ENG

k.Air

Air handling unit controller

USER MANUAL

LEGGI E CONSERVA QUESTE ISTRUZIONI

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NO POWER & SIGNAL CABLES TOGETHER

READ CAREFULLY IN THE TEXT!

k.Air

+030220981 -ENG

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- do not install the device in particularly hot environments. Too high temperatures may reduce the life of electronic devices, damage them and deform or melt the plastic parts. In any case, the product should be used or stored in environments that comply with the temperature and humidity limits specified in the manual;
- do not attempt to open the device in any way other than described in the manual.
- do not drop, hit or shake the device, as the internal circuits and mechanisms may be irreparably damaged.
- do not use corrosive chemicals, solvents or aggressive detergents to clean the device.
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DISPOSAL

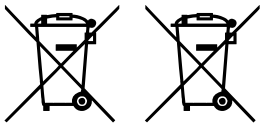

Fig. 1 Fig. 2

PLEASE READ AND KEEP.

WITH REFERENCE TO EUROPEAN UNION DIRECTIVE 2012/19/EU ISSUED ON 4 JULY 2012 AND RELATED NATIONAL LEGISLATION, PLEASE NOTE THAT:

1. Waste Electrical and Electronic Equipment (WEEE) cannot be disposed of as municipal waste but must be collected separately so as to allow subsequent recycling, treatment or disposal, as required by law;
2. users are required to take Electrical and Electronic Equipment (EEE) at end- of- life, complete with all essential components, to the WEEE collection centres identified by local authorities. The directive also provides for the possibility to return the equipment to the distributor or retailer at end-of-life if purchasing equivalent new equipment, on a one- to- one basis, or one- to- zero for equipment less than 25 cm on their longest side;
3. this equipment may contain hazardous substances: improper use or incorrect disposal of such may have negative effects on human health and on the environment;
4. the symbol (crossed-out wheeled bin – Fig.1) even if, shown on the product or on the packaging, indicates that the equipment must be disposed of separately at end-of-life;
5. if at end-of-life the EEE contains a battery (Fig. 2), this must be removed following the instructions provided in the user manual before disposing of the equipment. Used batteries must be taken to appropriate waste collection centres as required by local regulations;
6. in the event of illegal disposal of electrical and electronic waste, the penalties are specified by local waste disposal legislation.

Warranty on materials: 2 years (from the production date, excluding consumables).
Approval: the quality and safety of CAREL products are guaranteed by the ISO 9001 certified design and production system, as well as by the and marks and .

Symbols legende:

Dangerous voltage

Caution, hot surface

Important: this product is to be integrated and/or incorporated into the final apparatus or equipment. Verification of conformity to the laws and technical standards in force in the country where the final apparatus or equipment will be operated is the manufacturer's responsibility. Before delivering the product, Carel has already completed the checks and tests required by the relevant European directives and harmonised standards, using a typical test setup, which however cannot be considered as representing all possible conditions of the final installation.

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1. INTRODUCTION

k.Air is a ready-to-use solution for controlling air handling and ventilation units. k.Air is a pre-programmed and fully configurable controller designed to reduce time and cost from automation design to start-up.

k.Air is characterised by:

- easy commissioning, thanks to pre-defined configurations of central air handling units, an external configuration tool or the manual guided procedure;
- application flexibility, thanks to the modular concept that allows the coupling of c.pCOe expansion modules via an integrated serial board, for the management of additional configurations;
- energy efficiency, with the integration of advanced algorithms for device management, such as adiabatic humidification and high efficiency direct expansion units
- advanced connectivity with three serial ports and one Ethernet port, certified Bacnet protocol already in place, and remote control through CAREL digital services.
- great usability, thanks to the integrated web server graphical interface.

Fig. 1.a

k.Air is available in three sizes: mini cod. P+DA00FHD*FK, large cod. P+5A00SFC*LK e P+DA00UH00*S0.The software functions are the same for the three models, while the number and features of the available inputs/outputs and serial communication ports are different. It is possible to expand the number of inputs/outputs via c.pCOe expansion modules up to a maximum number of 4.

1.1 Main features

Summary of main functions:

- parameter setting by level, user, installer or manufacturer, with password-protected access;
- temperature control with different set points based on the operating mode (Economy, PreComfort, Comfort and/or cooling or heating);
- set point compensation with outside temperature probe;
- selection of daily time bands with corresponding operating mode;
- holiday and special day function;
- cascade control of heating/cooling devices in order to maximise energy savings (up to 6 devices);
- dehumidification control by cooling coil and regulation by dew point and post-heating control;
- humidifier control with 0...10 V input control for general humidifier or Modbus connection for HumiSonic, Humifog and HumiSteam CAREL humidifiers;
- "freecooling" and "freeheating" based on temperature or enthalpy;
- heat recoverymanagement with cross-flow, rotary and dual coilheat recovery;
- air quality control with CO2 and VOCprobe;
-
- up to 4 independent generic settings, with PI control algorithm and control probe;
- configuration wizard;
- free mapping of PGDE terminalinputs/outputs on the main board, expansions and serial probes;
- testing of inputs/outputs to verify correct wiring during installation;
- manual mode, to manually control each device during normal operation.
- management of an integrated direct expansion single-circuit and ON/OFF single-compressor or BLDC unit for active thermodynamic recovery through use of the main board and single-pole driver (k.Air mini/smart);
- control of tandem direct expansion units with On/Off and/or BLDC compressors via serial connection to uChiller;
- maintenance programme for the air handling unit based on the requirements of VDI 6022-1.

1.2 Map of points and functional diagram

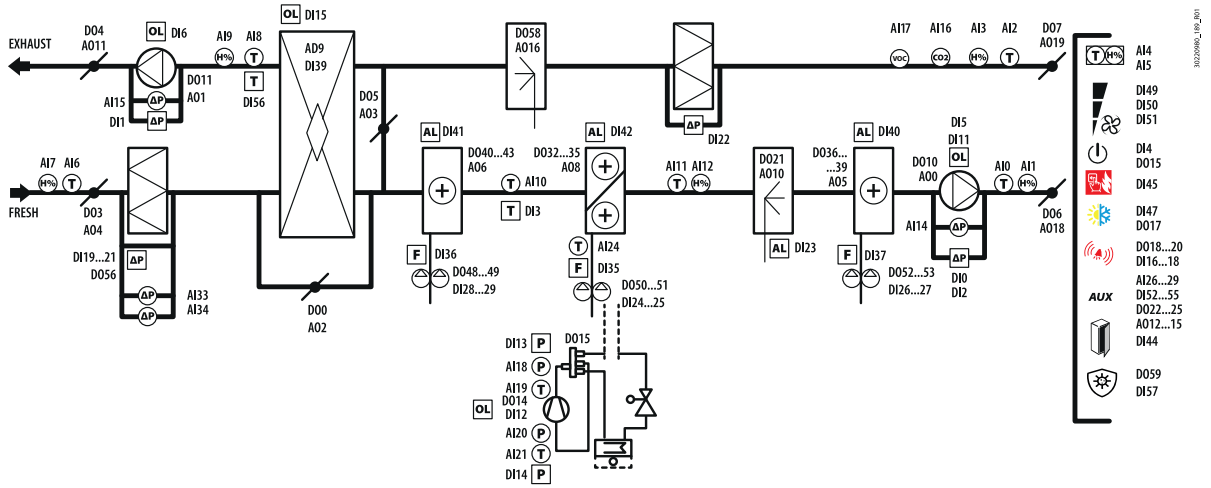


Fig. 1.b

AI	Analogue inputs
0	Supply temperature
1	Supply humidity
2	Return temperature
3	Return humidity
4	Room temperature
5	Room humidity
6	Outside temperature
7	Outside humidity
8	Exhaust temperature
9	Exhaust humidity
10	Frost protection temperature
11	Saturation temperature
12	Saturation humidity
14	Supply pressure
15	Return pressure
16	CO2 sensor
17	VOC sensor
18	Discharge pressure
19	Drain temperature
20	Suction pressure
21	Suction temperature
23	Preheating coil H2O temp.
24	Main coil H2O temp.
25	Reheating coil H2O temp.
26	Auxiliary loop 1 sensor
27	Auxiliary loop 2 sensor
28	Auxiliary loop 3 sensor
29	Auxiliary loop 4 sensor
33	Hepa 1 filter sensor
34	Hepa 2 filter sensor
35	PM 2.5 sensor
36	PM 10 sensor

DI	Digital inputs
0	Supply air flow switch
1	Return air flow switch
2	Air flow switch
3	Frost protection thermostat
4	Remote On/Off
5	Supply fan 1 thermal protector
6	Return fan 1 thermal protector
11	Fan thermal protector
12	Compressor thermal protector
13	High pressure switch
14	Low pressure switch
15	Heat recovery unit thermal protector
16	Serious alarm
17	Generic alarm
18	Generic warning
19	Filter alarm
20	Supply filter 1 alarm
21	Supply filter 2 alarm
22	Return filter alarm
23	Humidifier alarm
24	Main coil pump 1 thermal protector
25	Main coil pump 2 thermal protector
26	Reheat coil pump 1 thermal protector
27	Reheat coil pump 2 thermal protector
28	Preheat coil pump 1 thermal protector
29	Preheat coil pump 2 thermal protector
35	Main coil flow switch
36	Preheating coil flow switch
37	Reheating coil flow switch
39	Heat recovery unit dirty
40	Reheating alarm
41	Preheating coil alarm
42	Main coil alarm
44	Open door contact
45	Smoke-fire alarm
47	Summer/winter contact
49	Eco contact
50	Pre-Comfort contact
51	Comfort contact
52	Auxiliary loop 1 input
53	Auxiliary loop 2 input
54	Auxiliary loop 3 input
55	Auxiliary loop 4 input
56	Heat recovery unit defrost
57	Sanification alarm

DO	Digital outputs
0	Bypass damper
3	Outside air damper
4	Exhaust damper
5	Mixing damper
6	Supply damper
7	Return damper
10	Supply fan
11	Return fan
14	Compressor
15	Reversing valve
16	Unit status
17	Heating/cooling status
18	Global alarm
19	Minor alarm
20	Serious alarm
21	Humidifier
22	Auxiliary loop 1 output
23	Auxiliary loop 2 output
24	Auxiliary loop 3 output
25	Auxiliary loop 4 output
26	Open main coil valve
27	Open preheating coil valve
28	Open reheating coil valve
29	Main coil valve closing
30	Close preheating coil valve
31	Close reheating coil valve
32	Main coil step 1
33	Main coil step 2
34	Main coil step 3
35	Main coil step 4
36	Reheating coil step 1
37	Reheating coil step 2
38	Reheating coil step 3
39	Reheating coil step 4
40	Preheating coil step 1
41	Preheating coil step 2
42	Preheating coil step 3
43	Preheating coil step 4
48	Preheat coil pump 1
49	Preheat coil pump 2
50	Main coil pump 1
51	Main coil pump 2
52	Reheat coil pump 1
53	Reheat coil pump 2
56	Filter alarm
57	On/off heat recovery unit
58	IEC humidifier
59	Sanification device

AO	Analogue outputs
0	Supply fan
1	Return fan
2	Bypass damper
3	Mixing damper
4	Outside air damper
5	Reheat coil
6	Preheat coil
8	Main coil
9	Thermal wheel
10	Humidifier
11	Exhaust damper
12	Auxiliary loop 1 signal
13	Auxiliary loop 2 signal
14	Auxiliary loop 3 signal
15	Auxiliary loop 4 signal
16	IEC humidifier
18	Supply damper
17	Modulating heat recovery unit
19	Return damper

Tab. 1.a

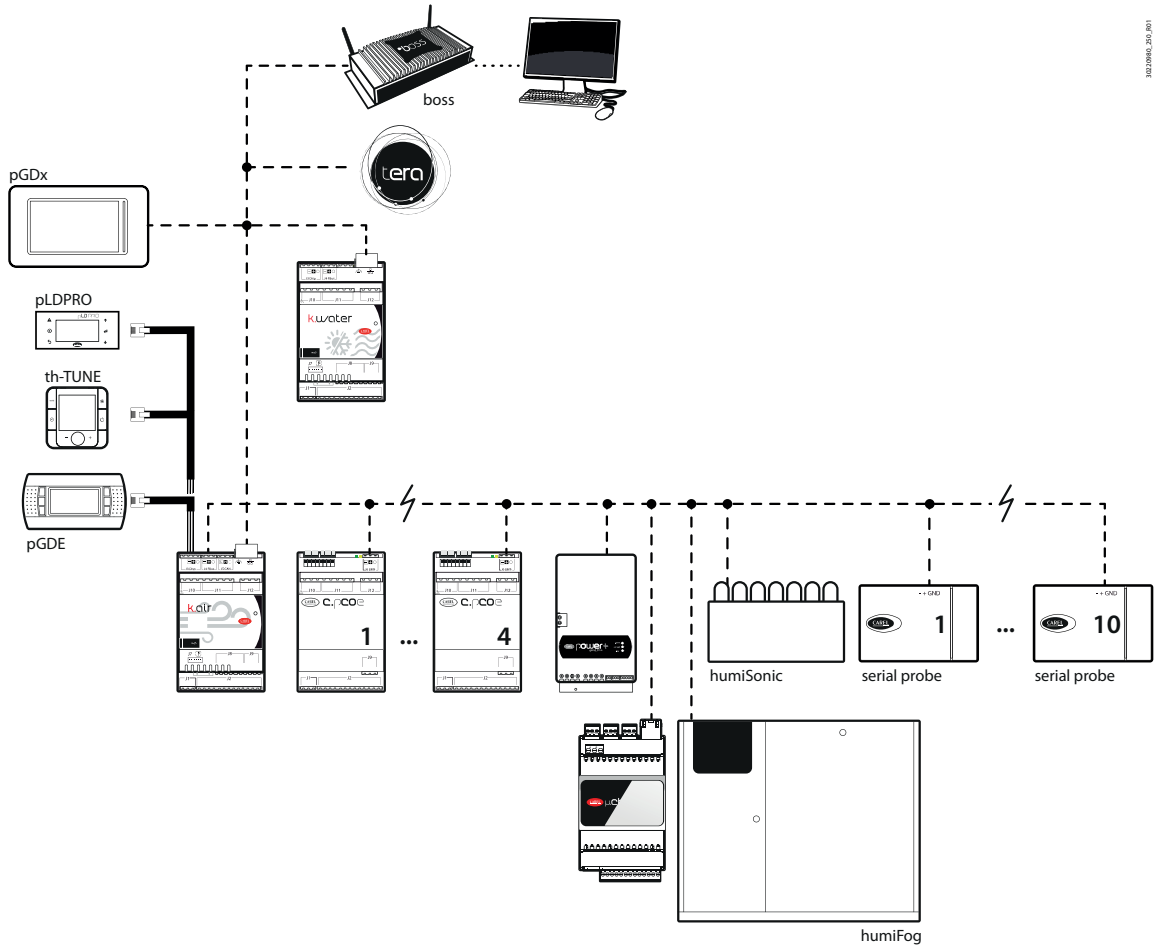


Fig. 1.c

Addr.	Modbus Devices
30	Supply Fan
31	Return fan
1...4	c.PCOe
10	µChiller
1	Power+

Addr.	Modbus Devices
5	Humisonic
6..7	Humifog
128…137	Serial Probe
9	Th-Tune

Tab. 1.b

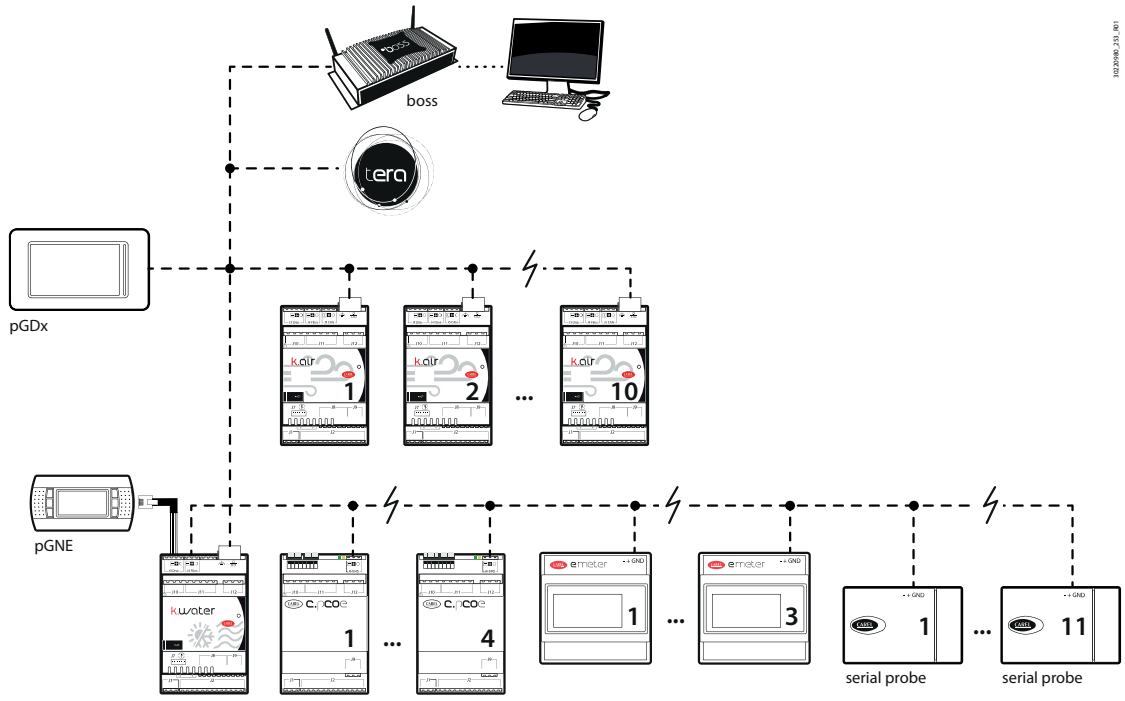


Fig. 1.d

1.3 Accessories

Below is a list of devices that are suitable for use with k.Air. CAREL has passive and active temperature probes and differential pressure probes, for duct installation, designed specifically for heat recovery units and small air handling units.

Note: see manuals +040010025/+040010026 for guidelines on installing the sensors on the unit.

1.3.1 Duct temperature sensor

Fig. 1.e

P/N	Type	Range
DPDT011000	NTC	-20T70°C
DPDT010000	0…1 V, 4…20 mA	

Tab. 1.c

1.3.2 NTC temperature sensor

Fig. 1.f

P/N	Type	Range
NTC*HP*	10 kΩ ±1% @25°C, IP67	-50 to 105/50 °C (air/fluid)
NTC*WF*	10 kΩ±1%@25°C (Fast), IP67	-50 to 105°C
NTC*WH*	10 kΩ ±1% @25°C, IP68	-50 to 105°C
NTC*HF*	10 kΩ±1%@25°C,strap-on, IP67	-50 to 105°C
NTC*HT*	50 kΩ ±1% @25°C, IP67	-30 to 150°C (air)
NTC*HT*	50 kΩ±1%@25 °C, st. steel cap, IP67	-30 to 150°C (air)

Tab. 1.d

1.3.3 Differential air pressure sensor

Fig. 1.g

P/N	Range	Output
SPKD00U5N0	0…1000 Pa	4...20 mA
	0…2500 Pa	
	0…3000 Pa	
	0…5000 Pa	

Tab. 1.e

Note : the k.Air mini/smart/smart +Vdc terminal provides a supply voltage of 12 Vdc ± 8%. If a higher voltage is required, use an external power supply.

1.3.4 Differential air pressure switches/flow switches

Fig. 1.h

PRESSURE SWITCHES

P/N	Range	Output
DCPD000100	0.5 to 5 mbars	ON/OFF
DCPD001100	0.2 to 2 mbars	ON/OFF

Tab. 1.f

FLOW SWITCHES

P/N	Range	Output
DCFL000100	1-9 m/s	ON/OFF

Tab. 1.g

1.3.5 Wired CO2 and VOC sensors

Fig. 1.i

CO_2 SENSORS

Cod.	Range	Output
DPWQ402000	0…2000 ppm	0…10 V
DPDQ402000	0…2000 ppm	0…10 V

Tab. 1.h

1.3.6 All-in-one sensor for environment and ducting (temper., humidity, CO2 and VOC)

Fig. 1.j

Cod.	Range	Output
DPWQ*B010		

Tab. 1.i

1.3.7 pGDE graphic terminal

Fig. 1.k

The pGDE graphic terminal part number PGNE000* allows complete graphics management, with icons and international fonts.
Installation accessories:

- telephone connection cable for k.Air large P/N S90CONN00*;
- connection cable for k.Air mini/smart P/N S90CONN0S0;
- junction card TCONN6J000 (for distances > 10 m, see technical leaflet +050002895). See technical leaflet +050001425.

1.3.8 Th-Tune environment terminal

Fig. 1.l

th-Tune part number AT* is the room terminal that, together with the k.Air programmable controller, allows the user to set the room temperature and humidity (when the corresponding probes are available). Based on the model, the power supply can be chosen between 230 Vac and 24 Vac/Vdc. th- Tune is compatible with the main recessed wall boxes on the market. The temperature set point can be set simply and intuitively using the front knob. For assembly details, see the technical leaflet +0500016IE.

1.3.9 PGDX touchscreen terminal

Fig. 1.m

The pGDX graphics terminal range in the browser version (cod. PGB***) allows to explore the usability of k.Air's graphical user interfaces to the fullest.
Through the pGDX terminal it is possible to fully navigate the integrated web server in k.Air, completely fulfilling the role of a machine terminal. In the version with on-board probes (4.3" and 7"), it can also act as a room terminal.

1.3.10 HumiSonic ultrasonic humidifier

Fig. 1.n

Adiabatic ultrasonic humidifier for installation inside the air handling unit.
Installed directly in the air flow, humiSonic atomises water into very small droplets (5 µm on average), which are instantly absorbed by the air flow. This is proposed as a high energy efficiency alternative to steam humidification.
It is available in the Ventilation and Compact versions.
In the Ventilation version, it has capacity of 2 kg/h at 18 kg/h, and is designed for installation inside air handling units or ducts.
It comprises an atomising production and distribution unit and an external electrical panel. For more details see manual +0300063EN.

Fig. 1.o

In the Compact version, it has a capacity of 0.5 kg/h to 1 kg/h, and is designed to be built into compact units, such as heat recovery units, fan heaters, fan coils, etc. See manual +0300056EN.

1.3.11 humiSteam immersed electrode humidifier

Fig. 1.p

Stand-alone immersed electrode isothermal humidifier for the production of steam at atmospheric pressure using untreated mains drinking water. The water is heated due to the conduction of electricity and boils to produce steam. The controller measures the current, which is automatically adjusted by varying the water level in the cylinder. Steam production, water drain and refill are managed by the control program completely automatically according to actual water conductivity, without the need for prior analysis or settings. For details see manual +0300042IE.

1.3.12 Humifog high pressure sprayer

Fig. 1.q

High pressure adiabatic humidifier for humidity control and evaporative cooling. humiFog combines an intelligent pumping station with a modular distribution system, equipped with special nozzles capable of maximising water atomisation and allowing a short absorption distance. Inverter modulation ensures very accurate control of pump speed, reducing energy consumption and optimising water use. With capacities from 100 to 1000 kg/h, it is designed for applications with high humidification demand, where precision and hygiene are distinctive factors.

1.3.13 µChiller

Fig. 1.r

µChiller is Carel's solution for the complete management of direct expansion units. The maximum configuration manages 2 compressors per circuit (On/Off or BLDC), up to a maximum of 2 circuits (using an expansion card for circuit 2). The distinctive element of µChiller is complete control of high-efficiency units through integrated management electronic expansion valves (ExV) and the brushless DC compressors, guaranteeing greater compressor protection and reliability and high unit efficiency. CAREL's "APPLICA" app, available on Google Play for the Android operating system, makes it easier to configure parameters and commission the unit. Operation of µChiller is described in the user manual +0300053EN.

2. COMMUNICATION PORTS

See the c.pCO manual +0300057EN for the hardware characteristics of the serial ports. The k.Air controller manages the protocols on the serial ports shown in the table.

Ref.	Type/connectors	Model	Specifications	Protocol
A	J3 Disp.	k.Air mini k.Air smart	• Integrated on main board • HW driver: asynchronous half duplex RS485 pLAN • Not optically-isolated • Connectors: plug-in 4-pin pitch 3.81 (k.Air mini/smart), 6-pin telephone jack + plug-in 3-pin pitch 5.08 (k.Air large)	• pLAN (pGDE) • Modbus Master (th- Tune)
	pLAN,/J10, J11	k.Air large	• Maximum cable length: 500 m • Max data rate: 38400 bit/s • Max. no. of connectable devices: 1 (th-tune); 1 powered by the controller, another 2 powered externally (pGDE)	pLAN (pGDE)
B	BMS 1 Serial Card	k.Air large	• Not integrated on main board • HW driver: not present • Used for all c.pCO family BMS expansion cards	Modbus Slave
C	FieldBus 1 Serial Card	k.Air large	• Not integrated on main board • HW driver: not present • Used for all c.pCO family BMS expansion cards	Modbus Master
D	BMS 2/ J25	k.Air large	• Integrated on main board • HW driver: asynchronous half duplex RS485 Slave • Optically-isolated • 3-pin plug-in connector, pitch 5.08 mm • Maximum cable length: 1000 m • Max data rate: 115200 bit/s • Max. number of connectable devices: 16	Modbus Slave
E	J4 FBus	k.Air mini k.Air smart	• Integrated on main board • HW driver: asynchronous half duplex RS485 Master. • J4 not optically-isolated • J26 optically-isolated • J23 not optically-isolated • Connectors: plug-in 3-pin pitch 3.81 (k.Air mini/smart), pitch 5.08 (k.Air large)	Modbus Master
	FieldBus 2/ J26 et J23	k.Air large		
F	RJ45	k.Air mini k.Air smart	1 Ethernet port, 10/100 Mbps	TCP/IP
		k.Air large	2 Ethernet ports, 10/100 Mbps (100-BASE TX), both equivalent	

Tab. 2.a

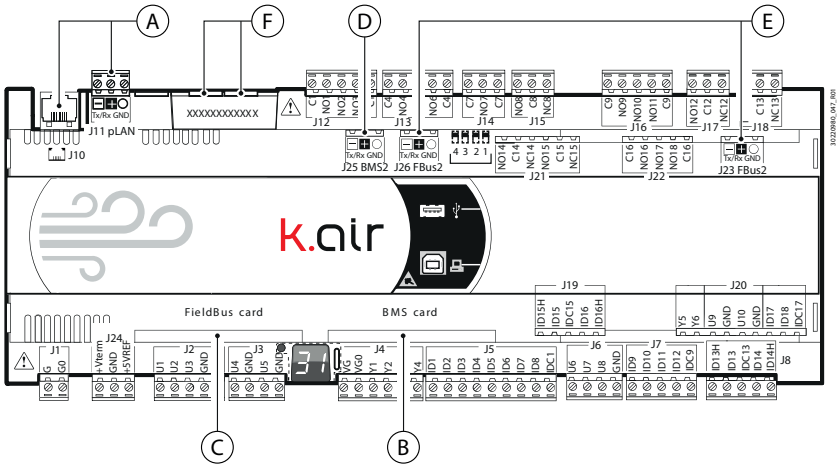


Fig. 2.a

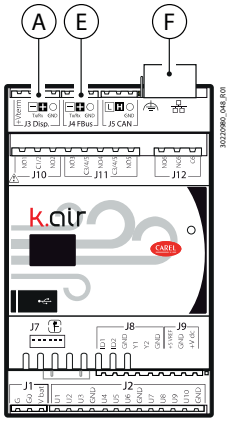


Fig. 2.b

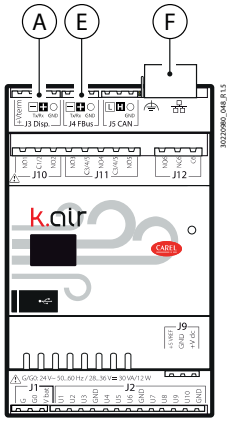


Fig. 2.c

3. HARDWARE INSTALLATION

3.1 Assembly and dimensions – mm (in)

The k.Air controllers are available in the DIN rail mounting version. See the technical documentation +0300057EN. The th- Tune terminal is available in the flush- mounted and wall- mounted versions. For assembly, see the technical leaflets +0500016IE, +0500017IE.

k.air large

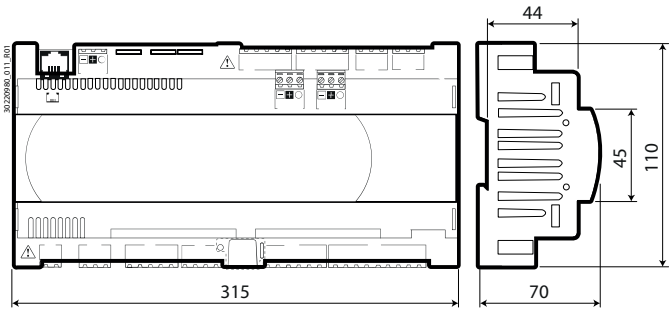


Fig. 3.a

k.air mini, k.air smart, c.PCOe

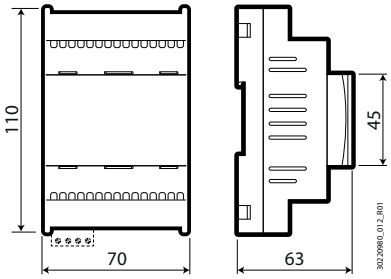


Fig. 3.b

pGDE

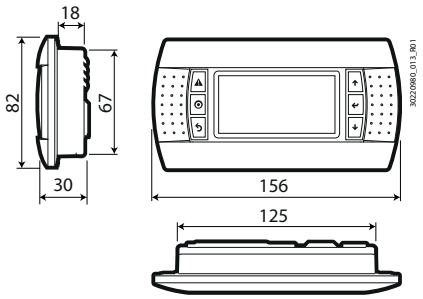


Fig. 3.c

th-Tun

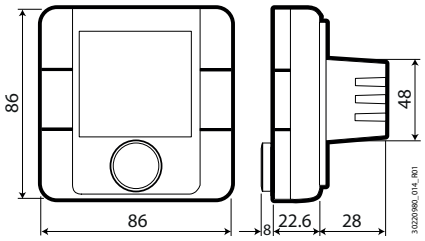
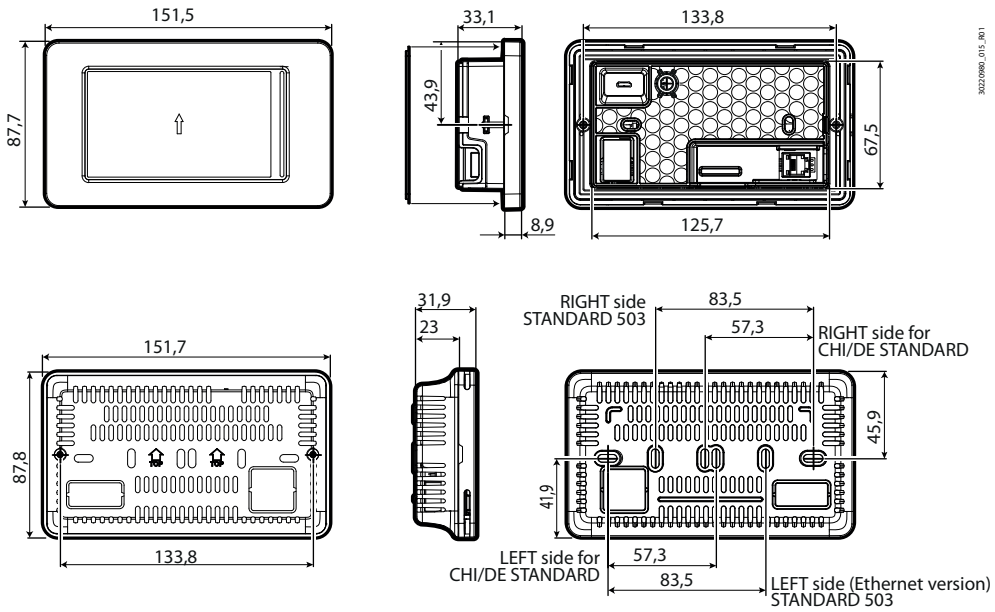


Fig. 3.d

PGDX



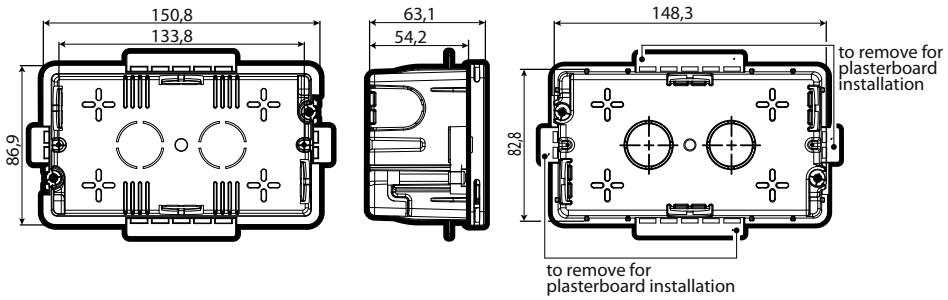
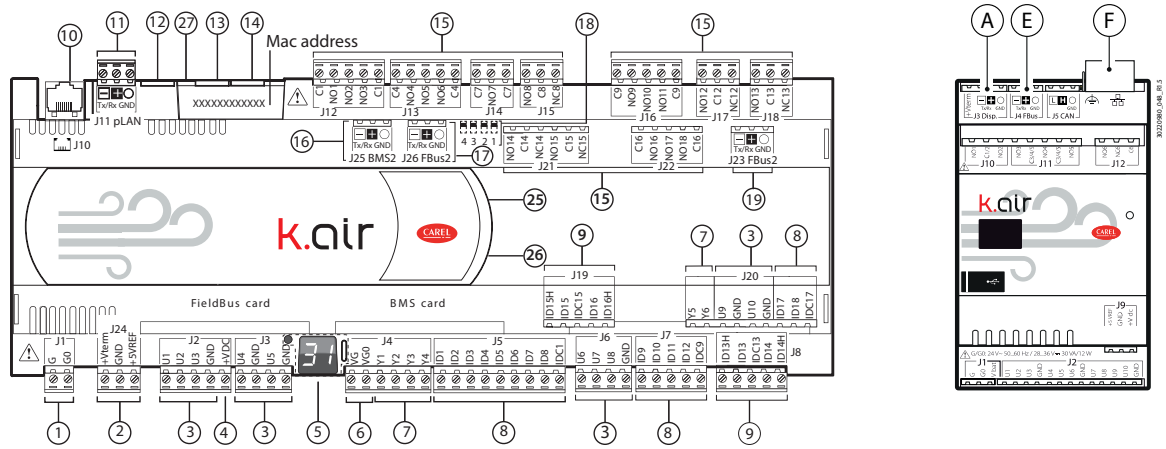


Fig. 3.e

3.2 Description of the terminals



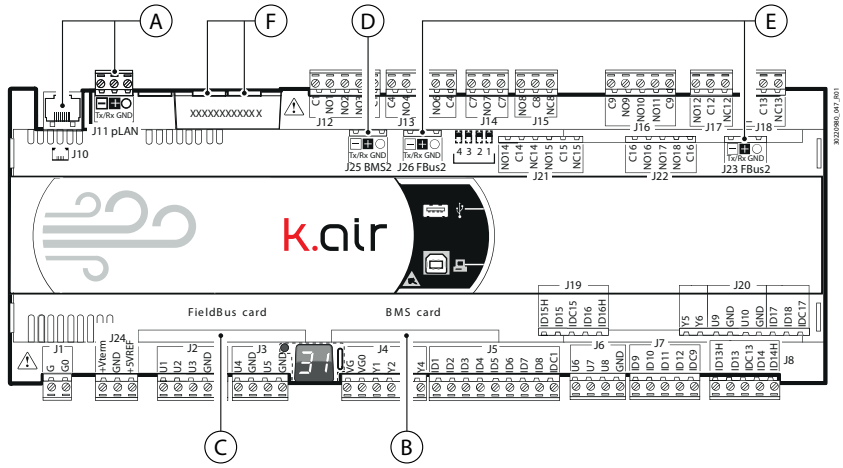


Fig. 3.f

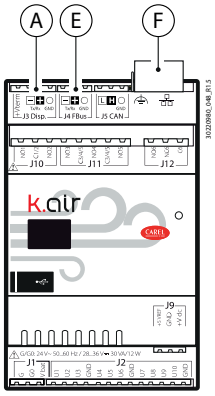


Fig. 3.g

Ref.	Description
1	Power supply connector [G(+), G0(-)]
1a	+Vdc: power supply to active probes +5 VREF power supply for ratiometric probes: not used
2	+Vterm: power supply to additional terminal +5 VREF power supply for ratiometric probes: not used
2a	Vbat: not used
3	Universal inputs/outputs
4	Optional Fieldbus card
5	pLAN address setting button, pLAN address display, yellow power supply LED and red +VDC overload LED
6	VG: power at voltage A (*) for opto-isolated analogue output VG0: power for opto-isolated analogue output, 0 Vac/Vdc
7	Analogue outputs
7a	Not used
8	ID: digital inputs with voltage A (*)
8a	Type: digital inputs with voltage-free contacts
9	ID..: digital inputs with voltage A (*) IDH..: digital inputs with voltage B (**)

Ref.	Description
10	Telephone jack for terminal
11	Plug-in terminal network connector
12	Reserved
12a	Reserved
13	Ethernet connector
14	Ethernet connector 2
15	Relay digital outputs
16	BMS2 connector
17	FieldBus2 connector
18	FieldBus/BMS selection dipswitches
19	FieldBus2 connector
25	USB host ports (master)
26	USB device port (slave)
27	Spade connector for Ethernet port earth
28	Built-in display and keypad
29	µSD Slot
30	NFC
31	Optional BMS card

Tab. 3.a

3.3 Installation

Environmental conditions

Avoid installing the controller and terminal in environments with the following conditions:

- exposure to direct sunlight and the elements in general;
- temperature and humidity outside of the values allowed for the operation of the product (see the technical specifications table in manual +0300057EN);
- wide and rapid fluctuations in ambient temperature;
- strong magnetic and/or radio frequency interference (thus avoid installation near transmitting antennae);
- strong vibrations or knocks;
- in the presence of explosives or flammable gas mixtures;
- exposure to aggressive and polluting atmospheres (e.g.: sulphur and ammonia gases, saline mist, smoke) which may cause corrosion and/or oxidation;
- exposure to dust (formation of corrosive patina with possible oxidation and reduction of insulation);
- exposure to water.

Positioning the controller inside the panel

The controller must be installed inside an electrical panel and must not be accessible, to avoid impact. The position in the electrical panel must be chosen so as to guarantee correct physical separation from the power components (solenoids, contactors, actuators, inverters, ...) and the connected cables. The ideal solution is to house these two circuits in two separate cabinets. Proximity to such devices/cables may create random malfunctions that are not immediately evident. The structure of the panel must allow the correct flow of cooling air.

⚠ Important:

- for safety reasons, the equipment must be housed inside an electrical panel so that the only accessible parts are the display and the keypad on the built-in terminal;
- the controller must be installed in such a way as to simplify operations on the disconnection devices;
- when wiring, separate as much as possible the probe, digital input and serial line cables from the power device cables (contactors, circuit breakers and the like) to avoid possible electromagnetic disturbance;
- never run power cables (including the electrical cables) and probe signal cables in the same conduits;
- for the control signals, it is recommended to use shielded cables with twisted wires. If the controller cables have to cross over the power cables, the intersections must be as near as possible to 90 degrees, always avoiding running the controller cables parallel to the power cables;
- reduce the path of probe cables as much as possible, and avoid spiral paths that enclose power devices;
- in the event of any malfunctions, do not attempt to repair the device, rather contact a CAREL service centre.

Electrical installation

⚠ **Important:** before carrying out any maintenance, disconnect the controller from the power supply by moving the main system switch to "off".

Provide a power disconnect device in compliance with current regulations. Use cable ends suitable for the corresponding terminals. Loosen each screw and insert the cable ends, then tighten the screws. There is no limit to the number of wires that can be inserted into a single terminal. The maximum tightening torque for the screws on the 5.08 mm pitch terminals is 0.4 Nm and on the 3.81 m pitch terminals is 0.2 Nm.

For the maximum length of the connections of the analogue/digital inputs and the analogue outputs, see the table of technical specifications (in manual +0300057EN). For environments with strong disturbance, it is recommended to use shielded cables with the shield connected to the earth in the electrical panel. When the operation is completed, slightly tug the cables to check they are sufficiently tight.

Notes:

- fix the cables connected to the controller using cable ties, placed around 3 cm from the connectors;
- if the power supply transformer secondary is earthed, make sure that the earth wire is connected to the wire that runs to the controller and is connected to terminal G0. Follow this instruction for all devices connected to controller via the serial network.

⚠ Important:

- a power supply voltage other than that specified may seriously damage the system;
- the fuse must be located near the controller;
- installation and maintenance/inspection of the controller are operations reserved exclusively for qualified technical personnel, in compliance with current national and local regulations;
- all of the extra low voltage connections (24 Vac or 28-36 Vdc analogue and digital inputs, analogue outputs, serial bus connections, power supplies) must have reinforced or double insulation from the mains network;
- avoid touching or nearly touching the electronic components fitted on the boards to avoid electrostatic discharges (extremely damaging) from the operator to the components;
- do not exert excessive force with the screwdriver on the connectors to avoid damaging the controller;
- if the device is used in a way not specified by the manufacturer, the protection provided may be compromised;
- only install optional cards and connectors supplied by Carel.

3.4 Power supply

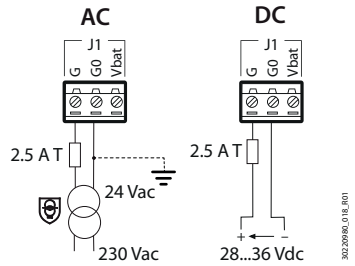


Fig. 3.h

The following figure shows the power supply connection diagram. Use a class II safety transformer with protection against short circuits and overload.

Vca	P (Vca)		Vcc	P (Vcc)	
24 Vac (+ 10/-15%), 50/60 Hz to be protected by an external 2.5 A (T) fuse	k.Air mini/ smart	30 VA	28-36 Vdc (-20/+10%) to be protected by an external 2.5 A (T) fuse	k.Air mini/ smart	12 W
	k.Air large	45 VA		k.Air large	30 W

Tab. 3.b

Important:

- if the Ethernet connection is used, the transformer secondary must be connected to earth;
- a power supply voltage other than that specified may seriously damage the controller;
- it is recommended to separate the power supply to the controller and the terminal from the power supply to the other electrical devices (contactors and other electromechanical components) inside the electrical panel.

3.5 pGDE terminal connection

k.Air mini/smart

Use the accessory cable P/N S90CONN0S0, as shown in the figure. The maximum distance allowed between controller and terminal is 10 m.

Note: for connection cable lengths > 10 m or to connect multiple terminals, use the TCONN6J000 accessory. See manual +0300057EN.

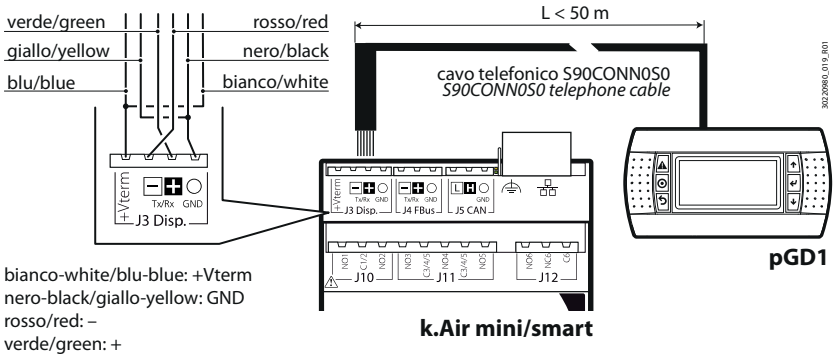


Fig. 3.i

k.air large

Use the accessory cable P/N S90CONN00*0, connected as shown in the figure. The maximum distance allowed between controller and terminal is 50 m.

Note: for connection cable lengths > 50 m or to connect multiple terminals, use the TCONN6J000 accessory. See manual +0300057EN.

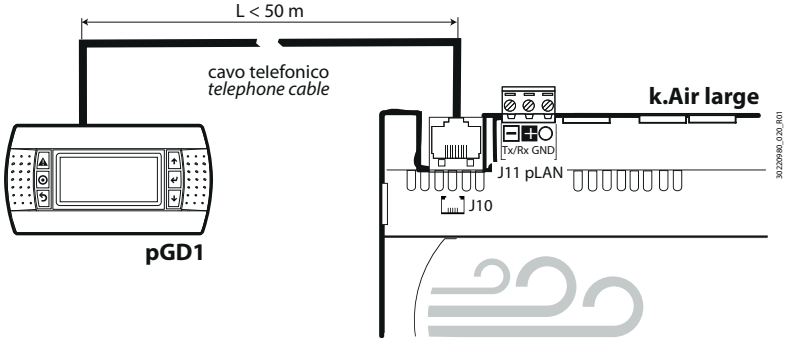


Fig. 3.j

3.6 Universal input/output connections

3.6.1 Universal inputs/outputs

The universal inputs/outputs are marked with the letter U ... and can be configured in the application program as:
- passive temperature probes: NTC;
- 0-10 Vdc active probes;
- 4-20 mA current inputs;
- digital inputs with voltage-free contacts;
- 0-10 Vdc analogue outputs.

⚠ **Important**: universal inputs/outputs cannot be used as digital outputs.

Maximum number of analogue inputs that can be connected

The maximum number of analogue inputs that can be connected to the universal inputs/outputs depends on the type.

Signal type	k.Air mini/smart		k.Air large		c.pCOe	
CAREL NTC probes (-50T90°C, R/T 10 kΩ±1% at 25°C)	10		10		10	
0- 1 Vdc/0- 10 Vdc signals from probes powered by the controller	0		max tot 10	max. 6	0	
0-1 Vdc/0-10 Vdc signals from probes powered externally	10			10	10	
4-20 mA inputs from probes powered by the controller	Max tot 4	Max 2 (*)	Max tot 9	Max. 6	Max tot 4	Max. 2 (*)
4-20 mA inputs from probes powered externally		Max 4		Max 9		Max. 4

Tab. 3.c

(*)Excluding DP**Q and DP****2 probes

Note: the table indicates the maximum number of inputs that can be connected. For example, with k.Air mini/smart, a maximum of two 4- 20 mA inputs from probes powered by the controller and a maximum of four 4-20 mA inputs probes powered externally can be connected. The maximum total number of inputs of both types is however four.

Remote control of analogue inputs

The cable sizes for the remote control of the analogue inputs are shown in the following table:

Input type	Size for length < 50 m (mm2)	Size for length < 100 m (mm2)
NTC	0.5	1
PT1000	0.75	1.5
I (current)	0.25	0.5
V (voltage)	0.25	0.5

Tab. 3.d

⚠ **Important:**
- if the controller is installed in an industrial environment (standard EN 61000- 6-2), the length of the connections must be less than 10 m; do not exceed this length so as to avoid measurement errors;
- separate as much as possible (at least 3 cm) the probe and digital input cables from cables to loads and power cables, so as to avoid possible electromagnetic disturbance. Never run power cables (including the electrical panel cables) and probe signal cables in the same conduits.

Connection of NTC temperature probes

See the table at the beginning of the paragraph for the maximum number of probes that can be connected. For the operating range, see the technical specifications table in manual +0300057EN.

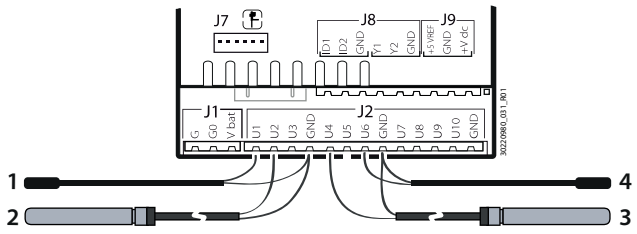


Fig. 3.k

Controller terminals	NTC probe 1	2	3	4
GND	Wire 1			
U1	Wire 2			
GND		Wire 1		
U2		Wire 2		
GND			Wire 1	
U4			Wire 2	
GND				Wire 1
U5				Wire 2

Tab. 3.e

Connection of active temperature and humidity probes

See the table at the beginning of the paragraph for the maximum number of probes that can be connected. This depends on the type of power supply. The distinction is made between probes powered by the controller (+VDC terminal) and probes powered externally, as well as between active probes with voltage or current output signals. For the operating range, see the probe data sheets. The controller can be connected to all CAREL DP* series active temperature and humidity probes configured with 4-20 mA signal.

Note: the k.Air mini/smart models do not accept 0-10 Vdc signals as inputs from probes powered by the controller.

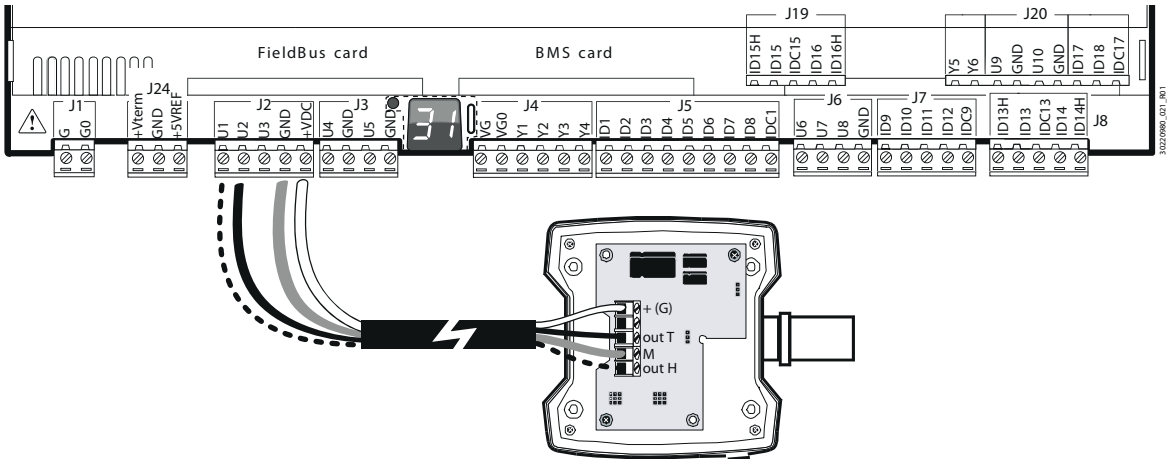


Fig. 3.l

Controller terminals	Probe terminals	Description
GND	M	Reference
+VDC	+ (G)	Probe power supply
U1	outH	Humidity probe output
U2	outT	Temperature probe output

Connection of active probes with 0-10 V output powered by the controller

See the table at the beginning of the paragraph for the maximum number of probes that can be connected. For the operating range, see the probe data sheets.

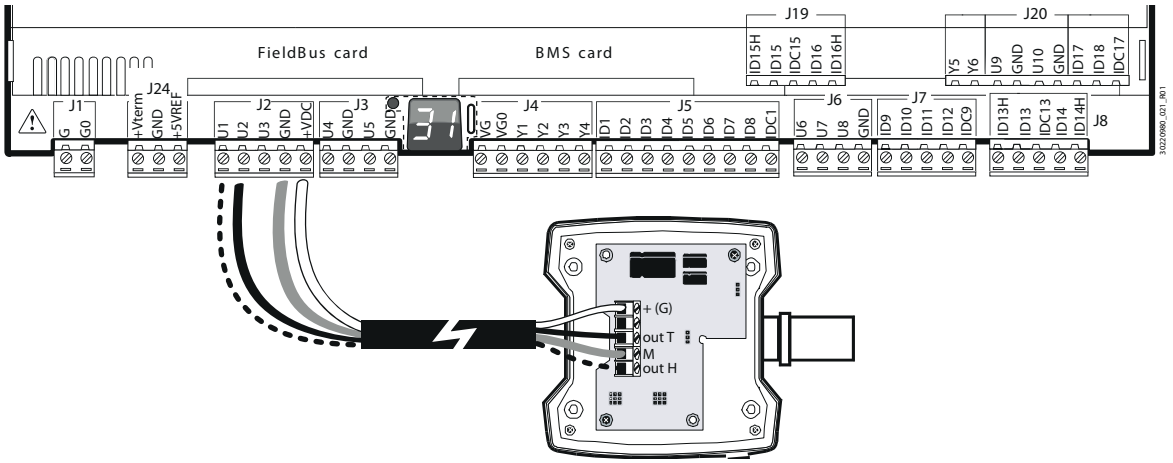


Fig. 3.m

Controller terminals	Probe terminals	Description
GND	M	Reference
+VDC	+ (G)	Probe power supply
U1	outH	Signal 1
U2	outT	Signal 2

Connection of active probes with 0-10 V output powered externally

See the table at the beginning of the paragraph for the maximum number of probes that can be connected. For the operating range, see the probe data sheets.

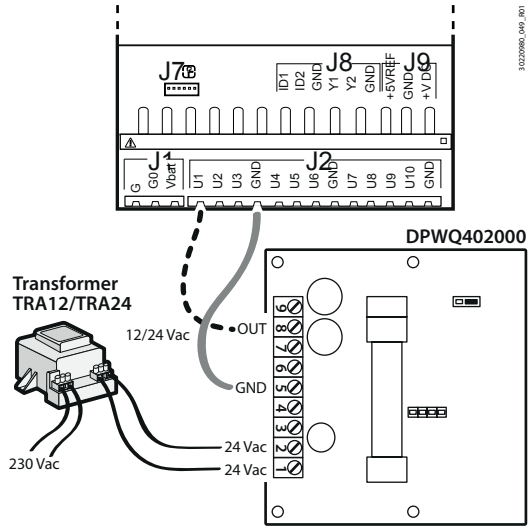


Fig. 3.n

Controller terminals	Probe terminals	Description
GND	GND	Reference
U1	OUT	Signal

Tab. 3.f

Maximum number of digital inputs that can be connected

The controller allows the universal inputs/outputs to be configured as voltage-free, non-optically isolated digital inputs. In any case, the inputs must be connected to a voltage-free contact. The maximum length of the connections is 30 m.

Digital inputs (not opto-isolated)	k.Air mini/smart		k.Air large		c.pCOe	
voltage-free contacts	Max tot 10	10	Max tot 10	10	Max tot 10	10
fast digital inputs		Max 2		Max 6		Max 2

Tab. 3.g

⚠ **Important:** the maximum current allowed by the digital input is 10 mA. Therefore, the external contact must be rated for at least 10 mA

Connection of ON/OFF inputs

There are no specific constraints on the maximum number of inputs that can be connected. For the operating range, see manual +0300057EN.

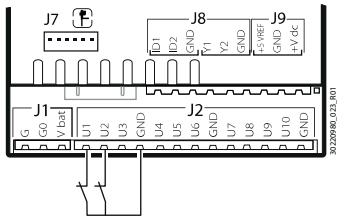


Fig. 3.o

Controller terminals	Description
U1	Digital input 1
GND	
U2	Digital input 2
GND	

Tab. 3.h

Maximum number of analogue outputs that can be connected

Analogue outputs (not opto-isolated)	k.Air mini/smart	k.Air large	c.pCOe
0-10 Vdc (class 2) (maximum current 2 mA)	max. 5	10	max. 5

Tab. 3.i

Connection of non-optically isolated analogue outputs

There are no specific constraints on the maximum number of outputs that can be connected. For the specifications of the output signals, see manual +0300057EN.

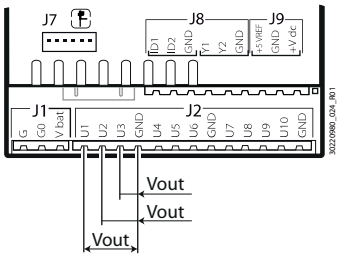


Fig. 3.p

Controller terminals	Description
U1	Analogue output 1
GND	
U2	Analogue output 2
GND	
U3	Analogue output 3
GND	

Tab. 3.j

Notes:
- the analogue outputs cannot be connected in parallel;
- the max output current is 10 mA.

Probe and terminal power supply

Controller terminals	Description
+Vcc	k.Air mini/smart: 12 Vdc ± 8%; maximum current 50 mA, protected against short circuits k.Air large: 24 Vdc ± 10%; maximum current 150 mA, protected against short circuits
Vterm	k.Air mini/smart: 24-36 Vdc ± 5% depending on the power supply voltage; max current available: 100 mA (pGDE, th-Tune), protected against short circuits. Max connection cable length: 10 m. k.Air large: 24 Vdc ± 10% - To be used to power an external terminal as an alternative to the one connected to J10, Pmax = 1.5 W. Max connection cable length: 30 m; if the length exceeds 10 m, use a shielded cable with the shield connected to earth.

Tab. 3.k

3.6.2 Digital inputs

The controller features digital inputs for monitoring safety devices, alarms, device states and remote enabling signals. See manual +0300057EN. Maximum connection cable length: k.Air mini/smart 10 m, k.Air large 30 m.

Important:
- the k.Air controller does not provide any protection, limitation or functional safety for the controlled devices.
- separate as much as possible the probe and digital input cables from cables to inductive loads and power cables, so as to avoid possible electromagnetic disturbance. Never run power cables (including the electrical panel cables) and signal cables in the same conduits;
- the external contact for digital inputs must be rated to at least 5 mA.

Maximum number of digital inputs that can be connected

Digital inputs	k.Air smart	k.Air mini	k.Air large		c.pCOe
free non-optoisolated contacts	0	2	total 18 max.		0
opto-isolated inputs at 24 Vac or 28...36 Vdc	0	0		14	0
opto-isolated inputs at 24 Vac or 230 Vac (50 Hz)	0	0		4	0

Tab. 3.l

Characteristics of digital inputs ID...IDH...

Minimum digital input pulse detection time	ormally open (open-closed-open): 200 ms; Normally closed (closed-open-closed): 400 ms
Input power supply	k.Air mini Internal; k.Air large -External
	IDH...: 230 Vac (+10/-15%) 50/60 Hz, current draw 5 mA
	ID...: 24 Vac (+10/-15%) 50/60 Hz or 28-36 Vdc (+10/-20%), current draw 5 mA
Maximum connection cable length	k.Air mini 10 m; k.Air large 30 m
Measurement circuit classification (IEC EN 61010-1)	Category I: 24 Vac/Vdc (J5, J7, J20); Category III: 230 Vac (J8, J19)

Tab. 3.m

Important:

- the two 230 Vac or 24 Vac/Vdc inputs on terminals J8 (ID13, ID14) or J19 (ID15, ID16) have the same common pole and therefore both must have the same voltage (230 Vac or 24 Vac/Vdc). The insulation between the two inputs is functional; there is reinforced insulation between the inputs and the rest of the controller;
- ID1-ID8, ID9-ID12, ID17, ID18 have functional insulation from the rest of the controller;
- for inputs with direct current voltage (24 Vdc), either the + or - can be connected to the common terminal;

Connection of digital inputs

There are no specific constraints on the maximum number of inputs that can be connected. For the k.Air mini/smart controller, see the figure above, while for k.Air large, a possible connection example is shown below. See manual +0300057EN.

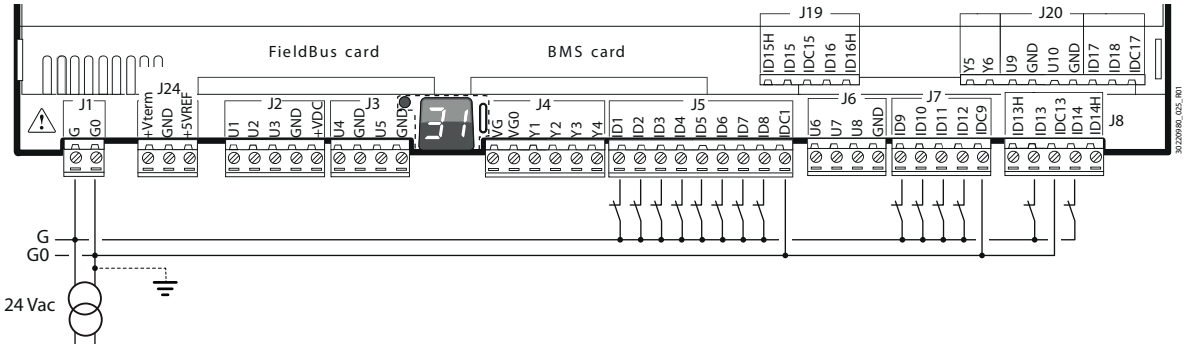


Fig. 3.q

3.6.3 Analogue outputs

The controller provides non-optically isolated 0- 10 Vdc analogue outputs powered directly by the controller (k.Air mini), and optically isolated outputs powered externally (k.Air large). See manual +0300057EN.

Maximum number of analogue outputs that can be connected

Digital inputs	k.Air smart	k.Air mini	k.Air large	c.pCOe
0...10 Vdc optoisolate su Y1, Y2, Y3, Y4, Y5, Y6	0	0	6	0
0...10 Vdc optoisolate su Y1, Y2	0	2	14	0

Tab. 3.n

Characteristics of analogue outputs Y...

Power supply	k.Air mini internal; k.Air large external, 24 Vac (+ 10/-15%) or 28-36 Vdc (+ 10/-20%) on VG (+), VG0 (-) (class 2)
Precision	k.Air mini ± 3% full scale; k.Air large ± 2% full scale
Resolution	8 bit
Stabilisation time	From 1 s (slew rate 10 V/s) to 20 s (slew rate 0.5 V/s) selectable via SW
Maximum load	1 kΩ (10 mA)
Maximum connection cable length	k.Air mini 10 m; k.Air large 30 m

Tab. 3.o

Important:

- for lengths > 10 m, a shielded cable is required, with the shield connected to earth;
- other outputs of the same type can be connected in parallel to a 0-10 Vdc analogue output or an external voltage. The resulting voltage will be the higher value. Correct operation is not guaranteed if actuators with voltage inputs are connected;
- for k.Air large, power analogue outputs VG-VG0 at the same voltage supplied at G-G0: connect G to VG and G0 to VG0. This applies to both AC and DC power supplies.

Connection of analogue outputs

Example connection diagrams:

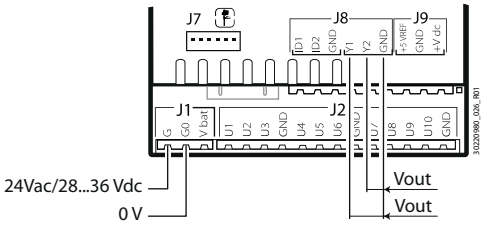


Fig. 3.r

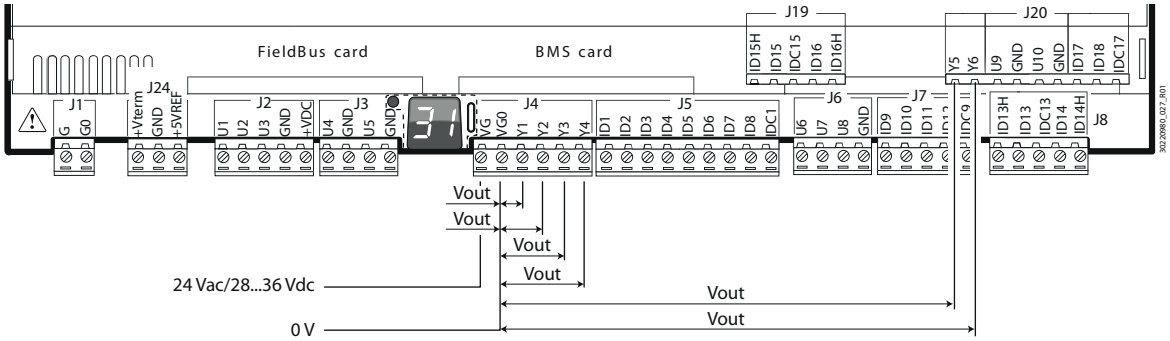


Fig. 3.s

Note : the max output current is 10 mA.

3.6.4 Digital outputs

Electromechanical relay digital outputs

The controller provides digital outputs with electromechanical relays; for easier assembly, the common terminals for some relays have been grouped together. Some relays are equipped with changeover contacts. Also see the technical specifications table in manual +0300057EN.

Maximum number of digital outputs that can be connected

Digital inputs	k.Air mini/smart		k.Air large		c.pCOe	
NO/NC output relay	max tot 6	1	max tot 18	5	max tot 6	1
NO output relay		5		13		5

Tab. 3.p

The following tables apply in relation to the type of insulation.

Insulation type on k.Air mini/smart andc.pCOe

Between relays in group 1 (R1, R2) and 2 (R3, R4, R5)	basic
Between relays in group 3 (R6) and relays in group 1 and 2	reinforced

Tab. 3.q

Note:

- there is basic insulation between groups 1 and 2, and therefore these must have the same voltage (generally 24 Vac or 110/230 Vac);
- between relays in groups 1 and 2 and in group 3 there is reinforced insulation, therefore group 3 can have a different voltage.

Insulation type on k.Air large

Between relays in the same group	basic
Between groups of relays	reinforced
Between relays and the rest of the controller	reinforced

Tab. 3.r

Note:

- within a group, the relays have functional insulation and therefore must have the same voltage (generally 24 Vac or 110/230 Vac);
- between groups of relays there is reinforced insulation, therefore the groups can have different voltages.

Important: the current running through the common terminals must not exceed the rated current of a single terminal:

- k.Air mini/smart: 5 A for groups 1 and 2, 1 A for group 3;
- k.Air large: 8 A

Remote control of digital outputs

The cable sizes based on the current are shown in the following table.

Size (mm2)/AWG	Current (A)
0,5/20	2
1,5/15	6
2,5/14	8

Tab. 3.s

Connection of digital outputs

Example connection diagrams:

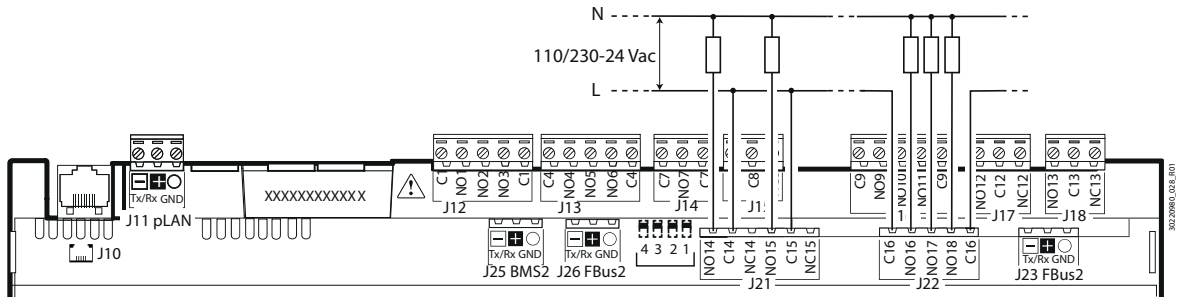


Fig. 3.t

3.6.5 c.pCOe expansion cards

c.pCOe is an expansion module that can be used to increase the number of available I/Os. For details on mounting the c.pCOe expansion cards, see technical leaflet +0500059IE.

The k.Air controller is designed to be able to host up to four c.pCOe cards with serial addresses from 2 to 5; to assign the serial address to the c.pCOe card, the dipswitches on the card must be set as shown in the figure; the "Ext" dipswitch must be set to "OFF" (no offset).

⚠ **Important:** the dipswitches must be set when the unit is off.

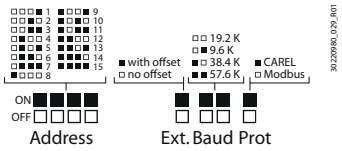


Fig. 3.u

In the same way as for serial communication, the factory configuration of the c.pCOe expansion cards is already set up for communication with k.Air via the FieldBus2 port, with Modbus protocol and baud rate 19.2 kbps. For more details, see manual +0300057EN.

3.7 Connection diagrams

For the functional and wiring diagrams of the various configurations managed by the k.air controller, see the Application Notes.

4. USER INTERFACE

4.1 Introduction

The k.Air system uses the user terminal (P/N PGNE000*) for displaying alarms and some key values, and for setting the parameters. The terminal comprises a display and 6- button keypad for configuring and
programming the unit. The main information can also be displayed on the pGDX graphic terminal.

4.2 Keypad

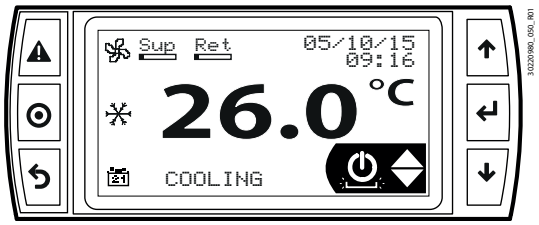


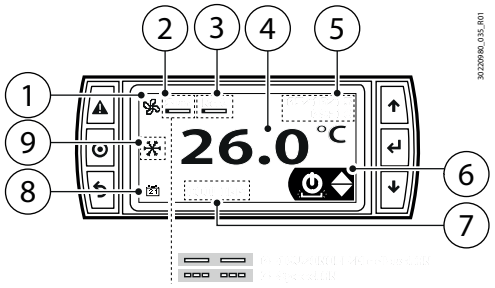
Fig. 4.a

BUTTON	DESCRIPTION
Alarm	Display active alarms/mute buzzer Reset alarms with manual reset (press and hold)
Prg	Access the main menu
Esc	Return to the previous screen
/ UP / DOWN	Scroll quick-access menu rows Browse between display screens Increase / decrease value
Enter	Select quick-access menu row Switch between parameter display and setting modes Confirm value and move to the next parameter

Tab. 4.a

4.3 Display

During normal operation, the display shows, in addition to the current date and time, the status of the fans, the control probe measurement, the operating mode and active time bands



1	Fan status: ON OFF
2	Supply fan (% activation)
3	Return fan (% activation)
4	Control probe measurement
5	Current date/time
6	Quick-access menu button icon
7	Unit operating mode/status
8	Active time bands
9	Current operating mode: Heating Cooling

Fig. 4.b

Note: the control probe can be selected as the supply, return or room probe (see screen Ac018). To find out which control probe is being used and the corresponding set point, see screen Qc01 in the "Set point" quick access menu.

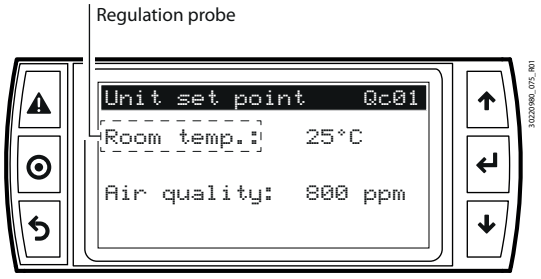


Fig. 4.c

Possible unit operating modes/status:

ID	Unit status	Description
0	OFF ALRM	Off from alarm
1	OFF BMS	Off from BMS
2	OFF BAND	Off by time band
3	OFF IN.DIG.	Off from digital input
4	OFF KEYPAD	Off from keypad
5	OFF FAN	Off due to no ventilation
6	OFF FLOW	Off due to no flow
7	OFF FROST	Frost protection with unit OFF
8	ON	Unit starting
9	WARM UP	Warm up
10	HEAT	Unit ON in heating mode
11	COOL	Unit ON in cooling mode
12	MANUAL ON	Starting with manual mode active(*)
13	WARM UP MAN.	Warm up with manual mode active(*)
14	HEAT MAN	Heating with manual mode active(*)
15	COOL MAN	Cooling with manual mode active(*)
16	REC. DEFROST	Defrost on heat recovery
17	DEFROST DX	Defrost on direct expansion circuit
18	FROST	Frost protection
19	C. PROBE ERR.	Control probe error
20	SHUTDOWN	Shutting down
22	DEHUMIDIFICATION	Dehumidification active
23	GENERIC CON.	Generic control active (no temp. control)
24	GEN. CON. MAN.	Generic control active (no temp. control) with manual mode active(*)
31	LOW SUPPLY T	Minimum supply limit control
32	HIGH SUPPLY T	Maximum supply limit control
33	HIGH H SAT	High humidity control (VDI)
34	START INACT.	Start due to inactivity (VDI)

Tab. 4.b

(*) at least 1 device controlled in manual mode. See "Functions".

4.4 Programming mode

The parameters can be set on the user terminal. Access to the parameters depends on the level: User (password = 0000), Service (password = 1234) and Manufacturer (password = 5678). Press Prg to access the main menu.

Fig. 4.d

Main menu icons and access by user type:

Ref	Icon	Name	Access (*)
A.		Unit	U(**), S, M
B.		Fans	S, M
C.		Dampers	S, M
D.		Coils	S, M
E.		Heat recovery	S, M
F.		Humidifier	S, M
G.		Filters	S, M
H.		Auxiliary control	S, M
I.		IEC	S, M

Ref	Icon	Name	Access (*)
J.		VDI	S, M
T.		Alarm log	S, M
U.		Compressor	S, M
V.		EEV	S, M
W.		Inputs/outputs	a : U(**), S, M - b : S, M
X.		Settings	U, S
Y.		Connectivity	S, M
Z.		Logout	U, S, M

Tab. 4.c

(*) Access: U = user, S = service, M = manufacturer. (**) Read-only access.

The parameter setting screens are identified by an alphanumeric code at the top right, the first letter indicates the main menu, the second lower case letter indicates the submenu branch, and finally the number identifies the screen inside the menu.

Example: screen Ac01 is the first screen in menu A. Unit > c. Configuration.

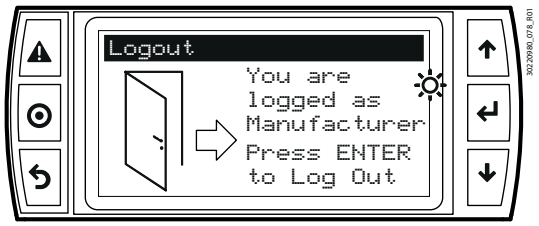
4.5 Setting the parameters

Note:
- the user, installer and manufacturer passwords can be changed on screen Xd01;
- for read (R) or read/write (R/W) access to each screen according to the type of user, see the parameters table.

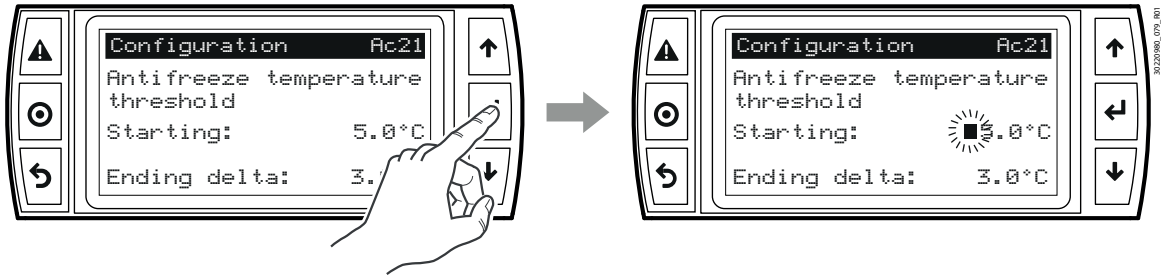
Navigation

1. Press Esc one or more times to go to the standard display (if there are no active alarms);
2. Press Prg and enter the password: 0000: User; 1234: Service; 5678: Manufacturer;

1. To change from one programming level to another, exit using the Logout command in menu Y and login again using a different password;



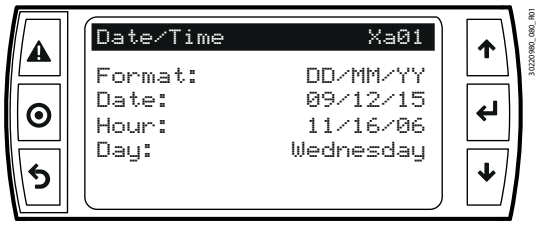
1. Select the parameter category (A-Z) by pressing Up / Down;
2. Press Enter to enter the first submenu or the first screen;
3. Press UP/DOWN to modify the value and Enter to confirm;
4. Press Enter to set the first parameter on the screen: the cursor flashes in front of the first value to be set; press Up / Down to change the value and confirm by pressing Enter. Then move to the next parameter.



1. once having set all the parameters on the screen, press Enter to return to the screen level, Esc to go back to the higher level if necessary and continue setting the parameters on the other screens, following steps 4-8.

Note: the parameters that can be set are shown on the display in UPPER CASE.

EXAMPLE: setting the current date/time



1. Press Esc one or more times to go to the standard display;
2. Press Prg: after entering the user password, the main menu is shown;
3. Press UP/DOWN and select category X: Settings; press Enter to confirm;
4. Press UP/DOWN and select sub-category a: Date/time; press Enter to confirm;
5. Press Enter and UP/DOWN to set the date format: Day/Month/Year, Month/Day/Year, Year/Month/Day;
6. Confirm by pressing Enter and set the date: day, month, year;
7. Press Enter to confirm and set the hours, minutes and seconds;
8. When the settings are complete, press Esc three times to return to the standard display.

Note: when setting the time, the clock on the display stops, even if the clock inside the controller continues counting.

4.6 Quick access menu

The quick access menus provide instant access to unit information and settings. Procedure:

1. Press ESC one or more times to go to the standard display;
2. Press UP/DOWN to display the icon relating to the desired quick access menu;

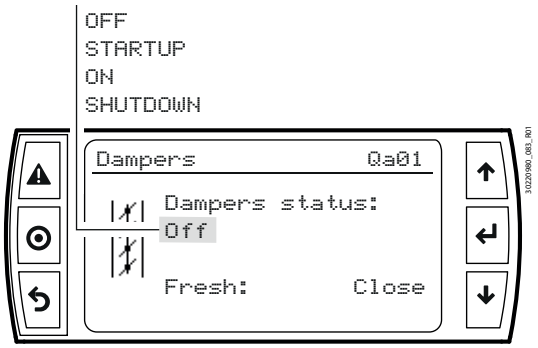
ICON			
	Info	On/Off	Set point

3. Press Enter to enter the menu, UP/DOWN to navigate, ESC to exit.

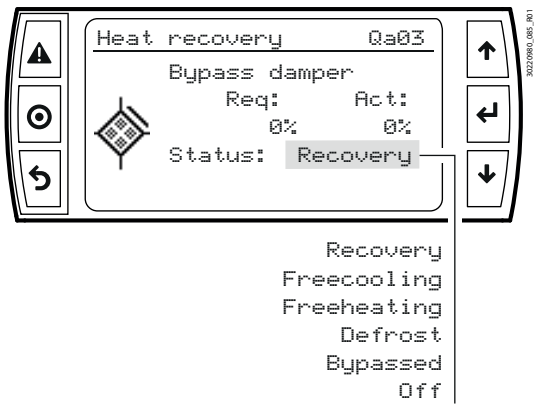
The quick access menu screens are identified by an alphanumeric code at the top right, the first letter Q indicates the quick access menu, the second lowercase letter indicates the submenu branch: a. Info, b. On/Off, c. Set point; finally, the number identifies the screen in the menu.

Info

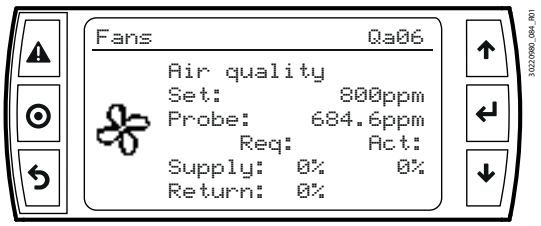
Read-only screens displaying the main unit information:



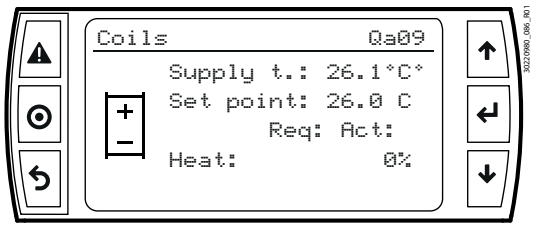
Damper status based on opening time
Outside air, mixing and exhaust damper status



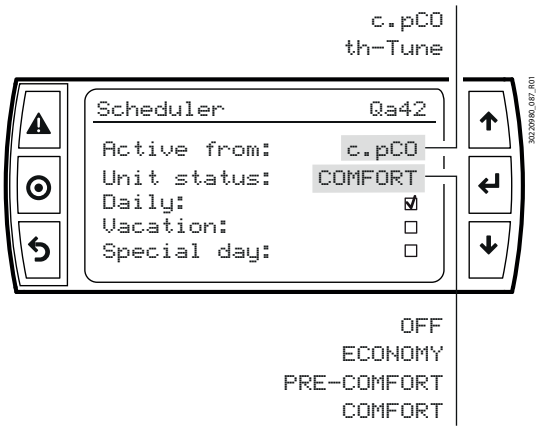
Bypass damper status and request, unit status.



Air quality probe measurement and set point.
Request and % activation of the supply/return fans

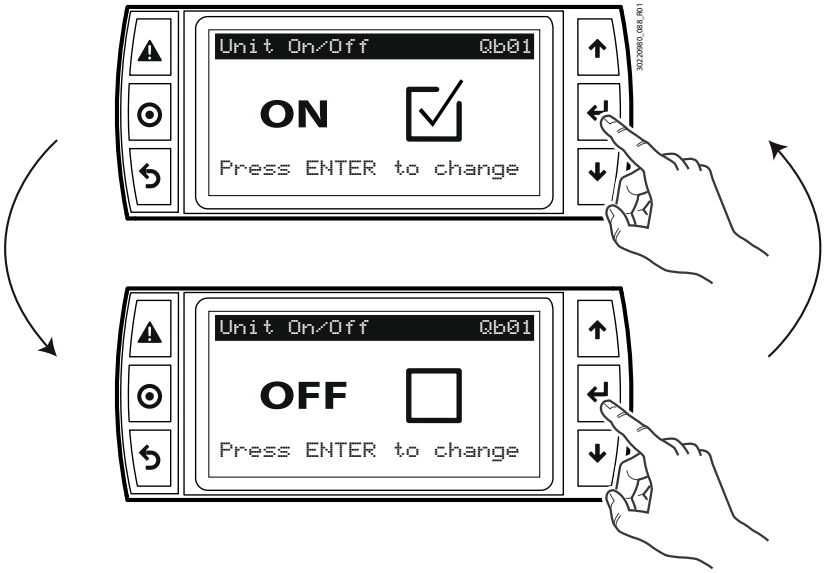


Coil request and activation



Scheduler active from c.pCO controller or from other modes.
Scheduler active: daily programming, holiday program or special days.
The next two screens show information on the software version and operating system, the size of the k.Air controller and the cycle time.

On/Off



Switch the unit on/off from the keypad..

Set point

Read/write and read-only screens displaying the main unit information:

- Temperature, humidity, pressure, flow-rate and air quality set point in relation to the probes available and control functions enabled.
- Operating mode: cooling, heating;
- Summary screen showing the set point value and current operating mode.

Note: the set points shown in this menu differ according to whether or not the scheduler is enabled. With the scheduler disabled, the set points are fixed references and are available even after a power failure. With the scheduler enabled, the set points are temporary until the next profile change (e.g. Comfort, Economy, etc.) and/or unit is switched off. In this case, the reference set points will depend on the profile and will be shown on the screens in menu Aa. Also see the chapter on the Scheduler.

5. TH-TUNE (ACCESSORY)

5.1 Introduction

The th-Tune room terminal is an accessory and is available in flush-mounted and wall-mounted versions.

th-Tune flush mounted

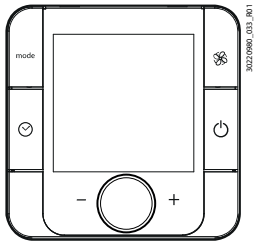


Fig. 5.a

th-Tune wall mounted

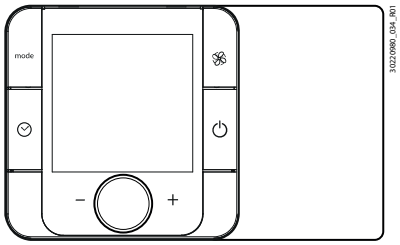
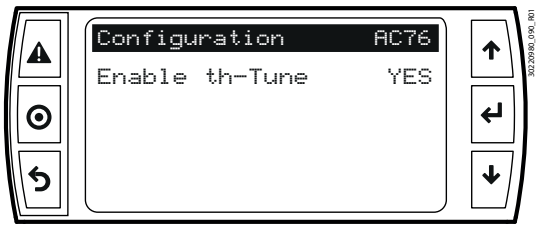


Fig. 5.b

Note: see technical leaflets +0500016IE/+ 0500017IE for assembly of the terminal.

Once connected to the k.Air controller and enabled, th- Tune allows the user to control the room temperature and relative humidity (**NOTE:** the room humidity set point can however only be set on the pGDE terminal) and change the operating mode.. Depending on the model, it can be equipped with a temperature probe or with a temperature and humidity probe.

Configuration from pGDE terminal:



Access screen Ac76 and enable th-Tune;

Rif	Description	DEV	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ac08	PreHeating coil type	0	0	5	-	R/W	HR1296	PIV2804
	Main coil type	0	0	7	-	R/W	HR1297	PIV2805
	PostHeating coil type	0	0	5	-	R/W	HR1298	PIV2806
Ac76	Enable thTune management	FALSE	0	1	-	R/W	CS232	BV232

Tab. 5.a

5.2 Keypad

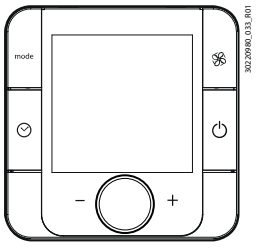


Fig. 5.c

Button	Description	Function
mode	MODE	Select operating mode (Summer, Winter)
	FAN	Select fan speed (3-speed fan only: min, med, max). Press to select the desired operating speed or automatic operation (Auto).
	Power	Unit off/on: the command takes effect after a 5 s delay from pressing the button, to avoid accidentally switching on or off; ESC, return to the previous level.
	Control knob	Turn the knob to set the value and press to confirm

Tab. 5.b

5.3 Display

During normal operation, the display shows, in addition to the current day of the week and time, the status of the fans, the room probe measurement and the operating mode.

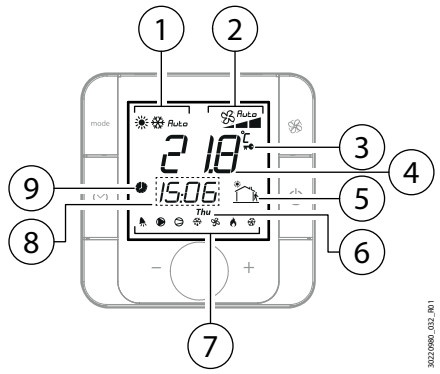


Fig. 5.d

Key

1	Current operation
2	Fan speed in manual/automatic mode
3	Command locked (key symbol shown)
4	Room temperature
5	Current time band
6	Day of the week
7	Alarm icons: alarm, pump, compressor, defrost, fan, heating, cooling. See chap. Alarms
8	Current time (small area)
9	Time bands (active and enabled)

LOCK COMMAND

Button	Cause
	3-speed fan not available
	Time bands not set on pGDE or th-Tune

Tab. 5.c

MESSAGES IN SMALL AREA

Message	Description
OFF by ALRM	OFF due to alarm
OFF by BMS	OFF from Building Management System
OFF by SCHD	OFF from scheduler
OFF by DIN	OFF from digital input
OFF by FAN	OFF due to fan alarm
OFF by COND	OFF due to alarm during start-up
STRT UP	Unit starting
SHUT DOWN	Shutting down

Tab. 5.d

OPERATING MODE	ICON
Summer	
Winter	

Tab. 5.e

FAN SPEED	ICON
Speed 1	
Speed 2	
Speed 3	
Automatic speed	Auto

Tab. 5.f

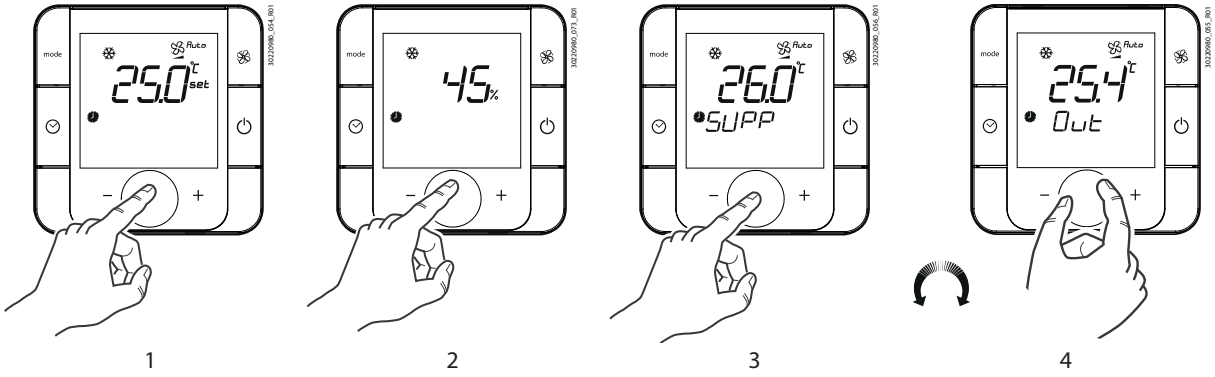
5.4 Setting the time and day of the week

The current time and day of the week can only be set on the pGDE terminal.

⚠ **Important:** setting the time and day of the week on the th Tune terminal HAS NO effect.

5.5 Main data display

Procedure:
Press the knob 1 to 4 times to display the temperature/humidity values:
1. room temperature set point,
2. relative humidity reading;
3. supply probe reading;
4. outside probe reading.



1 2 3 4

After 10 s the terminal returns to the standard display.

Note: the set point will be correctly displayed after selecting the main control probe (Ac18)

5.6 Cambio setpoint

With th-Tune installed, the unit set point is the combination of:
- Main scheduler on k.air
- Change set point using the control knob.

The control knob can always be used to change the main control set point (temperature). This set point will then be permanently active if no scheduler is active, or temporary if one or both schedulers are active. With the scheduler active, whenever the time band changes, the set point will be the reference value for the corresponding time band.

5.7 Fan speed control

Note : for manual operating mode, see chap. "Functions".

The first two parameters concern the fan speed setting in manual mode. Fixed speed is the speed of the modulating fans when operating as ON/OFF fans.

Rif.	Descrizione display	Def.	U.M	Min	Max
Ad09	Supply fan				
	Status	Auto	-	Auto	Manual
	Value	10	%	0	100
Ad10	Return fan				
	Status	Auto	-	Auto	Manual
	Value	10	%	0	100
Ba098	Fixed speed				
	Value Speed 1| Speed 2| Speed 3	Speed 3	%	Speed 1	Speed 3

Tab. 5.g

FANS: ICONS DISPLAYED

Type of fan	Type of management (from pGDE)	(th-Tune) Speeds available	(th-Tune) Icon displayed
On-off (or modulating with fixed speed)	Manual (*)	Fixed speed	
		If fan button is pressed	
3-speed	Manual	None, on/off only	
		If fan button is pressed	
Modulating	Manual	None, on/off only	
		If fan button is pressed	
On-off (or modulating with fixed speed)	automatic (*)	On/off only	
		If fan button is pressed	
3-speed	automatic	3-speed or automatic	
Modulating	automatic	None, only on/off and change set point	
		If fan button is pressed	

Tab. 5.h

(*) manual: manual mode, see chap. "Commissioning" and parameters in group Ad. Automatic: normal operating mode.

6. PGDX AND WEB SERVER (ACCESSORY)

6.1 Introduction

The pGDx terminal, available as an accessory, is intended for unit managers and commissioning technicians, once commissioning has been completed using the pGNE terminal. It can display the web- server graphic pages included on the controller. It is available in the versions with flush or surface wall mounting.

pGDX flush mounting

Fig. 6.a

pGDX surface wall mounting

Fig. 6.b

Notes:

- nonetheless, the pGDx can be used, in the service profile, to view the pGNE terminal screens and to commission the system;
- the pGDx terminal product label shows the MAC Address.

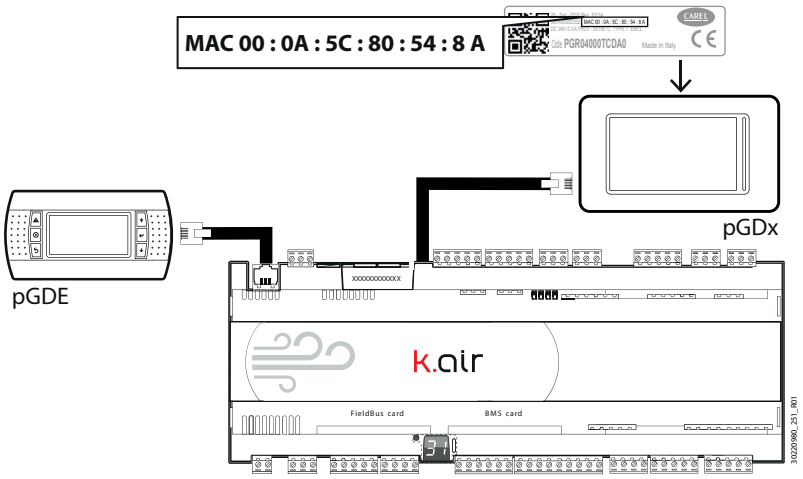


Fig. 6.c

Network connection of the pGDx terminals and k.air

Procedure

1. connect the pGDx terminal to the power supply and the Ethernet cable. See technical leaflet +050001895;
2. once both devices have been powered on, enter: "kair01.local" (figure) in the text box shown on the display.
3. confirm by selecting Check and then, if the network is stable, GO.

Once communication has been established, the initial screen (figure) is shown on the pGDx.

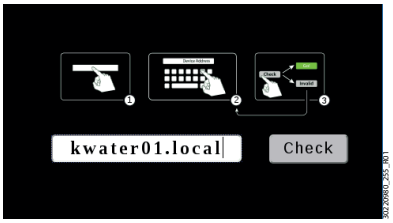


Fig. 6.d

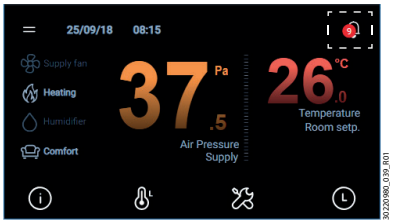


Fig. 6.e

If needing to use the temperature and humidity probes included in the pGDx terminal:

- go to screen Y065 and enter the last 4 digits of the MAC Address. In this way, k.air will acquire the values read by the temperature and humidity probe, which can be assigned as a room temperature and humidity probe for the space where the terminal is located.

The pGDX terminal is now ready to display the pages from the k.air web server, presenting the main information on the controller intuitively and graphically. It can also be used to set the User and Service parameters. The main rule for navigating the pages and setting the parameters is that the clickable areas are identified by white icons and texts.

The main screen shows two main values, selectable by the user via the configuration parameters on screen Ac84; the meaning of the other areas is shown in the figure:

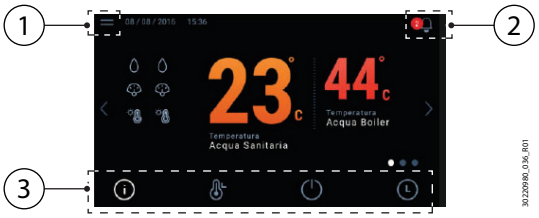


Fig. 6.f

Key

1. Access the main programming menu
2. Access the list of active alarms
3. User menu: info, Set point, On/Off and scheduler

Rif	Description	DEV	Min	Max	UoM	Dir	Modbus	BACnet
SETTING								
Y065	PGDx Browser - MAC Address Last Four Digit - Part 1 -	48	48	101	-	R/W	HR1900	PIV3380
	PGDx Browser - MAC Address Last Four Digit - Part 2 -	48	48	101	-	R/W	HR1901	PIV3381
	PGDx Browser - MAC Address Last Four Digit - Part 3 -	48	48	101	-	R/W	HR1902	PIV3382
	PGDx Browser - MAC Address Last Four Digit - Part 4 -	48	48	101	-	R/W	HR1903	PIV3383
	pGDx - Room temperature	-	-99.9	99.9	°C	R	-	-
	pGDx - Room humidity	-	0.0	99.9	%rh	R	-	-

Tab. 6.a

Rif	Description	DEV	Min	Max	UoM	Dir	Modbus	BACnet
Y099	7seg number	0	1	10	-	R/W	HR1750	PIV3237
	DHCP enabled	-	0	1	-	R	DI725	BV1183
	IP Address (XXX.xxx.xxx.xxx)	-	0	255	-	R	IR550	PIV3864
	IP Address (xxx.XXX..xxx.xxx)	-	0	255	-	R	IR551	PIV3865
	IP Address (xxx.xxx.XXX.xxx)	-	0	255	-	R	IR552	PIV3866
	IP Address (xxx.xxx.xxx.XXX)	-	0	255	-	R	IR553	PIV3867
	Gateway (XXX.xxx.xxx.xxx)	-	0	255	-	R	IR554	PIV3868
	Gateway (xxx.XXX..xxx.xxx)	-	0	255	-	R	IR555	PIV3869
	Gateway (xxx.xxx.XXX.xxx)	-	0	255	-	R	IR556	PIV3870
	Gateway (xxx.xxx.xxx.XXX)	-	0	255	-	R	IR557	PIV3871
	Netmask (XXX.xxx.xxx.xxx)	-	0	255	-	R	IR558	PIV3872
	Netmask (xxx.XXX..xxx.xxx)	-	0	255	-	R	IR559	PIV3873
	Netmask (xxx.xxx.XXX.xxx)	-	0	255	-	R	IR560	PIV3874
	Netmask (xxx.xxx.xxx.XXX)	-	0	255	-	R	IR561	PIV3875
	DNS (XXX.xxx.xxx.xxx)	-	0	255	-	R	IR562	PIV3876
	DNS (xxx.XXX..xxx.xxx)	-	0	255	-	R	IR563	PIV3877
	DNS (xxx.xxx.XXX.xxx)	-	0	255	-	R	IR564	PIV3878
	DNS (xxx.xxx.xxx.XXX)	-	0	255	-	R	IR565	PIV3879

Tab. 6.b

The main programming menu provides access to all of the k.Air controller parameters, also using the function that simulates the user terminal, available by selecting "Service".

Note: when simulating the user terminal, the k.Air controller user menu can also be accessed. For further details, see the c.pCO manual +0300057EN.

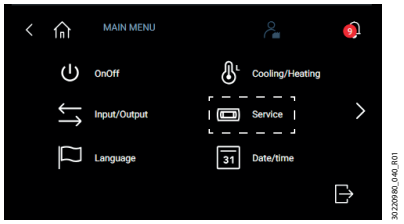


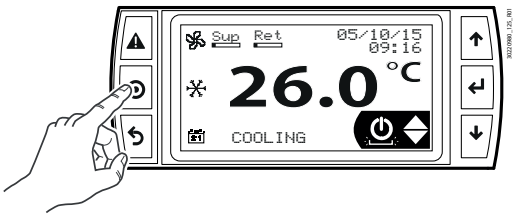
Fig. 6.g

7. MENU DESCRIPTION

7.1 Menu tree

Note : the parameters displayed depend on the password entered. See chap. User interface and the Parameter table;

The parameters accessible on the PGDE terminal are organised into a menu structure based on categories.
Press Prg to access the main menu. Select the parameter category using UP/DOWN and confirm by pressing Enter. If a password is required, enter each digit using the Up/Down buttons and confirm by pressing Enter. If no button is pressed for a certain time, the password will need to be entered again. The menu is based on the devices available on the unit; items corresponding to devices that are not available are not shown.



Enter password

- A. Unit
  - a. Setpoints
  - b. Scheduler
  - c. Configuration
  - d. Manual Mode
- B. Fans
  - a. Configuration
  - b. Supply
  - c. Return
- C. Dampers
- D. Coils
  - a. Main coil
  - b. Preheating
  - c. Reheating
- E. Heat exchanger
- F. Humidifiers
- G. Filters
- H. Auxiliary regulation
- I. IEC
- J. VDI
- T. Alarms logger
  - a. View
  - b. Export
- U. Compressor
  - a. Configuration
  - b. BLDC
  - c. Power+
- V. EXV
- W. In/Out
  - a. Status
  - b. Configuration
- X. Settings
  - a. Date/time
  - b. Language
  - c. Unit of measure
  - d. Pwd change
  - e. Initialization
- Y. Connectivity
- Z. Logout

User parameters

User parameters (A, W, X, Z) are accessible without a password (=0000) and include the following categories:

- A. Unit: Set point (read only), Scheduler, Configuration, Manual mode;
- W. Inputs/outputs: terminal and corresponding value measured. The type of probes and actuators and their position on the terminal block depend on the software loaded on the controller;
- X. Settings: Date/time, Language, Unit of measure, User password change;
- Z: Logout: exit programming menu (and login again with other password).

In quick access menu Qc, users can directly set:

- The temperature set point based on the control probe (supply, room) and static pressure/air flow/air quality;
- Heating/cooling operating mode.

7.2 Service parameters

In addition to the user parameters, the installer (password 1234) can modify the following categories of parameters:

A

a. Temperature set point, pressure/air flow, ppm (air quality), humidity, in the different operating modes: economy, comfort;
b. Daily time bands, closing periods, holidays
   - select the control probe: supply or room;
   - enable and configure dehumidification control;
   - operating mode changeover thresholds based on the outside temperature;
   - freecooling/freeheating settings;
   - enable auxiliary control, enable/disable from BMS;
   - export/import configuration
c. Manual mode:
   - possibility to activate each device at a certain percentage during normal operation

B

a. Type of flow switch, post- ventilation, enable night- time ventilation functions (PID parameters), freecooling/freeheating, air quality control, temperature control (with fans);
b. Supply fan. Request in the event of air pressure/quality probe error, request in the event of frost protection, minimum and maximum output limits, operating hours before maintenance alarm.

Note: parameters Bb07 to Bb22 refer to the ebm-papst EC fan (fan type = Modbus).

c. Return fan. See Bb.

Note: parameters Bc07 to Bc22 refer to the ebm-papst EC fan (fan type = Modbus).

C

a. Damper parameters: (the outside air and mixing damper are ON/OFF or modulating, the exhaust damper is only On/Off), opening time, enable air quality control. For modulating dampers, select the type 0-10 V, for the On/Off damper select the activation logic (see Commissioning);

D

a. PID parameters for pre-heating, main and reheating coils
b. Pump group configuration
c. Heating/cooling mode for the main coil

E

- Heat recovery unit: PID parameters, activation thresholds, defrost parameters;
- Modulating bypass damper: minimum and maximum limits, operating hours;

F

- Humidifier: type (modulating or CAREL humiSonic, Humifog and HumiSteam controlled via serial), set operating hours before alarm;
- Enable humidification control, PID parameters;
- Humidifier operating times: time between washing cycles, read variables;
- FW version, humidifier operating hours and alarm code.

G : **Filters:** operating hours and hours remaining until maintenance.

H : **Auxiliary control:** input probe that acts as an independent variable, set point, minimum and maximum output limits, PID parameters, type of control in cooling/heating - direct or reverse.

W :

a. Input/output status For each logical input/output value, the following can be displayed: analogue input:
   - the input that the current measurement and value are associated with;
   - digital input: the input that the measurement, logical value, activation logic and hardware value are associated with;
   - analogue output: the output that the current measurement and value are associated with;
   - digital output: the output that the measurement, logical value, activation logic and hardware value are associated with.

b. Configuration. For each physical input/output, the following can be set/displayed (for the settings, see "Commissioning"):
   - universal inputs: the board and channel, the type, the description of the associated measurement, the value/status, any configuration errors, any minimum and maximum output limits, offset and filter (depending on the type);
   - digital input: the board and channel, the description of the associated measurement, the status, any configuration errors;
   - analogue output: the board and channel, the type, the description of the associated measurement, the value, any configuration errors, minimum and maximum output limits, any offset and filter; digital output: the board and channel, the description of the associated measurement, the status, any configuration errors;

Y : **Connectivity:** serial port communication parameters;

Z : Exit programming level and login again with different user level (with password).

7.3 Manufacturer parameters

The manufacturer (password 5678) can access all of the read/write parameters. The manufacturer can:

- select the devices, the device opening values in the event of a control probe error, activate the frost protection function both during operation and when OFF, enable auxiliary control, the heating coil, cooling coil and electric heater;
- enable and configure the th-Tune terminal;
- enable the devices on the unit: return fan, heat recovery unit, humidifier, type of fans;
- enable and configure warm-up at power on;
- enable and configure frost protection and frost prevention (low supply temperature);
- select the unit operating mode in the event of a control probe error: (force the unit OFF/activate devices at a fixed %, Ac16);
- select the possible operating modes based on the devices on the unit; set the air pressure/flow-rate conversion coefficient K; select the type of fans, heating device (heater/water coil) and the type (ON/OFF, modulating);
- select the type of heat exchanger (plate/rotary), outside air damper and bypass damper;
- select the type of humidifier (modulating/humiSonic/Humifog /humiSteam).

8. COMMISSIONING

Before commissioning the unit, check that:
- the working voltage range is correct;
- the power cables are sized correctly;
- all of the controller's inputs are connected correctly.

k.Air must be commissioned from the pGDE user terminal.

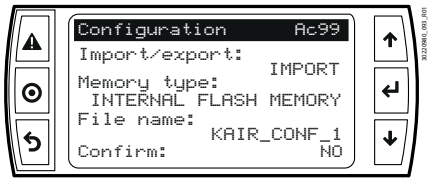
Note: k.Air is factory set for correct display on a pGDE terminal with address 32 in the pLAN network (default); for more details on using the terminal, see manual +0300057EN.

After powering on the controller, k.Air provides the possibility to select the user interface language from the options available (Italian, English). If no setting is made within 30 s from when the selection screen is displayed, the user interface is set in English and the next screen is shown.

Nota: the language can be changed subsequently under Settings ⊠ Language, accessible by pressing Prg ⊙ and scrolling with ↑, ↓, ↵.

After having selected the language, the controller shows a selection screen for configuring the unit, with the following options:
- configurations already pre-loaded on the k.Air controller;
- a custom configuration file saved to USB pen drive;
- Auto-Backup configuration, an automatic backup that is performed every time the unit is switched on;
- skip importing the configuration from file and proceed with manual configuration.

Note: to proceed, the user must choose from the four available options, otherwise the display will remain on this screen.



8.1 Choose pre-loaded configuration

Procedure
1. Press ↵ and select "PRELOADED" using ↑, ↓;
2. confirm by pressing ↵;
3. select the number of the configuration file using ↑, ↓, ↵;
4. confirm the selection by setting "YES" using ↑, ↓ and then press ↵.

⚠ **Important:** unplug any USB cables connected to the USB device port before proceeding with the configuration.

Note: the complete list of configurations preloaded on board the k.Air control is available in the documentation: +030221105.

8.2 Upload configuration from USB pen drive

All k.Air models are equipped with a USB or micro USB host (Master) port that a USB mass storage device can be plugged into (typically a USB pen drive or portable hard disk) so as to load a custom configuration.

Procedure
1. Plug the pen drive into the USB Host port;
2. Proceed as described in the previous paragraph, selecting the "CUSTOM" option.

⚠ **Important:**
- Use only FAT formatted pen drives.
- Do not use mass storage devices with a current draw higher than 500 mA;

8.3 Load from auto- backup

k.Air, independently whenever the unit is switched ON, automatically backs up the unit configuration. This is very useful for restoring parameter settings following a software update, as it is the most recent active configuration that was used by the unit.

Procedure

1. select the "AUTO-BACKUP" option and confirm by pressing ↵.

8.4 Manual configuration

If choosing to configure k.Air manually, select "SKIP"
Then, using the menus, set the parameters that define the unit composition and complete the fine- tuning procedure. The recommended steps are as follows:

Unit>Configuration menu
Set the composition of the air handling unit by enabling the various devices, such as fans, coils, dampers, etc.
This is also used to configure all of the common parts between the various devices, such as control probe, heating/cooling mode selection, frost protection etc.

Device menu
For each device enabled (fans, coils, dampers etc.), a specific menu will be available for fine-tuning the unit. Scroll through all of the menus proposed for the devices

In/Out>Configuration menu
After the devices have been enabled in the previous menus, only the inputs or outputs needed for correct operation of the unit will be shown. Assign a channel for each point proposed. See the chapter on Input/output configuration

Unit>Set point and scheduler menu
Configure the scheduler (if featured) and the reference set points

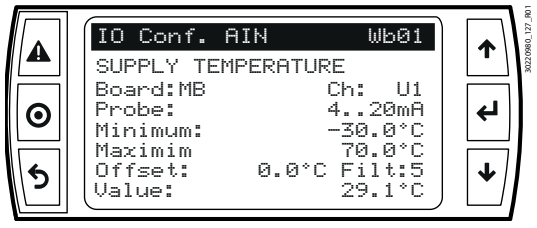
It is recommended to export the unit configuration via screen Ac99 (see chapter 8.10)

Once the configuration of the unit has been completed by choosing the preloaded configurations, custom configuration file or manual guided procedure, the unit shows the main screen and is ready to be switched on. It is always recommended to reboot the unit.

⚠ **Important:** it is recommended to carefully check the parameters before switching the unit on, so as to avoid possible malfunctions relating to an incorrect configuration.

8.5 Input/output configuration

k.air features free input/output mapping. For each device, sensor or contact (referred to as "points"), an acquisition channel needs to be selected from those available on the main board or expansions.
Menu W.In/Out is used to configure and check the inputs and outputs connected to the k.air controller.



There are four configuration screens:
- Wb01 - AIN (analogue inputs)
- Wb02 - DIN (digital inputs)
- Wb03 - DOUT (digital outputs)
- Wb04 - AOUT (analogue outputs).

Each of these shows a scrollable list of all the inputs/outputs available, filtered based on the unit configuration, so as to assign the reference channel and set the other fundamental parameters for processing the signal.
The following acquisition channels are available:

ID	Type	Description
1	MB	Main board
2	E1	Expansion 1
3	E2	Expansion 2
4	E3	Expansion 3
5	E4	Expansion 4
6	SERIAL	Serial probes (max 10) and pGDx
7	KWATER	Probes connected to k.water
8	THTUNE	Th Tune room terminal probes

ID	Type	Description
9	PGDX	PGDX terminal probes
10	C1	Custom serial probe 1
11	C2	Custom serial probe 2
12	C3	Custom serial probe 3
13	C4	Custom serial probe 4
14	C5	Custom serial probe 5
15	IAQ	IAQ serial probe
16	BMS	Sonda da registro BMS

Tab. 8.a

Note: the channels already associated with a point cannot be reused; k.air filters the channels and only proposes those that are free, depending on the type of HW selected.

Note: universal channels ("U") are available as AIN, DIN and AOUT.
The following parameters are available for each point:

Group	Parameter	Description
AIN	Probe type	0:--; 1:NTC; 2:NTC-HT; 3: NTC-80; 4:PT1000; 6: 0..1V; 7: 0..10V; 8:0..5Vdc c.pco; 9:0..5Vdc ext; 10:0,5..4,5V; 11: 4..20mA; 12:0..20mA; 13: COUNTER; 14:FREQUENCY;
	Minimum	Minimum conversion range for active probes
	Maximum	Maximum conversion range for active probes
	Offset	Probe calibration
	Filter	Sensor filter (0: no filter ... 9: high filtering)
DIN	Logic	NC / NO contact logic
DOUT	Logic	NO / NC contact logic
AOUT	Minimum	Minimum output signal conversion value
	Maximum	Maximum output signal conversion value

Tab. 8.b

Note: the minimum and maximum conversion values rescale the output signal. Specifically, the minimum value is also active when the unit is OFF.

8.6 Unit of measure

The k.Air controller is configured to display International System units of measure. Access screen Wc01 to set a different unit of measure, if desired. The options are international system (Int), Imperial (UK) and other systems used in the United States (USA) and Canada (CAN). Below is a table showing the units of measure for each physical measurement, according to the selected system.

Ref.	Display description
Xc01	Unit of measure setting bar/°C/Pa/m3h ¦ KPa/°C/Pa/m3h ¦ psi/°F/"wc/cfm ¦ psi/°C/"wc/cfm ¦

Selection	Refrigerant circuit pressure	Temper.	Static pressure	Flow-rate	CO2	Humidity
bar/°C/Pa/m 3 h	bars	°C	Pa	m3/h	ppm	% H.R.
KPa/°C/Pa/m 3 h	KPa	°C	Pa	m3/h	ppm	% H.R.
psi/°F/"wc/cfm	psi	°F	"wc	cfm	ppm	% H.R.
psi/°C/"wc/cfm	psi	°C	"wc	cfm	ppm	% H.R.

Tab. 8.c

8.7 Hour counter setting for each device

The maximum number of operating hours can be set for each device. When the threshold is exceeded, a warning is displayed, which has no effect on control, and is cleared once maintenance has been carried out and the hour count has been reset. The number of maintenance hours is pre-set to 30000; to change the value, see the following screens.

Ref.	Display desc.
Ae01	Unit hours
Ae03	Supply fan
Ae06	Return fan
Ae09	Dirty filters
Ae12	Thermal wheel
Ae15	Compressor
Ae18	IEC
Ae21	Humidifier
Ae24	Auxiliary 1 (on/off)
Ae27	Auxiliary 1 (modulating)
Ae30	Main coil pump 1
Ae33	Main coil pump 2
Ae36	Main coil (modulating)
Ae39	Main coil heater 1
Ae42	Main coil heater 2
Ae45	Main coil heater 3
Ae48	Main coil heater 4
Ae51	Preheating coil pump 1
Ae53	Preheating coil pump 2
Ae55	Preheating coil (modulating)
Ae57	Preheating coil heater 1
Ae60	Preheating coil heater 2
Ae63	Preheating coil heater 3
Ae66	Preheating coil heater 4
Ae69	Reheating coil pump 1
Ae72	Reheating coil pump 2
Ae75	Reheating coil (modulating)
Ae78	Reheating coil heater 1
Ae81	Reheating coil heater 2
Ae83	Reheating coil heater 3
Ae84	Reheating coil heater 4
Ae99	Reset all counters

Tab. 8.d

8.8 FieldBus serial port configuration

The k.Air software manages the devices that communicate via the FieldBus (modello mini/smart) or Fieldbus2 (large model) serial network using the Modbus protocol, with the following frame:

- baud rate: 19200;
- parity: none;
- stop bits: 2.

The device addresses must be set as shown in the table:

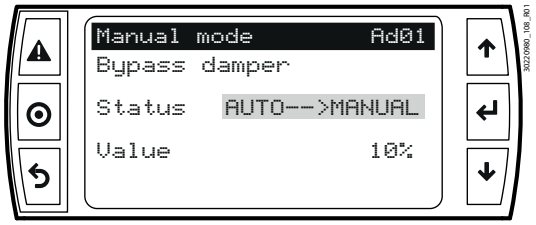
Addr.	Modbus Devices
34..37	SupplyFan 1...4
30..33	ReturnFan 1...4
1...4	c.PCOe
10	µChiller
1	Power+
5	Humisonic
6..7	Humifog (main and IEC)
128…137	Serial Probe 1..10
9	Th-Tune

Tab. 8.e

Check the manual or technical leaflet for each device for the correct serial address setting. The communication frame and baud rate can however be changed on screen Y010.

8.9 Manual mode

During normal operation (unit ON), the unit may need to be controlled manually, especially for commissioning/service requirements. In this way, a specific device can be excluded from the control algorithm and switched off or operated at a certain percentage.
When at least one device is operated in manual mode, the unit status shown on the main screen is "manual".



⚠ **Important:** during manual operating mode, all alarms, interlocks, safety times and delays are enabled. Manual mode ends when the user switches the device from "manual" to "auto".
When the unit is switched back to automatic operation, control resumes and progressively reaches the same status as prior to entering manual mode, via the incremental PID control algorithm.

Note: manual mode remains active even after a restart due to a power failure.

8.10 Save configuration

After setting all of the desired parameters, the resulting configuration can be saved so as to be able to restore the same conditions subsequently or copy the configuration to another controller. The export file is in .txt format and contains with the default values of the variables.

⚠ **Important:** when loading a configuration, all of the parameters are set to the value saved in the file, and therefore any subsequent changes will be lost.

⚠ **Important:** unplug any USB cables connected to the USB device port (k.Air large) before loading a configuration.

8.10.1 Save/load to the controller's internal memory

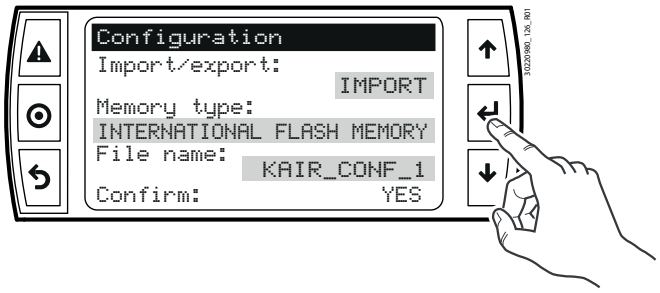
Save configuration
Procedure:

1. access screen Ac99;
2. select "Export" and "Internal flash memory";
3. type the file name and confirm;
4. a confirmation message is shown to indicate that the operation was successful.

Note: write down the name of the file containing the configuration for subsequent operations.

Load configuration

1. access screen Ac99;
2. select "Import", "Internal flash memory";
3. type in the exact file name and confirm;
4. a confirmation message is shown to indicate that the operation was successful.



Note: Following confirmation, a compatibility check of the loaded configuration will be performed. If the following screen appears, it is recommended to review the following parameter categories:

- Unit setpoint (Aa03-Aa36)
- External temperature compensation thresholds (Aa87-Aa90)
- Serial fans (Bb09-Bb21)
- Hot/cold changeover (Qc04, Ac28, Wb01)

8.10.2 Save/load to USB pen drive

Save configuration

Procedure:

1. connect a USB pen drive with micro USB connector;
2. access screen Ac99;
3. select "Export" and "USB";
4. type the file name and confirm;
5. a confirmation message is shown to indicate that the operation was successful. The file has been copied to the USB pen drive.

Load configuration

1. connect a USB pen drive with micro USB connector;
2. access screen Ac99;
3. select "Import", "USB";
4. type in the exact file name and confirm;
5. a confirmation message is shown to indicate that the operation was successful.

9. FUNCTIONS

9.1 Activation

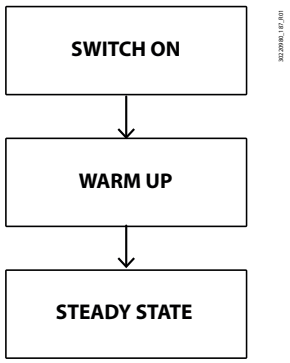


Fig. 9.a

The k.air software enables the unit to be switched on only if all of the enabled commands are set to ON (from pGDE/thTune, BMS, digital input, scheduler). When the unit is switched on, a procedure is activated to verify all of the safety conditions and activate the devices following a certain sequence; the dampers are opened 100% and the unit will complete the warm-up procedure, if enabled, before switching to steady state operation, in the active control mode.

Nota: durante la fase di warm-up è possibile forzare i dispositivi ad una certa percentuale.

9.1.1 Damper opening check

When the unit is switched on, after the damper opening time, a procedure verifies via digital contact (feedback) that these dampers are opened correctly. If this is not the case, an alarm is generated which switches the unit off. It is only during the start-up phase that the digital contact for the damper to be tested is correctly configured. The procedure does not allow the bypass damper to be checked.

9.1.2 Flow switch check

When the unit is switched on, a procedure checks for air flow after the fan has been activated. If there is no flow, an alarm is activated that shuts the unit down. After the fan starts, a set signal waiting time will elapse, which differs according to the phase of operation: start- up or steady state. This procedure is repeated for a set number of attempts, after which an alarm is generated that shuts down the unit, with manual reset. If the fan is running (steady state), the flow switch, when activated, generates an alarm that shuts down the unit after the first attempt.

The figure shows an example of starting with three attempts set.

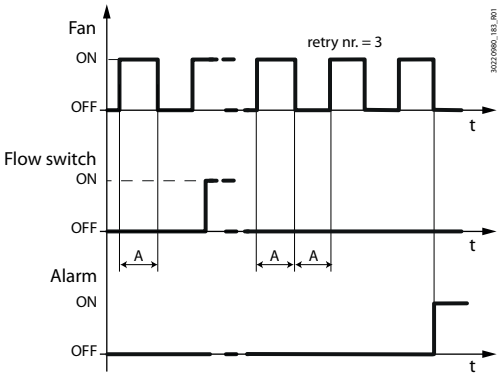


Fig. 9.b

Key

Fan	Fan
Flow switch	Flow switch
Retry nr.	Number of attempts
A	Delay at start-up
Alarm	Alarm
t	Time
B	Delay in steady state

If the flow switch is activated during steady state operation, the behaviour is shown in the figure.

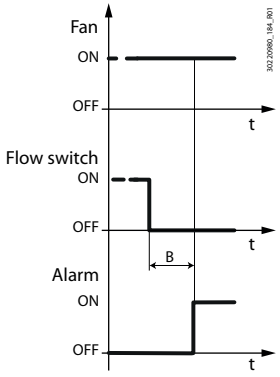


Fig. 9.c

Key

Fan	Fan
Flow switch	Flow switch
Retry nr.	Number of attempts
A	Delay at start-up
Alarm	Alarm
t	Time
B	Delay in steady state

9.1.3 Warm up disabled

On start-up, the fresh air, exhaust and bypass dampers are opened completely. The next phase starts after a delay (opening time - "Ca01") to allow complete opening. If the return fan is fitted, this is started, and the supply fan is then activated after the "supply fan delay". The unit then switches to steady state operation.

9.1.4 Warm up enabled

If the mixing damper is:
1. fitted: it is opened completely;
2. absent: the fresh air and exhaust dampers are opened completely.

Then, if fitted, the return fan is activated and after the "supply fan delay", the outside air temperature is checked. If:
1. the outside air temperature is lower than the threshold: the heating/mixed coil, the bypass damper and the supply fan are activated, at the percentage defined by the parameter, for the "Warm- up delay" time.
2. the outside temperature is higher than the threshold: normal control starts immediately.

After the warm-up phase, the unit switches to steady state operation.
Warm-up can also be enabled without an outside air temperature probe. In this case, the warm up will always be performed and will end after a time equal to the "warm-up delay".

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ac44	Enable warm up procedure during start up state	FALSE	0	1	-	R/W	CS228	BV228
	Low external temperature threshold for the activation of warm up procedure	-1.0	- 99.0	99.0	°C	R/W	HR1329	AV2837
	Settable delay between return and supply fan activation (seconds). To be used only when warm up procedure is disabled	15	1	999	s	R/W	HR1330	PIV2838
	Warm up delay time	15	1	60	s	R/W	HR1331	PIV2839
	Warm up fan activation delay time	15	0	600	s	R/W	HR1332	PIV2840

Tab. 9.a

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
DAMPERS								
Ca01	Damper opening time	120	0	65535	s	R/W	HR1639	PIV3134

Tab. 9.b

9.2 Shutdown

In the same way as when switching on, the k.Air software enables the unit to be switched off if at least one of the enabled commands is set to OFF (PGD1/th-Tune, BMS, DI, Scheduler). Once the command is
received, the unit goes into shutdown status, during which the devices follow a specific sequence until the unit is completely switched OFF. This sequence includes:
1. deactivation of the coils, electric heaters, heat recovery unit and compressor (following the ramps and/or timings)
2. deactivation of the fans after the post-ventilation time, counted from the end of phase 1.
3. closing of the dampers.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
FANS								
	Fan post ventilation time	10	0	600	s	R/W	HR1500	PIV3001
Ba12	Enable fan temperature regulation	FALSE	0	1	-	R/W	CS479	BV4369
	Enabling the selection of the temperature regulation for the fans	-	0	1	-	R	DI703	BV1161
	Enable fan temperature limit regulation	FALSE	0	1	-	R/W	CS246	BV246

Tab. 9.c

After the damper travel time (settable on screen Ca01), the unit will be OFF.

Note: during the shutdown phase, certain configuration parameters cannot be modified in the same way as for normal operation.

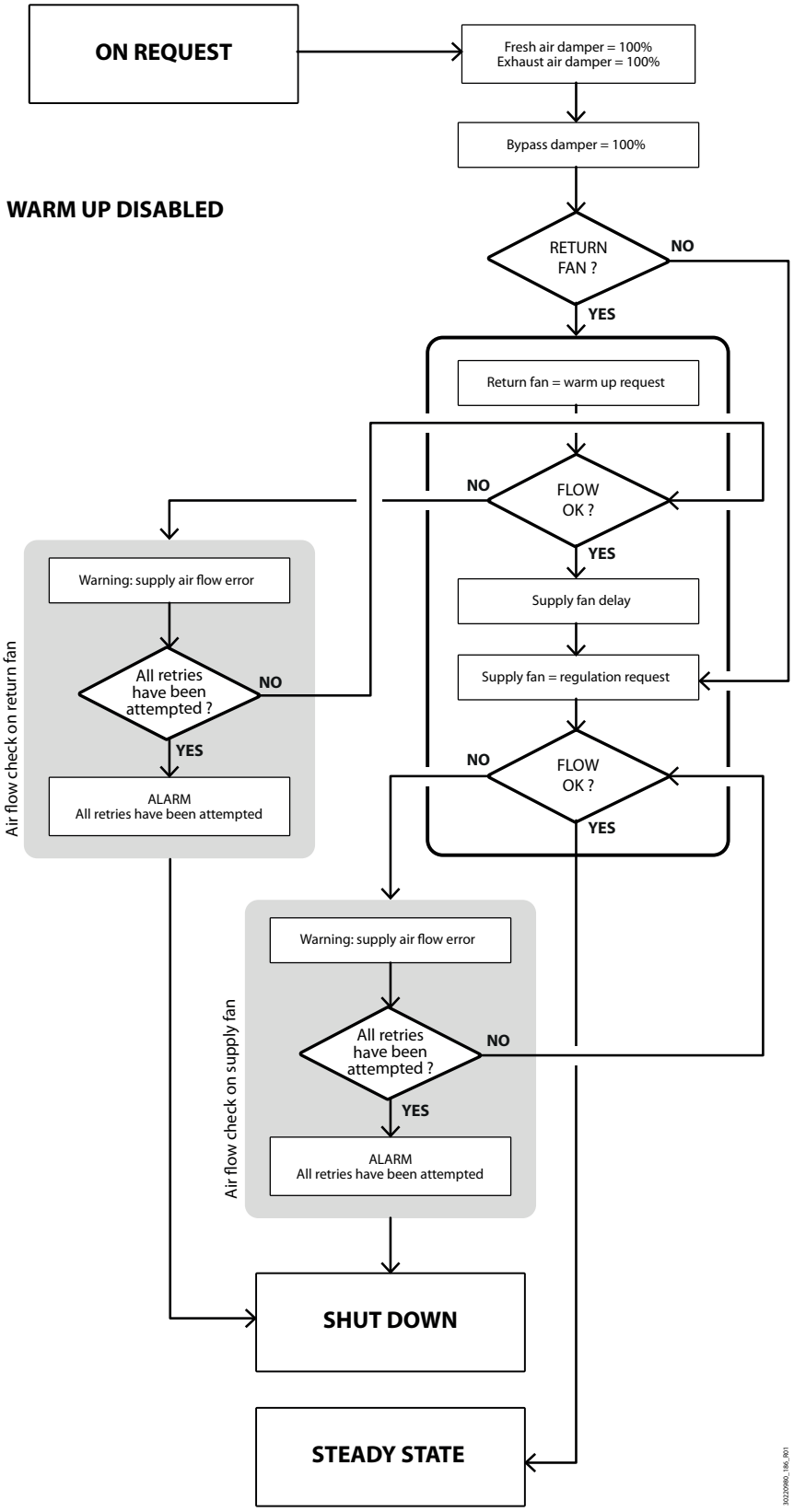

ON REQUEST
Fresh air damper = 100%
Exhaust air damper = 100%
Bypass damper = 100%
WARM UP DISABLED
RETURN FAN ?
NO
YES
Return fan = warm up request
NO
FLOW OK ?
YES
Supply fan delay
Supply fan = regulation request
NO
FLOW OK ?
YES
Warning: supply air flow error
All retries have been attempted ?
NO
YES
ALARM
All retries have been attempted
Air flow check on return fan
Warning: supply air flow error
All retries have been attempted ?
NO
YES
ALARM
All retries have been attempted
Air flow check on supply fan
SHUT DOWN
STEADY STATE

Fig. 9.d

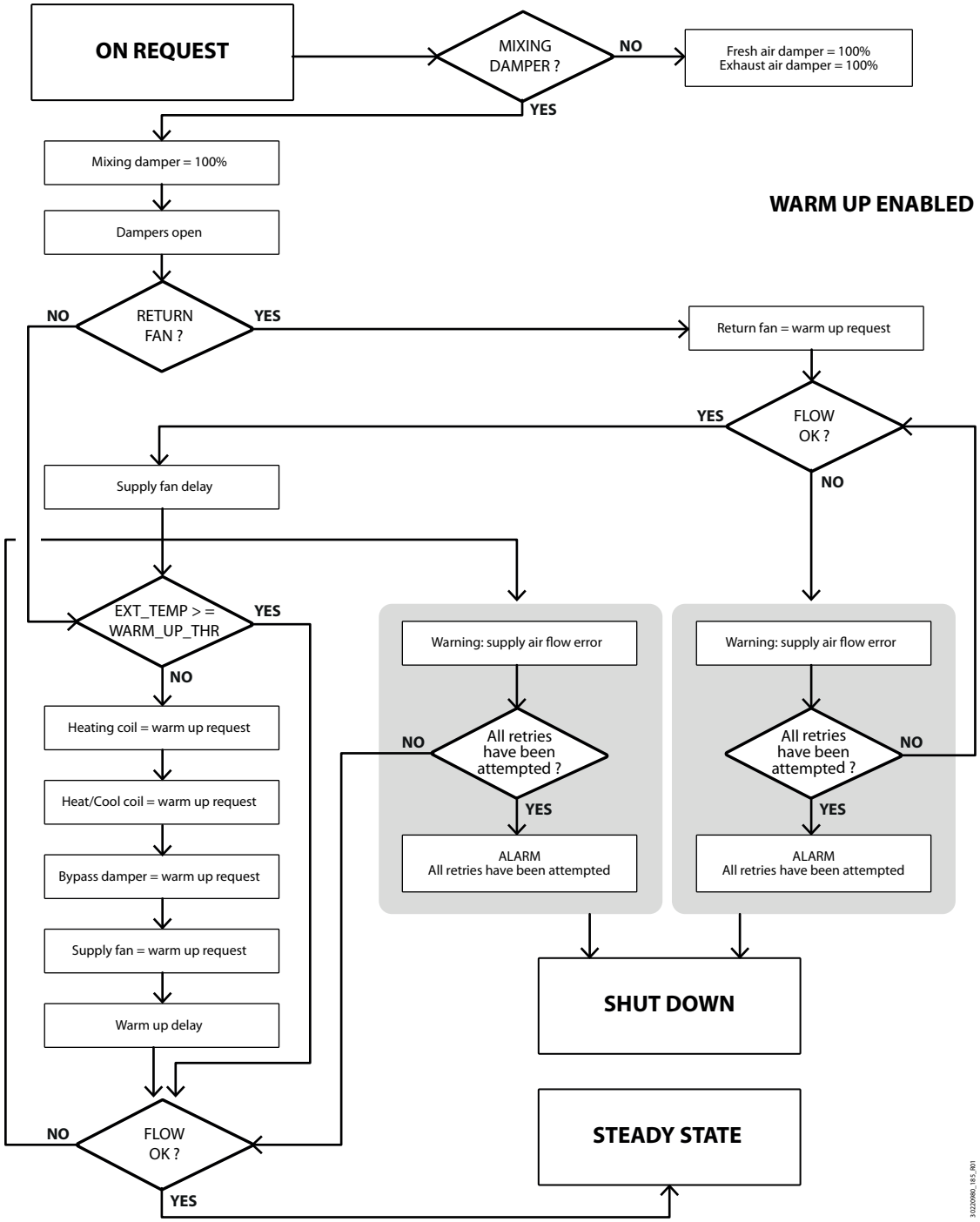


Fig. 9.e

9.3 Types of control

The main temperature control on the unit is using one of the following probes or combinations:

1. Supply
2. Return
3. Room
4. Return+supply
5. Room+supply

In the first three modes, the temperature control request depends directly on the comparison between set point and the selected probe reading. In the remaining two modes, cascade control is activated, so as to simultaneously control two points: the temperature request is always calculated based on the supply temperature probe, the supply set point is calculated using the return set point (considered as the main set point) by adding/subtracting an offset, based on the deviation of the return/room probe values. See the chapter on Temperature control for more details.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ac18	Regulation type (0: Supply only; 1:Return only; 2: Room only; 3: Return + Supply; 4: Room + Supply; 5: Disabled)	5	0	5	-	R/W	HR1307	PIV2815
Ac32	Humidification/Dehumidification: Control probe	0	0	2	-	R/W	HR1318	PIV2826
	Humidification/Dehumidification: Control type	0	0	1	-	R/W	HR1319	PIV2827

Tab. 9.d

Auxiliary control functions:

1. **humidity:** the humidity request is sent by the controller to a humidifier via the 0-10 V output or via the Modbus serial port (CAREL humiSonic, Carel Humifog, Carel HumiSteam);
2. **dehumidification:** the controller sends the request, either directly or via the dew point calculation, to the main coil.
3. **air quality:** the controller modulates the fan speed and/or the opening of the fresh air damper;
4. **pressure:** the controller modulates the fan speed, based on the pressure set point.
5. **air flow-rate:** the controller modulates the fan speed, based on the supply set point.
6. **fan speed:** the control acts by modulating the fan speed, based on the temperature setpoint.

Note: for points 4 and 5 see chapter "Fan speed control".

9.4 PID control

The controller features 4 types of control:

- Cascaded PID;
  Cascade control is applied to the main temperature controller with multiple control points (room + supply or return + supply) or air quality controller.
- Sequential PID;
  Sequential control features a single control point and activation of multiple actuators, so as to give priority to energy savings. This is used for supply temperature control, for example.
- Incremental PID;
  This features a single control point and a single actuator. It is used for independent control functions, such as air flow control.
- Algorithm PID
  The control manages a single control point and a single actuator. It is used in independent adjustments such as the request to the external air pre-treatment coil.

9.4.1 Cascaded PID

The cascaded PID is used for the following control functions:

- Main temperature control with return + supply probe
- Main temperature control with Room+Supply
- Air quality control with fans and pressure or flow control.

This type of control is aimed at keeping two control points linked together. The output of the PID controller on the first control point calculates a set point that is used as the reference by the PID that controls the second set point. The first control point, and its corresponding PID, is considered the main control function, while the second is used to limit the operating range inside predefined limits. For example, with return + supply temperature control, the main control is based on the return temperature, and any deviation from the return set point causes the supply temperature set point to be lowered in cooling mode and increased in heating mode, always within a predefined range. If the fan temperature control function is enabled, the working setpoint and the fan request will be calculated by adopting a sequential PID and then, after the maximum load of the fan request is reached, the setpoint will be calculated (see "Fan temperature control").

9.4.2 Sequential PID

The k.Air controller has different functions and devices that can act alone or in a coordinated way to ensure the best indoor comfort conditions. Each of these devices may either be present or absent, or enabled or disabled on the unit; therefore, depending on the situation, it will have a different impact on energy consumption during operation. Each device is activated only after the previous device reaches full load. Considering then that each device will make a different contribution in terms of deliverable capacity and response time, each individual actuator can be calibrated with its own gain and integral time.
Below is a functional diagram of sequential PID control: with a single set point and a series of PID parameters for each device, the request is divided into a series of sub- requests, corresponding to the number of devices.

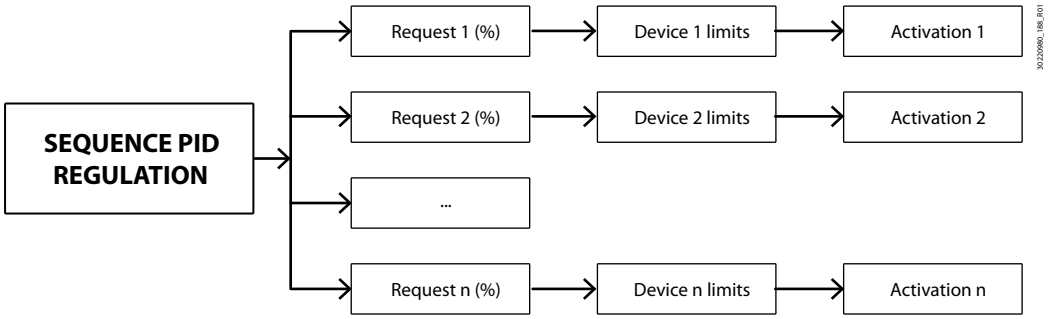


Fig. 9.f

Two control functions use sequential PID:

1. Single point control temperature control (supply, return, room) or when subordinated to cascade control (room + supply, return + supply)
2. Air quality control

Temperature control in cooling mode

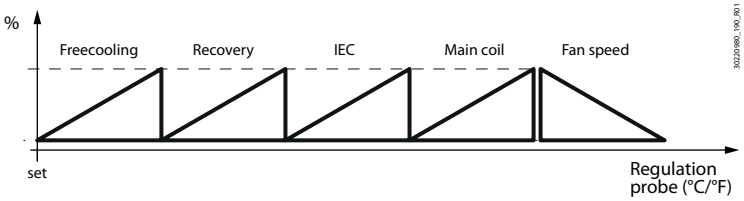


Fig. 9.g

Temperature control in heating mode

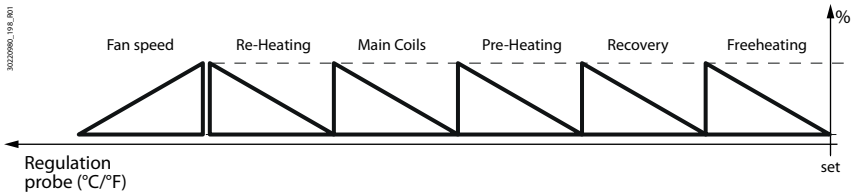


Fig. 9.h

Note: freecooling/freeheating and heat recovery are considered alternatives, as during freecooling/freeheating the bypass damper is open and heat recovery is disabled.

Air quality control

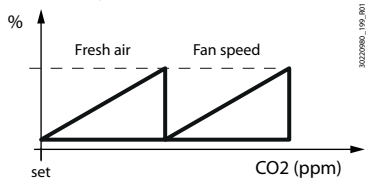


Fig. 9.i

Fan temperature control in heating mode

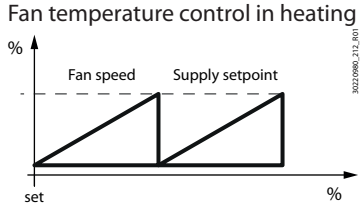


Fig. 9.k

Fan temperature control in cooling mode

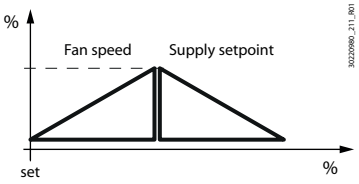


Fig. 9.j

Note: the working setpoint for the supply temperature will be calculated as a percentage, therefore the control points will be considered as such. The result will then be scaled in temperature between the unit setpoint and its maximum limit if the unit is in heating mode, or between minimum limit and unit setpoint if the unit is in cooling mode.

Calculation of the request for each device

The first request is calculated as shown in Fig. D1, where only the proportional part is shown. If there are two devices, the set point is the same and the second request starts when the first has reached 100%. The request sent to the second device is equal to A, but according to the incremental PID algorithm, the second request also starts from zero, as if the curve for the second device were shifted to the right by the value of Diff_1.

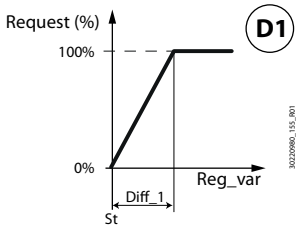


Fig. 9.l

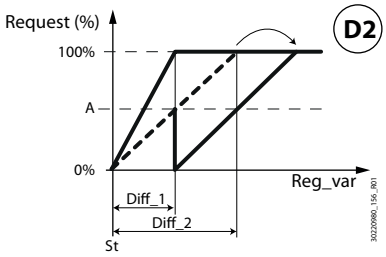


Fig. 9.m

Key

Request	Request
Reg_var	Control variable
A	Offset
St	Set point
Diff_1/2	Differential 1/2

Note : the examples use the term differential, while gain (kp) is used in the sett. The relationship is differential=100/kp.
If the first device has a lower limit "Lim1" for the activation request, it will be activated as shown in Fig. L1. Similarly for the second device, shown in Fig. L2.

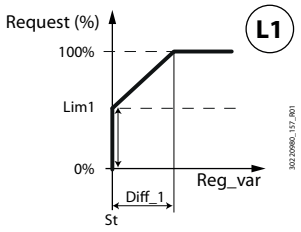


Fig. 9.n

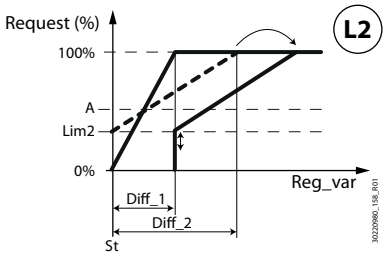


Fig. 9.o

Key

Request	Request
Reg_var	Control variable
Lim1	Minimum activation limit for device 1
A	Offset
St	Set point
Diff_1/2	Differential 1/2
Lim2	Minimum activation limit for device 2

Sequence control if devices not available

If there are two devices that can be activated to meet a request and the first is not available, the request is sent to the second. If in the meantime the first device becomes available again, the second is kept active and the first is activated at 100% output. This makes the response faster.

9.4.3 Incremental PID

Incremental PID is the most common control mode on k.air. It is used for a single point control and is based on a PID controller designed to avoid variations in the output in the event of variations to the set point.
Typically, the output is always limited between a minimum and maximum control value.

The incremental PID is used in the following algorithms:
- Dehumidification control
- Humidification control
- Fan flow or pressure control
- Control for auxiliary loop
- Supply limit control
- etc.

For each control point, the following are typically available:
- kp, proportional gain (differential = 100/kp)
- ti, integral time
- td, derivative time
- minimum and maximum control limits.

9.4.4 Algorithm PID

The PID algorithm is used as control at a single point for the raggiungimento of a specific setpoint, ie it is based on a standard PID controller composed of proportional, integral and derivative factors.
Typically it is always limited to a minimum and a maximum of regulation.

The PID algorithm is used with the following algorithms:
- External air pre-treatment battery temperature control

For each setpoint the following are typically available:
- kp, proportional gain (differential = 100/kp)
- ti, integral time
- td, derivative time
- minimum and maximum adjustment limits.

9.4.5 Dead band

For all types of control, where the dead band is configured and if the control probe reading is inside the dead band, the probe continues to be controlled, but the output is not modified. When the signal moves outside of the dead band, the output is increased, or decreased, without sudden variations.

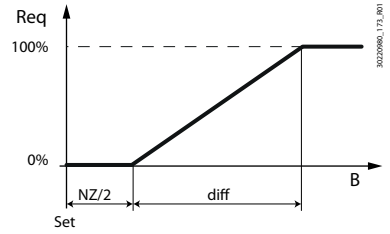


Fig. 9.p

Key

Req	Request
Set	Set point
NZ.	Dead band
Alarm	Alarm
diff	Differential
B	Control probe

9.5 Temperature control

As described under "types of control", different probes can be selected for temperature control, so as to best adapt to design requirements. In addition to the main temperature control function, the supply limits are also controlled.
Depending on the selected probe, specific control functions will be activated:

Control probes	Main control	Supply limit control
Supply	Sequential PID, single-point control on selected probe	-
Return		available
Room		available
Room + supply	Cascaded PID on room or return probe + Sequential PID on supply probe	-
Return + supply		-

Tab. 9.e

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ac18	Regulation type (0: Supply only; 1:Return only; 2: Room only; 3: Return + Supply; 4: Room + Supply; 5: Disabled)	5	0	5	-	R/W	HR1307	PIV2815
Ac40	Free cooling PID parameters - Proportional gain	8.0	0.0	999.9	-	R/W	HR1325	AV2833
	Free cooling PID parameters - Integral time	120	0	999	-	R/W	HR1326	PIV2834
Ac42	Free heating PID parameters - Proportional gain	8.0	0.0	999.9	-	R/W	HR1327	AV2835
	Free heating PID parameters - Integral time	120	0	999	-	R/W	HR1328	PIV2836

Tab. 9.f

Temperature control on supply, return or room probe

Sequential PID control is used, which progressively activates all of the actuators available on the unit as set in the configuration menu.
For correct operation of this function, the following need to be set:

- The PID parameters relating to each individual actuator, considering the type of probe selected; the supply probe will have fast response times compared to return and room control
- Supply, return or room set point
- With return or room control, evaluate enabling supply limit control.

Room temperature control + supply or return + supply

Two control functions are available. A first cascade control function, controlling the room or return temperature, will calculate the supply set point, which will be used by the sequential PID to precisely control the supply probe value. This function controls the return or room temperature by modulating the unit's heating or cooling capacity via supply control with a fixed set point.
For correct operation of this function, the following need to be set:

- The PID parameters relating to each individual actuator, used for the sequence managed by the sequential PID
- The PID parameters relating to cascade control, used to calculate the supply set point
- The minimum and maximum supply limits, used as the control range for calculating the supply set point
- Room or return set point

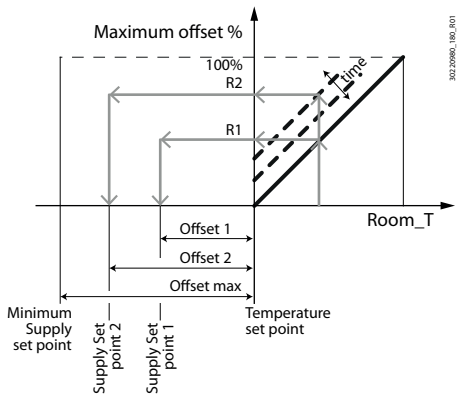


Fig. 9.q

Key

Minimum supply setpoint	Minimum supply set point
Supply setpoint 1/2	Supply set point 1/2
RoomRet_T	Room or return temperature
RoomRet_Set	Temperature setpoint
Time	Time

Supply temperature limit control

The algorithm corrects the actions implemented by the main control function so as to remain within acceptable supply temperature values. This occurs, and is a required condition, when the main temperature control is not supply temperature control. The function uses a minimum and a maximum limit, with diversified actions according to the operating mode, heating or cooling.

	Low temperature limit	High temperature limit
Heating mode	In the event where the return set point has been reached but there is an active air quality control request. This leads to the introduction of cool outside air below the minimum limit. The limit function will thus increase the output of the heating devices.	Return temperature control may lead to the introduction of excessively hot air, due for example to overloading of the heating coils. The limit function will thus gradually reduce the output of the heating devices.
Cooling mode	Return temperature control may lead to the introduction of excessively cold air, due for example to low outside temperatures or overloading of the cooling coil. The limit function will thus gradually reduce the output of the cooling devices (coils and freecooling) and subsequently activate the heating devices, where available.	In the event where the return set point has been reached but there is an active air quality control request. This leads to the introduction of excessively hot outside air, above the minimum limit. The limit function will thus increase the output of the cooling devices.

Tab. 9.g

The minimum and maximum supply limits are available in loop A.Unit> C.Config and are always visible. It is possible to set a gain and integral time to calibrate the response of the limit control function.
The same thresholds are also used as an alarm that, with a suitable delay at start-up/in steady state, shuts the unit down (OFF) when reaching the minimum limit in cooling mode and the maximum limit in heating mode. In other cases, the alarm does not shut the unit down and is signal-only.

For adiabatic humidification, the production of humidity is also limited as the last stage of the low supply temperature limit function. This accessory function is also active, as the only limit stage, in the main supply temperature control function. Below is a summary of the limit action.

	Main control, return or room temperature	Main control, supply temperature
Heating mode	The limit function is active as the last stage; after increasing the output of the heating devices, adiabatic humidification output is reduced	The limit function reduces adiabatic humidification output only
Cooling mode	The limit function is active as the last stage; after increasing the output of the cooling devices, adiabatic humidification output is reduced	The limit function reduces adiabatic humidification output only

Tab. 9.h

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ac60	Low supply temperature threshold	16.0	0.0	25.0	°C	R/W	HR1354	AV2862
	Low supply temperature alarm delay time at start up	999	0	65535	s	R/W	HR1355	PIV2863
	Low supply temperature alarm delay time at unit in run mode	600	0	65535	s	R/W	HR1356	PIV2864
Ac62	High supply temperature threshold	32.0	0.0	40.0	°C	R/W	HR1357	AV2865
	High supply temperature alarm delay time at start up	999	0	65535	s	R/W	HR1358	PIV2866
	High supply temperature alarm delay time at unit in run mode	600	0	65535	s	R/W	HR1359	PIV2867
Ac64	Low supply temp: proportional part	8.0	0.0	999.0	-	R/W	HR1360	AV2868
	Low supply temp: integral time	120	0	999	s	R/W	HR1361	PIV2869
Ac66	Purge function - Time	10	0	999	min	R/W	HR1949	PIV3972
	Purge function - Automatic mode	0	0	3	-	R/W	HR1950	PIV3973
	Purge function - Start hour	0	0	23	h	R/W	HR1951	PIV3974
	Purge function - Start minute	0	0	59	min	R/W	HR1952	PIV3975

Tab. 9.i

9.6 Summer/Winter and Cooling/Heating

The k.Air controller is extremely flexible in adapting to the temperature control demands and characteristics of the system so as to respond to changes in season or over a day. The unit can operate (Ac22):
The unit can change season (Ac22) according to :

- Outside temperature;
- Digital input;
- BMS;
- Keyboard;
- k.water;
- thTune;
- Water coil;
- Date

It is also possible to choose the heating/cooling changeover mode according to:

- Season (Summer: cooling only; Winter: heating only)
- Automatic from temperature control

Type of changeover summer/winter	Description	Note
Auto from outside temperature probe	The unit switches according to outside temperature thresholds	
Manual from DIN	The unit switches according to the status of the dedicated digital input	
Manual from BMS	The unit switches through a supervised selection	see register from supervision table (retentive register)
Manual from keyboard	The unit switches through the display selection (Qc04)	
Manual from k.water	The unit switches through a selection from k.water	only with k.water connected via Ethernet
Manual by thTune	The unit switches through a selection from thTune	
Auto from control probe + mixed coil limit from DIN	The unit automatically changes mode so as to reach the main set point, however the mixed coil can only be used based on the status of the heating/cooling digital input. This mode is useful when the operating mode needs to change over, and therefore stages such as heat recovery or freecooling can be used, yet the mixed coil is still supplied by a source that is not consistent with the temperature control requirements. Example: mixed coil supplied with hot water, yet freecooling in winter required.	with mixed coil only
Auto from control probe + mixed coil limit from water temp. probe.	The unit automatically changes mode so as to reach the main set point, in the same way as for mixed coil limit mode by DIN, however in this specific case the coil is enabled directly by measuring the supply water temperature. This mode allows precise control of consistency between the required mode and the operating capacity of the mixed coil. Activation thresholds must be set based on the water temperature (Ac28)	with mixed coil only
Manual by date	The unit switches when the control date is or is not within the preset time interval.	

Tab. 9.j

Forcing automatic summer/winter mode according to outside temperature

In all types of automatic summer/winter changeover, it is possible to set a forced operation mode based on the outside temperature. This is useful in order to avoid changing mode in the most critical periods in summer and winter. The thresholds are set on screen Ac24..

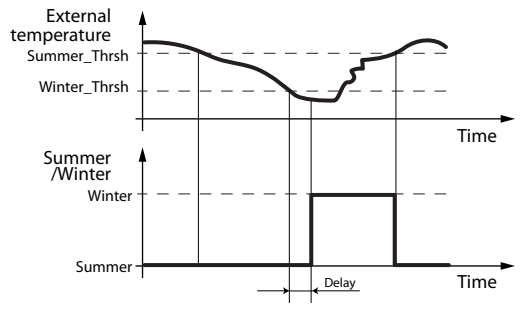


Fig. 9.r

Key:

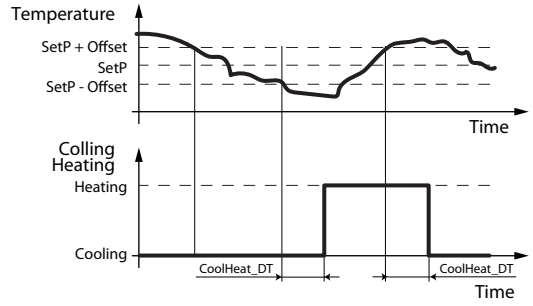
Summer_Thrsh	summer season changeover temperature
Winter_Thrsh	winter season changeover temperature

Unit operation based on summer/wintermode.

In summer or winter , the unit is forced to work with the corresponding setpoints and limits; however, it is possible to change the current setpoint in the setpoint screen (Qc01) or from the th-Tune terminal (if connected). The unit works in order to maintain the desired temperature, by activating the appropriate devices. Once the request has been fulfilled, the devices are gradually deactivated, following the priority described in the paragraph on "Temperature control". When the mode is changed, the default set point becomes the new control set point.

For example, if the unit is in winter mode with Set = 20 °C and the machine switches to summer, the new setpoint will be the summerdefault set. However, it is always possible to set a different control setpoint from th-Tune or PGDE referring to the current mode.

Manual modes allow an immediate change between summer and winter.
If configured as heating/cooling changeover from control temperature, the unit automatically selects whether to operate in cooling or heating mode based on the controlled temperature and how far it deviates from the reference setpoint. It is possible to set the offset considered and the waiting delay (Qc04) to change modes. The mode changeover will only take place if there is no residual temperature request: this is because an excessive temperature control request will cause an unwanted mode changeover.



Key:

Summer_Thrsh	summer season changeover temperature
Winter_Thrsh	winter season changeover temperature

Fig. 9.s

In the case of return+supply or room+supply control, the automatic summer/winter changeover takes effect after first having verified the room or return temperature, and consequently the adjustment to the supply set point by the offset will be negative in the case of summer mode and positive in the case of winter mode (see the paragraph on "Temperature control"). In this specific case, during the transients, it

should be noted that following a changeover in mode (due to the return or room temperature), supply temperature control also changes to the new mode, but gradually, using the new calculated setpoint.

Automatic heating/cooling changeover mode

If the unit is configured with automatic heating/cooling changeover mode from control temperature, it allows the user to choose how to manage the status switching according to the following modes:

- Standard: the heating/cooling state changes according to the control temperature when it exceeds the setpoint ± offset. The purpose of this mode is to have as much comfort as possible.

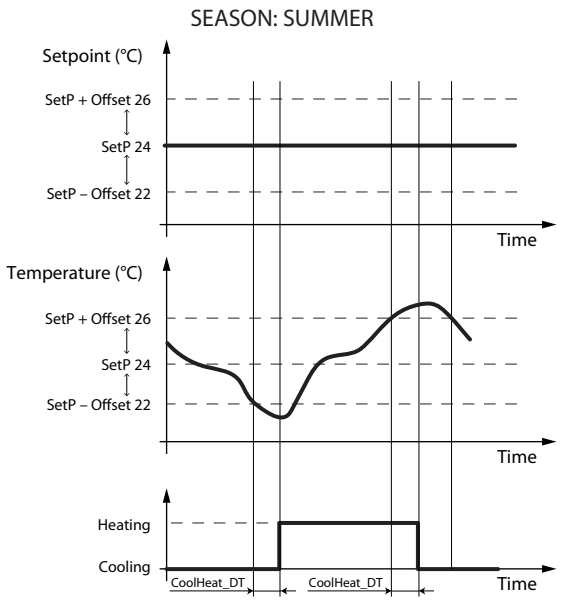


Fig. 9.t

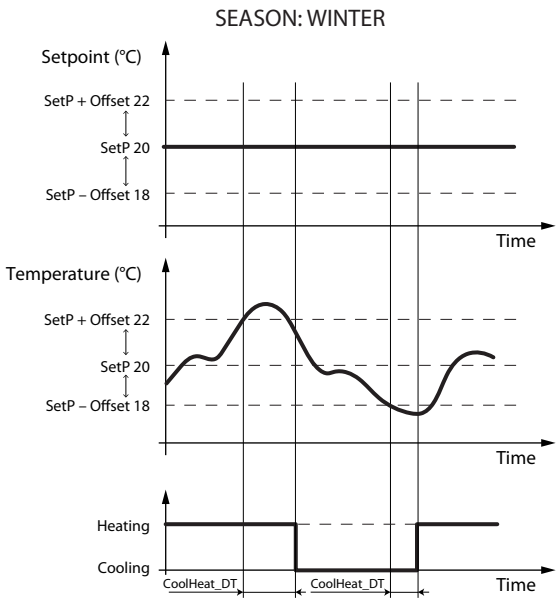


Fig. 9.u

- Energy saving: depending on the active season, when the temperature reaches the "summer setpoint - offset" or the "winter setpoint + offset" value and the changeover state waiting time elapses, the control setpoint (no user) will become:
  - Summer: setpoint - offset
  - Winter: setpoint + offset

The purpose of this mode is to avoid the heating state in summer and the cooling state in winter unless strictly necessary.

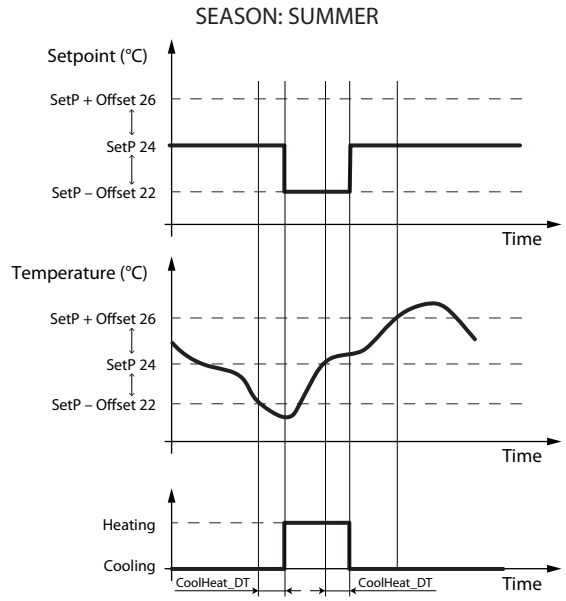


Fig. 9.v

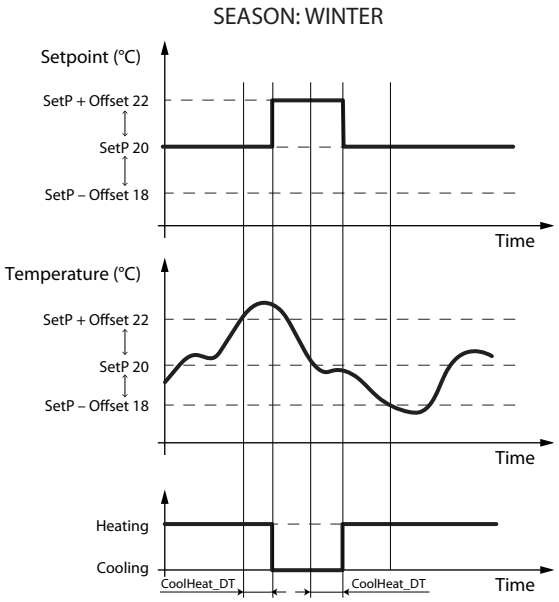


Fig. 9.w

Note: if you want to manage only one setpoint, you will need to set the unit with fixed season to "summer", set heating/cooling changeover to "automatic from control temperature" and set automatic heating/cooling changeover to "standard".

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ac22	Season changeover mode	0	0	7	-	R/W	HR2079	PIV4304
	Season changeover delay time	-	0	999	min	R/W	HR2078	PIV4352
	Unit cooling/heating mode configuration	0	0	6	-	R/W	HR1311	PIV2819
Ac23	Cooling/Heating change offset	2.0	0.0	20.0	°C	R/W	HR2080	AV4354
Ac24	Summer external temperature threshold	28.0	- 99.9	99.9	°C	R/W	HR1312	AV2820
	Winter external temperature threshold	18.0	- 99.9	99.9	°C	R/W	HR1313	AV2821
Ac25	Season changeover summer starting day	1	1	SummerEndDay	-	R/W	HR2087	PIV4360
	Season changeover summer starting month	1	1	SummerEndMonth	-	R/W	HR2088	PIV4361
	Season changeover summer ending day	1	SummerStartDay	31	-	R/W	HR2085	PIV4358
	Season changeover summer ending month	1	SummerStartMonth	12	-	R/W	HR2086	PIV4359
Ac28	Summer coil water temperature threshold	15.0	- 99.9	99.9	°C	R/W	HR1314	AV2822
	Winter coil water temperature threshold	25.0	- 99.9	99.9	°C	R/W	HR1315	AV2823
Ac29	Unit automatic mode configuration (0: Standard; 1: Energy saving	0	0	1	-	R/W	HR2084	PIV4357

Tab. 9.k

9.7 Dampers

k.air manages up to six types of dampers, on/off or modulating, with the following specific control functions:

Damper	Relationship	Control
Fresh air	Unit activation and main control functions	Air quality Frost protection Temperature control
Exhaust		
Mixing		
Supply	Unit activation	None
Suction		
Bypass	Heat recovery unit	Temperature control

Tab. 9.l

9.7.1 Supply and return dampers

The supply and return dampers are designed to isolate the air handling unit from the supply and return ducts. They can be either on/off or modulating, however in both cases they operate in a fully open/fully closed mode.
They are activated based on unit status: when the unit is on, without serious alarms, the dampers are opened.
The behaviour of the dampers in the transitory phases is as follows:

3. Frost protection, the dampers close
4. Start-up, opened immediately
5. Shutdown, the dampers close after the post-ventilation phase

The supply and return dampers are enabled directly from the W.In/Out configuration menu

Note : the signal sent to the supply and return dampers is the same, and from an electrical point of view it is possible to use one less point in the input/output configuration by using the same contact (supply) for both dampers.

9.7.2 Fresh air - Exhaust - Mixing dampers

The fresh air, exhaust and mixing dampers can be on/off or modulating, and the available settings will be affected accordingly. For modulating dampers, the request can be scaled between a minimum and a maximum value so as to allow a minimum amount of fresh air intake. The dampers, in terms of the request signal and therefore excluding the limits, are governed by the following relationships

1. Exhaust damper opening request % = fresh air damper opening request %
2. Mixing damper opening request % = 100 - Fresh air damper opening request % The damper request is scaled as shown in the graph below

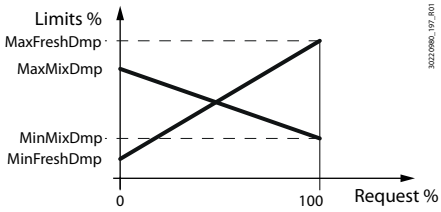


Fig. 9.x

Key

MaxFreshDmp	Maximum fresh air damper opening
MinFreshDmp	Minimum fresh air damper opening
MaxMixDmp	Maximum mixing damper opening
MinMixDmp	Maximum mixing damper opening
Limits	Minimum and maximum limit values for dampers
Request	Damper request

Note:
when the unit is Off or a serious alarm is active, all of the dampers will be completely closed and therefore the proportional modification limits and the relationship between fresh air damper and mixing damper will not be applied.
The damper output signal can be scaled further, based on the signal limits that are set in the IO configuration menu.

Below is a summary of the functions available for each type of damper.

Fresh air damper	Mixing damper	Control
On/off	On/off or absent	Fresh air damper opens when the unit is ON
		If frost protection is active, the fresh air damper closes and, if the mixing damper is fitted, the unit enters recirculation mode, with the fans on
		The unit thus operates with outside air only, and freecooling control is not available
Modulating	On/off or absent	Fresh air damper opens to the maximum (settable limit) when the unit is ON
		If there is no mixing damper, the fresh air damper goes into freecooling (main temperature control) or air quality control mode, or both.
		When frost prevention is active, the fresh air damper progressively closes, while the mixing damper remains closed
		If frost protection is active, the fresh air damper closes and, if the mixing damper is fitted, the unit enters recirculation mode, with the fans on
On/off	Modulating	Fresh air damper opens when the unit is ON and the mixing damper opens to the minimum (settable limit)
		Mixing damper goes into freecooling or air quality control mode, or both.
		When frost prevention is active, the mixing damper progressively closes.
		If frost protection is active, the fresh air damper closes and the mixing damper opens to the maximum (settable limit)
Modulating	Modulating	Fresh air and mixing dampers, in sync, go into freecooling (main temperature control) or air quality control mode, or both.
		When frost prevention is active, the fresh air damper progressively closes, while the mixing damper progressively opens.
		If frost protection is active, the fresh air damper closes and the mixing damper opens.

Tab. 9.m

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
DAMPERS								
Ca01	Damper opening time	120	0	65535	s	R/W	HR1639	PIV3134
Ca03	Enable air quality regulation for fresh air OR mixing damper	FALSE	0	1	-	R/W	CS289	BV289
	Air Quality - Dampers PID parameters - Proportional gain	1.0	0.0	999.9	-	R/W	HR1640	AV3135
	Air Quality - Dampers PID parameters - Integral time	60	0	999	-	R/W	HR1641	PIV3136
Ca06	Fresh air damper - Minimum regulation value	0.0	0.0	100.0	%	R/W	HR1642	AV3137
	Fresh air damper - Maximum regulation value	100.0	0.0	100.0	%	R/W	HR1643	AV3138
Ca09	Mixing air damper - Minimum regulation value	0.0	0.0	100.0	%	R/W	HR1644	AV3139
	Mixing air damper - Maximum regulation value	100.0	0.0	100.0	%	R/W	HR1645	AV3140
Ca12	Enable dampers regulation in case of FreeCooling/FreeHeating	FALSE	0	1	-	R/W	CS290	BV290

Tab. 9.n

9.7.3 Bypass damper

Operation of the bypass damper depends greatly on whether a cross- flow heat recovery unit is fitted. This may be on/off or modulating, and has the purpose of allowing freecooling and, for modulating dampers, limiting heat recovery capacity for precise air temperature control.

Below is a summary of the functions available based on the type of damper

Bypass damper	Control
On/off	The damper is activated by checking the outside air and return/room temperature conditions
Modulating	The damper is only controlled after checking the outside air and return/room temperature conditions
	Modulation is managed by the main temperature control function

Tab. 9.o

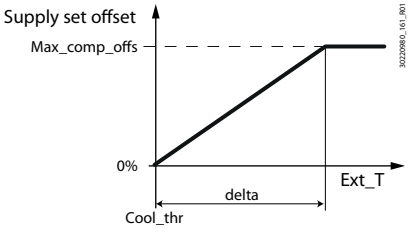
Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
HEAT RECOVERY								
E001	Heat recovery delta for bypass damper in cooling mode	4.0	-99.9	99.9	K	R/W	HR1458	AV2966
	Heat recovery delta for bypass damper in heating mode	4.0	-99.9	99.9	K	R/W	HR1459	AV2967

Tab. 9.p

Note: when the unit is Off, the bypass damper will be open.

9.8 Set point compensation with outside air probe

The control set point can be adjusted according to the temperature read by the outside air probe, adding or subtracting an offset. The offset is proportional to the deviation of the outside temperature from the start compensation threshold. The configuration parameters are different for heating and cooling mode.
The figure shows an example of a compensation in cooling mode with supply temperature control.



Key

Supply set offset	Supply set point offset
Max_comp_offs	Maximum compensation offset
Ext_T	Outside temperature
Cool_thr	Cooling threshold
delta	Differential

Fig. 9.y

Note: the function requires an outside air temperature probe: if there is an alarm on this probe, the function is disabled.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Aa84	Enable setpoint compensation by external temperature	FALSE	0	1	-	R/W	CS195	BV195
Aa87	Summer: external temperature compensation threshold	25.0	-50.0	90.0	°C	R/W	HR1179	AV2689
	Summer: external temperature compensation delta	7.0	-30.0	30.0	°C	R/W	HR1180	AV2690
	Summer: maximum compensation offset	2.0	-20.0	10.0	°C	R/W	HR1181	AV2691
Aa90	Winter: external temperature compensation threshold	0.0	-50.0	90.0	°C	R/W	HR1182	AV2692
	Winter: external temperature compensation delta	-8.0	-30.0	30.0	°C	R/W	HR1183	AV2693
	Winter: maximum compensation offset	-2.0	-20.0	10.0	°C	R/W	HR1184	AV2694

Tab. 9.q

9.9 Coils

k.air can manage up to three coils, called preheating, main and reheating. Each of these has different characteristics and requirements. The table below summarises the main features, while the details are described in the chapters corresponding to each control function.

Battery	Mode	Type	Regulations
External air pre-treatment	Only hot	1. Progressive steps 2. Binary steps 3. Power Modulation (multi-stage)	• Temperature regulation in warm mode • Defrost • Frost protection
PreHeating	Only hot	1. Water-based modulators 2. Progressive steps 3. Binary steps 4. Power modulation (multi-stage) 5. 3-point water modulators	• Main temperature adjustment in hot mode • Frost protection • Minimum temperature limit in adiabatic humidification
Main	Only hot Only cold Promiscua (Reversible)	1. Water-based modulators 2. Progressive steps 3. Binary steps 4. Power modulation (multi-stage) 5. 3-point water modulators 6. Integrated direct expansion 7. Direct expansion with µChiller	• Main temperature regulation in cold mode as the only active organ • Main temperature regulation in hot mode as a stage following pre-heating where present. • Dehumidification adjustment • Frost protection • Minimum temperature limit in adiabatic humidification
PostHeating	Only hot	1. Water-based modulators 2. Progressive steps 3. Binary steps 4. Power modulation (multi-stage) 5. 3-point water modulators	• Main temperature regulation in hot mode as last stage • Post-heating during dehumidification • Frost protection • Minimum temperature limit in adiabatic humidification

Tab. 9.r

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ac08	PreHeating coil type	0	0	5	-	R/W	HR1296	PIV2804
	Main coil type	0	0	7	-	R/W	HR1297	PIV2805
	PostHeating coil type	0	0	5	-	R/W	HR1298	PIV2806 PIV4545
	Outdoor air pre-treatment type	0	0	5	-	R/W	HR2166	

Tab. 9.s

Operating mode

The main coil is the only device that can optionally work in both heating and cooling mode. The modes can be selected on screen Da01: cooling, heating or heat/cool, which determines their operation as a mixed coil or reverse- cycle direct expansion coil. On the preheating and reheating coils only heating mode is available, and therefore the mode is not configurable. In the pre-heating, post-heating and external air pre-treatment coils, obviously only the hot mode is available and therefore cannot be configured. The external air pre-treatment coil can regulate based on the coil, delivery, return or external temperature probes, working in the event of a defrost request or in always active mode.

Modulating water coil

This coil requires management of a modulating output for the mixing valve and management of the pump assembly, which includes management of rotation of up to two pumps with thermal protector and flow switch. The mixing valve follows the percentage request sent by the controller, while the pumps are activated when the request is at least 5%, to avoid on-off cycles at loads close to zero. If there are two pumps, one remains in standby, ready for use in the event of a fault on the pump that is running (flow switch or thermal protector), while still being operational due to rotation between pumps and anti-seize function. The rotation time between pumps, the flow control times and enabling of the anti- seize function can all be set by parameter. The anti-seize function, which involves forcing the pump on for 30 s, is activated after a fixed time of one week of inactivity.

A further option available is control of the coil supply water temperature. k.air activates an alarm on exceeding a high or low temperature threshold, after a settable delay. An action can be set in response to the alarm, selected from the following:

- Signal only
- Signal and opening of the valve to maximum with changeover to the next control device if available
- Signal and closing of the valve with changeover to the next control device if available. When making the selection, take into account the positioning of the sensor with respect to the valve.
- Opening of the valve to maximum with changeover to the next control device if available
- Closing of the valve with changeover to the next control device if available. When making the selection, take into account the positioning of the sensor with respect to the valve.

Coil with power modulation

This type of coil is typically used for electric heaters, but can also be used as an external control signal when the main coil is in cooling mode. A modulating output and up to four on/off stages are available. For electric heaters, in the maximum configuration, a modulating device can be fitted on one heater, with three additional heaters activated sequentially once the first has reached maximum power. The heating capacity of the stages must be the same, and no rotation is featured to balance the operating hours. To avoid unnecessary on-off cycles, there is a 5% hysteresis in transitions between the stages. The image below shows the activation sequence for the maximum system configuration

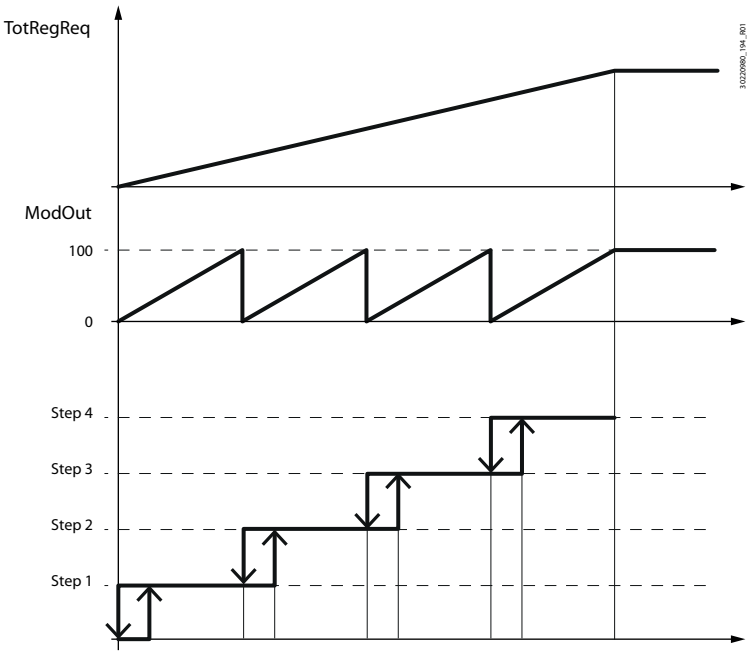


Fig. 9.z

Coil with progressive steps

Typically used for on/off heaters, but also available for any non-modulating device, this coil uses up to four power steps. The on/off outputs provided correspond to the number of control steps. The control request is divided equally into the number of steps set, with a hysteresis between steps equal to the power of each step as a percentage. The image below shows the activation sequence for the maximum system configuration of four steps.

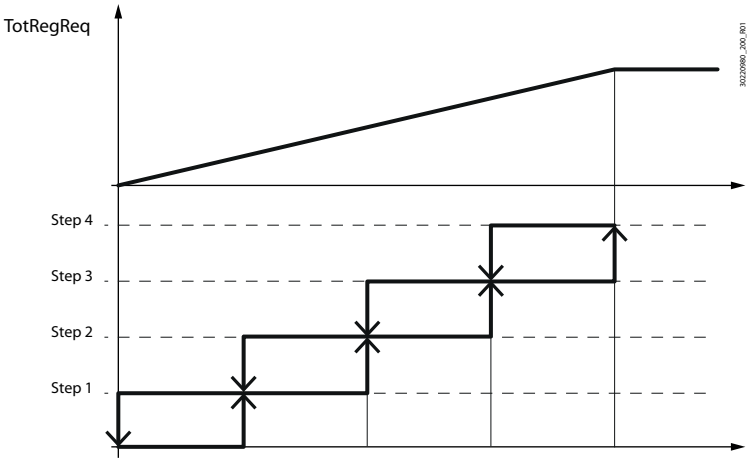


Fig. 9.aa

Coil with binary steps

This coil uses binary logic to increase the number of control steps by reducing the number of digital outputs. The relationship between outputs and control steps is as follows:

Control step = 2^digital outputs - 1

Each load connected to the digital outputs must have twice the power as the previous one. The table and image below show the activation sequence with two outputs and three steps.

Request	Digital output 1	Digital output 2
33%	ON	OFF
66%	OFF	ON
100%	ON	ON

Tab. 9.t

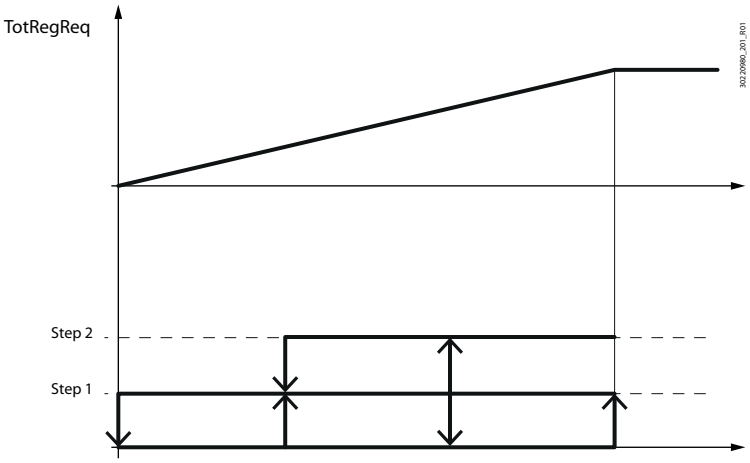


Fig. 9.ab

Coil with 3-point floating actuator

This configuration controls the 3-point floating actuator using two digital outputs: one to control opening and one to control closing. The valve travel time can be set for control and to estimate the position. k.air mini optimises the opening and closing commands in order to reduce activation of the outputs..

Direct expansion coil with integrated management

This configuration, available only on k.air mini, involves the installation of a refrigerant circuit using the inputs/outputs, unipolar expansion valve and communication with the Power+ inverter on the controller, so as to integrate direct expansion architecture with high efficiency. The unit and source heat exchangers are placed respectively in the fresh air intake and exhaust air flow. There is just one circuit with one compressor, which can also be on/off. For BLDC compressors, one of 200 compressor models can be selected, each pre-mapped with electrical parameters and envelope protection data.
See the chapter "Integrated direct expansion" for more information.

Direct expansion coil with µChiller management

The uChiller direct expansion architecture involves modular architecture, with the refrigerant circuit managed by an external uChiller controller, connected via the Fieldbus serial port available on k.air. This allows to the refrigeration unit to be expanded to include two circuits with two compressors each, either on/off or BLDC. Unlike integrated direct expansion management, the source heat exchanger is managed externally from the air handling unit, via a condensing/evaporation signal.
See the chapter "Direct expansion with uChiller" for more information.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
COILS								
Da01	Main coil configuration	2	0	2	-	R/W	HR1654	PIV3149
	Main coil steps number	1	1	4	-	R/W	HR1655	PIV3150
	Compressor type (FALSE: ON/OFF; TRUE: BLDC)	TRUE	0	1	-	R/W	CS291	BV291
	Enable EVD emb management	TRUE	0	1	-	R/W	CS292	BV292
Da03	Cooling coil PID parameters - Proportional gain	8.0	0.0	999.9	-	R/W	HR1656	AV3151
	Cooling coil PID parameters - Integral time	120	0	999	-	R/W	HR1657	PIV3152
Da06	Heating coil PID parameters - Proportional gain	8.0	0.0	999.9	-	R/W	HR1658	AV3153
	Heating coil PID parameters - Integral time	120	0	999	-	R/W	HR1659	PIV3154
Da09	Dehumidification PID parameters - Proportional gain	8.0	0.0	999.9	-	R/W	HR1660	AV3155
	Dehumidification PID parameters - Integral time	120	0	999	-	R/W	HR1661	PIV3156
	Dehumidification PID parameters - Derivative time	0	0	999	-	R/W	HR1662	PIV3157
	Maximum dehumidification offset	2.0	-99.9	99.9	K	R/W	HR1663	AV3158
Da12	Heating coil request during antifreeze off status	50.0	0.0	100.0	%	R/W	HR1664	AV3159
Da18	Cooling coil request during antifreeze off status	50.0	0.0	100.0	%	R/W	HR1665	AV3160
Da21	Cooling/Heating coil pumps number	0	0	2	-	R/W	HR1666	PIV3161
	Cooling/Heating coil pumps flow check startup delay	15	0	999	s	R/W	HR1667	PIV3162
	Cooling/Heating coil pumps flow check run delay	5	0	999	s	R/W	HR1668	PIV3163
	Cooling/Heating coil pumps enable antilock function	TRUE	0	1	-	R/W	CS293	BV293
	Cooling/Heating coil pumps rotation time	24	0	999	h	R/W	HR1669	PIV3164
Da24	Coil floating valve:Running time	180	1	999	s	R/W	HR1914	PIV3940

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
COILS								
Db01	PreHeating coil steps number	1	1	4	-	R/W	HR1670	PIV3165
Db03	Pre heating PID parameters - Proportional gain	8.0	0.0	999.9	-	R/W	HR1671	AV3166
	Pre heating PID parameters - Integral time	120	0	999	-	R/W	HR1672	PIV3167
Db06	PreHeating coil request during antifreeze off status	50.0	0.0	100.0	%	R/W	HR1673	AV3168
Db09	PreHeating coil pumps number	0	0	2	-	R/W	HR1674	PIV3169
	PreHeating coil pumps flow check startup delay	15	0	999	s	R/W	HR1675	PIV3170
	PreHeating coil pumps flow check run delay	5	0	999	s	R/W	HR1676	PIV3171
	PreHeating coil pumps enable antilock function	TRUE	0	1	-	R/W	CS294	BV294
	PreHeating coil pumps rotation time	24	0	999	h	R/W	HR1677	PIV3172
Db12	Coil floating valve:Running time	180	1	999	s	R/W	HR1914	PIV3940
Dc01	PostHeating coil steps number	1	1	4	-	R/W	HR1678	PIV3173
Dc03	Post heating PID parameters - Proportional gain	8.0	0.0	999.9	-	R/W	HR1679	AV3174
	Post heating PID parameters - Integral time	120	0	999	-	R/W	HR1680	PIV3175
Dc06	PostHeating coil request during antifreeze off status	50.0	0.0	100.0	%	R/W	HR1681	AV3176
Dc09	Post Heating coil pumps number	0	0	2	-	R/W	HR1682	PIV3177
	Re Heating coil pumps flow check startup delay	15	0	999	s	R/W	HR1683	PIV3178
	ReHeating coil pumps flow check run delay	5	0	999	s	R/W	HR1684	PIV3179
	Re Heating coil pumps enable antilock function	TRUE	0	1	-	R/W	CS295	BV295
	Re Heating coil pumps rotation time	24	0	999	h	R/W	HR1685	PIV3180
Dc12	Coil floating valve:Running time	180	1	999	s	R/W	HR1914	PIV3940
Dd01	Outdoor air pre-treatment regulation probe	0	0	4		R/W	HR2183	PIV4575
	Outdoor air pre-treatment setpoint	18.0	-99.9	99.9		R/W	HR2184	PIV4576
	Outdoor air pre-treatment regulation enable	0	0	1		R/W	HR2185	PIV4577
Dd03	Outdoor air pre-treatment steps number	1	1	4		R/W	HR2179	PIV4558
Dd06	Outdoor air pre-treatment PID parameters – proportional gain	8.0	0.0	999.9		R/W	HR2180	PIV4559
	Outdoor air pre-treatment PID parameters – integral time	120	0	999		R/W	HR2181	PIV4560
Dd09	Outdoor air pre-treatment antifreeze request value	50	0	100		R/W	HR2182	PIV4561
Dd12	Coil floating valve:Running time	180	1	999	s	R/W	HR1914	PIV3940

Tab. 9.u

9.10 Direct expansion with integrated management

9.10.1 Compressor management

k.air manages ON/OFF compressors with direct starting or modulating BLDC compressors. For BLDC compressors, more than 200 models can be selected. A BLDC compressor is always driven by a Power+ inverter connected via Modbus (Fieldbus or Fieldbus2)

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ac08	PreHeating coil type	0	0	5	-	R/W	HR1296	PIV2804
	Main coil type	0	0	7	-	R/W	HR1297	PIV2805
	PostHeating coil type	0	0	5	-	R/W	HR1298	PIV2806

Tab. 9.v

As soon as the controller recognises the compressor, it automatically writes the compressor motor electrical parameters to the Power+ driver. If a Power+ driver that has already been configured is then used to manage a different compressor, run the "write default" command.

Note: if replacing the Power+ inverter, the electrical parameters will be automatically updated only with the Auto- install parameters option (Uc10); otherwise, following replacement and wiring, the "write default" command needs to be run in Uc08.

9.10.2 Safety times

k.air guarantees compressor safety times, such as:

- Minimum on time
- Minimum off time
- Minimum time between consecutive starts

These times are available in the Compressor menu, together with the PID parameters, and can be set by accessing the Service level with the unit OFF.

9.10.3 Envelope

Parameters from Ub01 to Ub05 are read- only parameters that indicate the compressor status. The compressor operating limits are controlled. This control cannot be disabled, so as to prevent the compressor from operating outside of the safety limits defined by the manufacturer. All available compressors therefore contain envelope data. When selecting a specific type of compressor, the following parameters are set based on the compressor manufacturer's technical specifications:

- all the characteristic points that define the shape of the compressor envelope
- maximum discharge temperature
- MOP and DeltaP minimum ExV opening management parameters
- set point control parameters (BLDC only)
- alarm prevention parameters

Note: to view the graphs of BLDC compressor envelopes, see the CAREL document "BLDC compressor envelopes", available on ksa.carel.com

9.10.4 BLDC compressor start-up procedure

k.air manages the start-up of BLDC compressors in accordance with the manufacturer's specifications: on starting, the compressor is brought to start-up speed and kept at that speed, irrespective of the control request, for the entire minimum on time; at the end of this period, the compressor is managed by the controller, modulating its speed in relation to the request and in accordance with the conditions for managing the working point inside the envelope.

Note: if at start-up the differential pressure is greater than the maximum allowed start-up threshold, the compressor remains on call awaiting the differential pressure to drop below the threshold. If after 5 minutes the compressor has not yet started, a specific alarm will be activated

9.10.5 BLDC oil recovery

When the refrigerant gas speed in the circuit is below the value required to entrain the oil, operation periodically needs to be set to a sufficient value to guarantee oil return to the compressor crankcase: The function forces the BLDC to operate at higher capacity for a set time when the circuit has remained at low load for a time greater than or equal to the activation delay. All of the parameters are available on screen Ua39.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
COMPRESSOR								
Ua39	Enable the oil recovery function	FALSE	0	1	-	R/W CS465	BV4025	PIV3149
	Oil recovery minimum compressor speed for activation	35.0	0	999.9	rps	R/W HR1971	AV4026	PIV3150
	Oil recovery delay (compressor running at low speed)	15	0	999	min	R/W HR1968	PIV4029	BV291
	Oil recovery duration (when compr. speed is forced)	3	0	999	min	R/W HR1970	PIV4028	BV292
	Oil recovery compressor speed forced	50.0	0	999.9	rps	R/W HR1969	AV4027	AV3151

Tab. 9.w

9.10.6 BLDC compressor protectors

When the compressor working point is outside of the envelope, an alarm delay starts counting: if the working point remains outside of the envelope, when the delay expires, a specific alarm is activated that stops the compressor; if, on the other hand, the working point returns back inside the envelope limits, the alarm delay is reset. In addition to the operating limits defined by the shape of the envelope, there is also a discharge temperature limit (Ub16, Ub17) that stops the compressor. See the following paragraph.

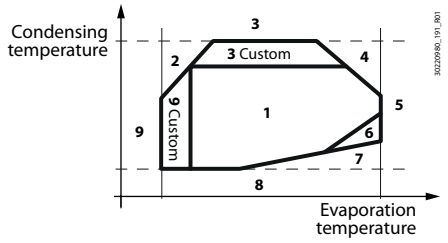


Fig. 9.ac

Key

1	Zone inside the operating limits
2	Max compression ratio
3	Max condensing pressure
3 c	Custom max condensing pressure threshold
4	Max motor current
5	Max evaporation pressure
6	Min compression ratio
7	Min differential pressure
8	Min condensing pressure
9	Min evaporation pressure
9 c	Custom min evaporation pressure threshold

9.10.7 Compressor alarm prevention

The suction and discharge pressure determine a working point, and depending on the zone, the controller applies corrective actions to maintain or return compressor operation within the limits.

9.10.8 Prevention actions

Below is the description of the working zones in a generic envelope:

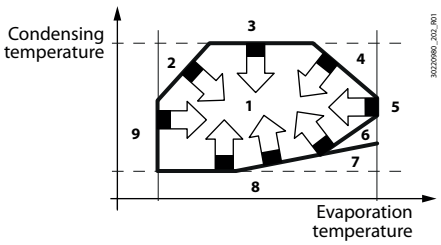


Fig. 9.ad

To allow the compressor to work inside the envelope, specific prevention actions are adopted that adjust circuit capacity and the opening of the electronic expansion valve (ExV).
In particular, the actions involving circuit capacity are:

- decrease the rate at which the capacity request from the temperature controller increases/decreases when approaching the limit of the envelope;
- limit/increase circuit capacity

The action on the ExV valve is applied by varying the MOP threshold (maximum evaporation temperature): the algorithm follows the set point, decreasing valve opening, and therefore reducing the mass flow of refrigerant, which in turn lowers the evaporation temperature.
The actions involving the rate of capacity variation start when the working point is a set distance from the compressor operating limits. Below are details of the various actions to prevent the operating limits from being exceeded; action 1 refers to the control action (before exiting the envelope); action 2 to the limiting action (working point already outside of the envelope).

High compression ratio prevention (zone 2)

Device	Description
BLDC compressor	1. Decrease the rate of capacity increase.
	2. Reduce capacity
EXV	-

A high compression ratio is a thermal limit of compressor operation: normally control is activated at the limit of the envelope, reducing capacity when the limit is exceeded; if a probe is fitted to measure discharge temperature and if the temperature approaches the limits, as the critical condition involves high compressor discharge temperature, compressor capacity control will be based directly on the corresponding probe reading.
To control discharge temperature, a specific algorithm is activated, which initially slows down the increase in capacity, until reaching zero when at the set point (5°C below the maximum limit); if the temperature increases further, the control algorithm gradually and slowly reduces capacity, mimicking compressor thermal inertia.

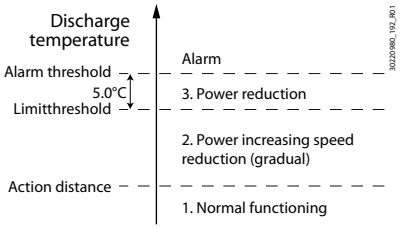


Fig. 9.ae

High condensing pressure prevention (zone 3)

Device	Description
BLDC compressor	1. Decrease the rate of capacity increase.
	2. Reduce capacity
EXV	-

High motor current prevention (zone 4)

Device	Description
BLDC compressor	1. Decrease the rate of capacity increase.
	2. Reduce capacity
EXV	MOP with specific algorithm

High evaporation pressure prevention (zone 5)

Device	Description
BLDC compressor	1. Decrease the rate of capacity increase.
	-
EXV	MOP

Low compression ratio prevention (zone 6)

Device	Description
BLDC compressor	1. Decrease the rate of capacity increase.
	2. Increase capacity
EXV	MOP variabile

Low differential pressure prevention (zone 7)

Device	Description
BLDC compressor	1. Decrease the rate of capacity increase.
	2. Increase capacity
EXV	Variable MOP

Low condensing pressure prevention (zone 8)

Device	Description
BLDC compressor	1. Decrease the rate of capacity increase.
	2. Increase capacity
EXV	-

Low evaporation pressure prevention (zone 9)

Device	Description
BLDC compressor	1. Decrease the rate of capacity increase.
	2. Reduce capacity
EXV	-

9.10.9 Compressor alarm management

Compressor shutdown

If abnormal conditions occur and the prevention actions are not effective, the circuit will shut down so as to avoid damaging the circuit or other components, the control algorithm stops the compressors and closes the thermostatic valve. This does not prevent the normal unit control functions, as the other devices remain active. The compressors will be able to start again when the minimum off time or the minimum time between two starts has elapsed.

Compressor delay at start-up/in operation

Compressor start-up is a critical phase and for this reason k.air has differentiated control for some alarms to exceed the transient phase from compressor start- up and allow it to reach steady operation. The following alarms implement this feature:

- low pressure alarm from pressure switch
- low pressure delta alarm
- out of envelope alarm (Ub13)

The alarm condition is ignored when the compressor is off. Once the start- up phase is complete, the steady-operation phase begins entered and the alarm is trigged when the delay is exceeded..

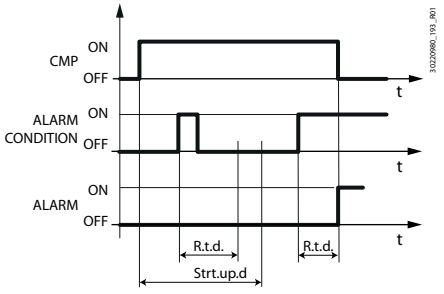


Fig. 9.af

Key

R.t.d.	Alarm delay in steady operation
Strt.up.d	Alarm delay at start-up
t	time
CMP	compressor
ALARM CONDITION	Alarm condition
ALARM	Alarm

9.10.10 Power+ Speed drive

When the circuit features a BLDC compressor, this is controlled by a Power+ inverter, connected to the k.air mini controller via Modbus master protocol with a serial baud rate of 19200 bps on the built- in FieldBus serial port. Use specific cable for RS485 (AWG20-22 with three wires plus shield).
See the parameters Uc… in the parameter table and the Power+ user manual, +0300048EN.

9.10.11 Built-in ExV driver

The driver to manage the electronic expansion valve is a fundamental device for the controller. This is used to safely manage the compressor and the circuit, and reads all the fundamental probes for control of suction superheat, management of the working area and discharge temperature. On k.air mini boards, the driver is built-in and manages unipolar valves. See parameters V... in the parameter table, the Power+ manual + 03000048EN and the EVD Evolution manual +0300005EN.

EXV control logic

The driver manages:

- valve activation
- suction superheat control
- low superheat alarm and control (Low SH)
- minimum evaporation temperature control and alarm (LOP)
- maximum evaporation temperature control and alarm (MOP)
- control of cooling capacity sent by the controller, which positions the valve correctly in the transient stages according to circuit control status

Note: see the parameter table, reference Ua, Ub, Uc.

9.11 Direct expansion managed by µChiller

µChiller is the solution for the complete management of reverse- cycle refrigeration units with on- off compressors and/or DC compressors, up to two circuits and two compressors per circuit, and including high-efficiency through Carel's Power+ and ExV system. uChiller can be easily integrated with k.air via the Fieldbus serial port to develop air handling units with a direct expansion main coil. k.air sends the start- up and capacity modulation commands, making available the main operating status information directly on the pGDE display, such as active compressors and active faults.

The modular k.air-µChiller architecture allows the configurability of the air handling unit to be separated from the specificity of the refrigeration unit. µChiller can also be used with the Applica app for configuration. See the µChiller installation manual +0300053EN.

Below is the simplified connection diagram for the µChiller controller.

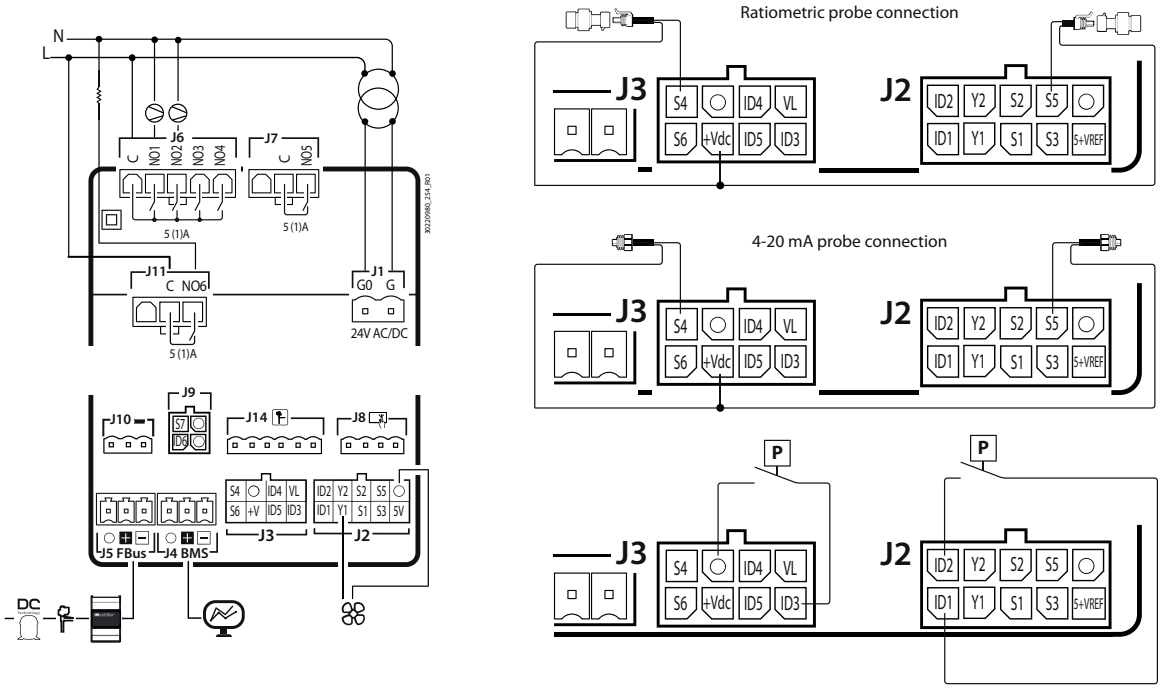


Fig. 9.ag

Table showing the maximum range of connectable inputs/outputs.
Taken from the uChiller manual.

Input/output channel	Description
S1	
S2	
S3	Drain temperature
S4	Condensing pressure
S5	Evaporation pressure
S6	-

Input/output channel	Description
ID5	Remote alarm (close contact if not used)
ID6	-
NO1	Compressor 1
NO2	Compressor 2
NO3	-
NO4	Reversing valve

Input/output channel	Description
S7	Suction temperature
ID1	Close contact
ID2	Compressor 1 thermal protector
ID3	High pressure switch
ID4	Compressor 2 thermal protector

Input/output channel	Description
NO5	Alarm
NO6	-
Y1	Condenser fan
Y2	-

Tab. 9.x

Procedure for integrating uChiller

1. Analysis and design of the refrigeration unit, evaluating the specific operations, such as defrost requirements.
2. Read the uChiller manual (+0300053EN) carefully, so as to understand the connections and parameters needed for correct configuration.
3. Electrical wiring of the refrigeration unit components and serial connection from J4 BMS on uChiller to the J26FBus2/J4Fbus port on k.air.
4. Using the Applica or uChiller display app, configure the parameters relating to the refrigeration unit.
5. Set parameter Hd00 (supervisor address) to 10.
6. On the k.air pGDE terminal, enable the main coil as uChiller on screen Ac08, and set the operating mode on Da01.
7. k.air with uChiller direct expansion is now operational.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ac08	PreHeating coil type	0	0	5	-	R/W	HR1296	PIV2804
	Main coil type	0	0	7	-	R/W	HR1297	PIV2805
	PostHeating coil type	0	0	5	-	R/W	HR1298	PIV2806

Tab. 9.y

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
COILS								
Da01	Main coil configuration	2	0	2	-	R/W	HR1654	PIV3149
	Main coil steps number	1	1	4	-	R/W	HR1655	PIV3150
	Compressor type (FALSE: ON/OFF; TRUE: BLDC)	TRUE	0	1	-	R/W	CS291	BV291
	Enable EVD emb management	TRUE	0	1	-	R/W	CS292	BV292

Tab. 9.z

9.12 Indirect evaporative cooling (IEC)

The possibility of heat recovery in temperate climates is further increased by the use of indirect evaporative cooling. Before being discharged and passing through the heat recovery unit, the exhaust air is further humidified: its temperature thus decreases, meaning it can be used to exchange heat with the fresh outside air, which is cooled without undergoing a change in humidity.

IEC is a further stage in the temperature control sequence and, due to its high energy efficiency, is used after freecooling/recovery and before the main coil. The air handling unit must be equipped with a non- enthalpy type heat recovery unit. IEC control may be On/Off or modulating, or via serial communication with compatible CAREL systems. The type of control is selected on screen AC04. Operation of this function can be described by chain logic: activation, control and management of limits.

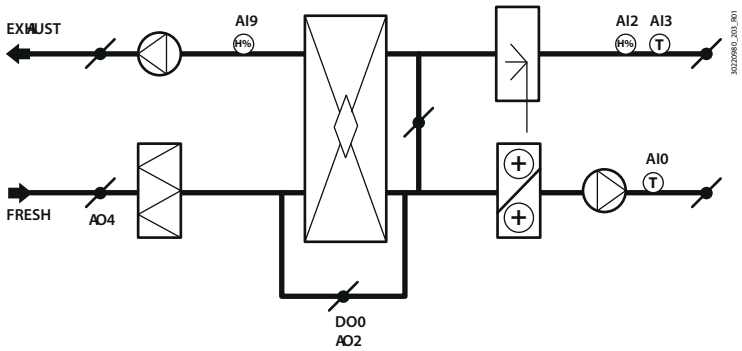


Fig. 9.ah

Key

AI0	Supply temperature
AI2	Return temperature
AI3	Return humidity
AI9	Exhaust humidity
AO2/DO0	Bypass damper signals
AO4	Fresh air damper signal
AO16/DO58	IEC signal

IEC stage activation

The activation logic determines in advance whether the humidity conditions of the exhaust air are sufficient to start the indirect cooling process. This is done by measuring the return humidity, which must be lower than the "activation threshold" set on screen I005. A differential is provided to prevent rapid transients. If the activation condition is verified, the IEC stage is available as part of sequential temperature control, and is bypassed by acting directly on the subsequent stage. Another condition required for activation is that the heat recovery unit is not bypassed (this condition is only true when the damper is fitted).

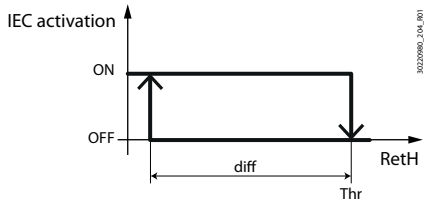


Fig. 9.ai

IEC stage control

Following verification of the conditions for activation of the IEC stage, the humidity request from the sequential temperature control stage is sent via the analogue, digital or serial output. See chapters "PID controllers" and "Temperature control". The PI parameters used to manage IEC need to be set on screen I001.
On/off humidifiers are switched on and off when the PI request reaches 100% and 0% respectively.

IEC stage limitation

The IEC limit function is necessary to reduce wasted water when the exhaust air reaches saturation. The power supplied to the IEC humidifier is used to increase the amount of moisture introduced into the saturated air, which then precipitates, meaning water is wasted as it does not serve to lower the exhaust air temperature. Therefore, two possible functions are available to improve IEC efficiency:

- Air saturation limit, using the exhaust humidity probe measurement (appropriately enabled). On screen I010, a threshold can be set beyond which a PI limit controller gradually begins to reduce the request sent to the IEC humidifier. If necessary, fine-tine the values of parameters kp and ti. For on/off IEC humidifiers used with an exhaust humidity probe, the limit will still be used, however instability may arise in the system due to the lack of modulation, and therefore it is recommended to set the limit threshold at 100%, thus disabling the limit.
- IEC limit based on exhaust air quantity. If no saturation probe is installed, or in any case as an additional preventive function, the IEC request can be reduced proportionally based on the closure of the fresh air damper. This is because it is assumed that a reduction in the amount of fresh air introduced corresponds to a reduction in the amount of exhaust air discharged, meaning a lower quantity of air to be handled by the IEC. This function only has one parameter, available on screen I015, which determines the maximum proportional reduction value calculated based on the total travel of the fresh air damper. For example, if set to 30%, it means when the fresh air damper is fully closed, IEC is limited by 30%. By default the parameter is set to 0%, i.e. the limit is disabled.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
IEC								
I001	IEC: PID parameters - Proportional gain	8.0	0.0	999.9	-	R/W	HR1646	AV3141
	IEC: PID parameters - Integral time	120	0	999	-	R/W	HR1647	PIV3142
I005	IEC: Return humidity activation threshold	75.0	0.0	100.0	%rh	R/W	HR1648	AV3143
	IEC: Return humidity activation differential	2.0	0.0	20.0	%rh	R/W	HR1649	AV3144
I010	IEC: Exhaust humidity limit threshold	95.0	0.0	100.0	%rh	R/W	HR1650	AV3145
	IEC: Exhaust humidity limit proportional gain	10.0	0.0	999.9	-	R/W	HR1651	AV3146
	IEC: Exhaust humidity limit integral time	60	0	999	s	R/W	HR1652	PIV3147
I015	IEC: Fresh air damper maximum limitation	0.0	0.0	100.0	%	R/W	HR1653	AV3148

Tab. 9.aa

Note: if an exhaust humidity probe is installed, it is recommended to use a type with limits extended to 0 to 100%

9.13 Humidity control

Humidity control can be activated by enabling the humidifier and/or the dehumidification option, both available on screen Ac04. Control is carried out based on the selected probe (screen Ac32), supply, return or room. When the unit is turned on, the humidity regulation can be delayed by a configurable time (mask Ac32) compare to the temperature regulation.
Control can be performed using the relative humidity value or the absolute humidity value.
To assist commissioning, the set point will still be the relative humidity value, and k.air will then calculate the equivalent in absolute humidity by taking into account the temperature set point; the result is shown on the info screen.

With the humidifier and dehumidification enabled, the unit has both settings available and independent of the active mode, heating or cooling. Switching between settings is done via the humidity changeover function (available in the Ac35 and Ac36 screens), which can depend on:

- Season (summer: dehumidifying only, winter: humidifying only)
- Automatic from humidity control

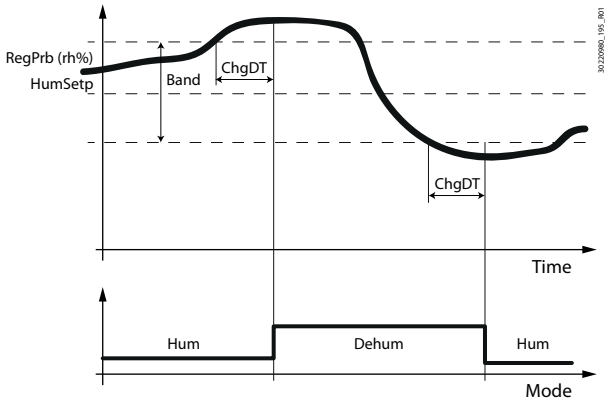


Fig. 9.aj

Key

RegPrb	Control probe
HumSetp	Humidity set point
Band	Changeover band
ChgDT	Changeover delay

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Aa33	Unit setpoints - Humidity setpoint - Winter - Comfort	50.0	MinVal	MaxVal	%rh	R/W	HR1174	AV2684
	Unit setpoints - Humidity setpoint - Winter – Economy	60.0	MinVal	MaxVal	%rh	R/W	HR1163	AV2672
	Unit setpoints - Humidity setpoint - Winter – Pre-comfort	55.0	MinVal	MaxVal	%rh	R/W	HR1168	AV2678
Aa36	Humidity setpoint – minimum value	40.0	0.0	MaxVal	%rh	R/W	HR1175	AV2685
	Humidity setpoint – maximum alue	60.0	MinVal	100.0	%rh	R/W	HR1176	AV2686
Ac04	Humidifier type (0:None; 1:Isothermal; 2:Adiabatic; 3:Humisonic; 4:Humi-fog; 5:HumiSteam)	0	0	5	-	R/W	HR1294	PIV2802
	Enable dehumidification regulation	FALSE	0	1	-	R/W	CS226	BV226
	IEC type (0: None; 1: OnOff; 2: Modulating; 3: Humisonic)	0	0	3	-	R/W	HR1295	PIV2803
	IEC: IO configuration warning	-	0	1	-	R	DI698	BV1156
							DI699	BV1157
Ac31	Unit automatic mode configuration (0: Standard; 1: Energy saving)	0	0	1	-	R/W	HR2084	PIV4357
Ac32	Humidification/Dehumidification: Control probe	0	0	2	-	R/W	HR1318	PIV2826
	Humidification/Dehumidification: Control type	0	0	1	-	R/W	HR1319	PIV2827
Ac34	Dehumidification: Regulation type	0	0	1	-	R/W	HR1320	PIV2828
	Dehumidification: enable kwater dew point calculation	FALSE	0	1	-	R/W	CS227	BV227
Ac35	Unit humidification/dehumidification mode configuration (0: Fixed by season; 1: Automatic by humidity regulation)	0	0	1	-	R/W	HR1310	PIV2818
Ac36	Humidification/Dehumidification: Regulation band	20.0	1.0	99.0	%rh	R/W	HR1321	AV2829
	Humidification/Dehumidification: Regulation change delay time	5	0	99	min	R/W	HR1322	PIV2830

Tab. 9.a

Note: absolute humidity control, once enabled, applies to both dehumidification and humidification.

9.14 Humidification

Humidification is controlled by a PID controller and via configuration of an analogue, digital or serial.
The type of humidifier used needs to be specified, selected from the following:

- Isothermal, 0-10 V signal or on/off.
- Adiabatic, 0-10 V signal or on/off.
- HumiSonic, the request is sent via serial;
- Humifog, the request is sent via serial;

If selecting adiabatic humidifiers, a number of dedicated functions are available (e.g. scheduled maintenance as per VDI).

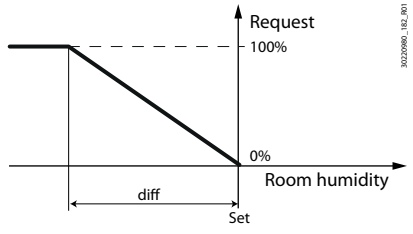


Fig. 9.ak

key

Humidity	Control humidity
Request	Humidity request
Set	Humidity set point
Diff	Differential = 100/kp

Maximum supply humidity limit control

Maximum humidity limit control is a PI algorithm that modulates the request to the humidifier based on a settable threshold value, thus controlling the supply humidity. This function is only active with return or room humidity control, using the parameters available on screen F008.

Minimum supply temperature limit control with adiabatic humidification

This function is only available with an adiabatic humidifier and is useful for counteracting the effect of excessively reducing the temperature when the heating coils are not sufficient or when humidification is active in cooling mode (when the heating devices are typically not functioning). The function uses PI control and the main supply temperature limit control threshold set on screen Ac60. The effect is a progressive increase in heating device output, in heating mode (if present), and, subsequently, a reduction in humidifier output, which is the only active stage in cooling mode.

The actions are summarised below:

	Heating mode	Cooling mode
Return temp. control	Increase in the heating device output as the first stage and reduction in humidifier output as the second stage.	Humidifier output reduction
Supply temp. control	Humidifier output reduction The heating devices are controlled to keep the supply temperature constant, if sufficiently sized, humidifier output is not reduced.	Humidifier output reduction

Tab. 9.ab

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
HUMIDIFICATION								
F004	Humidification PID parameters - Proportional gain	8.0	0.0	999.9	-	R/W	HR1549	AV3050
	Humidification PID parameters - Integral time	120	0	999	-	R/W	HR1550	PIV3051
	Humidification PID parameters - Derivative time	0	0	999	-	R/W	HR1551	PIV3052
F008	Humidifier: Max humidity threshold	80.0	1.0	100.0	%rh	R/W	HR1552	AV3053
	Humidifier: Max humidity proportional part	8.0	0.0	999.0	-	R/W	HR1553	AV3054
	Humidifier: Max humidity integral time	50	0	999	s	R/W	HR1554	PIV3055
F012	Low supply temperature threshold	16.0	0.0	25.0	°C	R	HR1354	AV2862
	Humidifier: Min temperature proportional part (Only adiabatic hum)	8.0	0.0	999.0	-	R/W	HR1555	AV3056
	Humidifier: Min temperature integral time (Only adiabatic hum)	100	0	999	s	R/W	HR1556	PIV3057
F020	Parameters for device configuration - Timings for washing operations - Delay time between two consecutive washes (mins)	30	0	999	-	R/W	HR1557	IV3058
	Parameters for device configuration - Timings for washing operations - No production time for inactivity wash (hours)	24	0	999	-	R/W	HR1558	IV3059
	Parameters for device configuration - Timings for washing operations - Washing phase time (fill + drain) (mins)	2	0	99	-	R/W	HR1559	IV3060
F024	Manual drain request: FALSE=no request; TRUE=request to drain	-	0	1	-	R/W	CS252	BV252
F028	Number of working hours left before check the humidifier cylinder	-	0	65535	-	R	IR514	PIV3828
	Parameters for device configuration - Hours counter reset request	-	0	1	-	R/W	CS253	BV253
F032	HumiSteam - Manual management - Enable manual management	-	0	1	-	R/W	CS474	BV4342
	HumiSteam - Manual management - Manual pre cleaning	-	0	1	-	R/W	CS475	BV4343
	HumiSteam - Manual management - Manual drain	-	0	1	-	R/W	CS476	BV4344
F036	HumiSteam - Cylinder hours counter value	-	0	65535	h	R	IR842	IV4346
	HumiSteam - Reset working hours	-	0	1	-	R/W	CS477	BV4345

Tab. 9.ac

Note: if CAREL humiSonic, Humifog or HumiSteam humidifiers are used, the humidifier must be configured according to the commissioning procedure, as described in the specific manuals or technical leaflets.

9.15 Dehumidification

Dehumidification is controlled by a main cooling or mixed coil, when appropriately enabled (Ac04).
The main function for calculating the dehumidification request uses PI control, and the control probe, in common with the humidification function, is selected between: return, room or supply. Control can be based either on the absolute humidity or relative humidity value (Ac32). The dehumidification load will be transferred to the cooling coil using two modes, selectable by parameter (Ac34):

- Cooling request
- Dew point

In cooling request mode, the request from the humidity controller is applied directly to the cooling coil signal. If there is already a cooling request, as these are compatible with each other, the higher request will be applied.

In dew point mode, the humidity control request is used to calculate the set point for a second PI algorithm (cascade control), relating to the dew point. The increased request due to humidity control will lower the dew point set point. Subsequently, the dew point control function will gradually increase the cooling coil capacity until reaching the (dynamic) dew point measured using the saturation probe, which is required in this mode. The supply temperature is however limited to the minimum supply set point value.

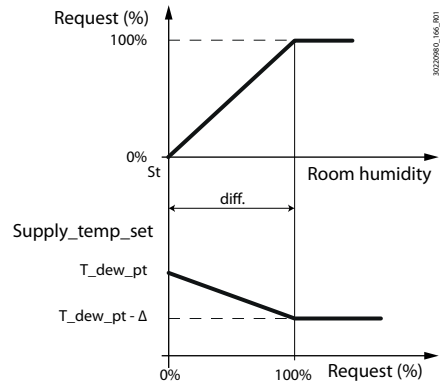


Fig. 9.al

Key

Room umidity	Room humidity
Request	Humidity request
St	Humidity set point
Diff	Differential (100/kp)
Supply_temp_set	Supply temperature set point
T_dew_pt	Dew point

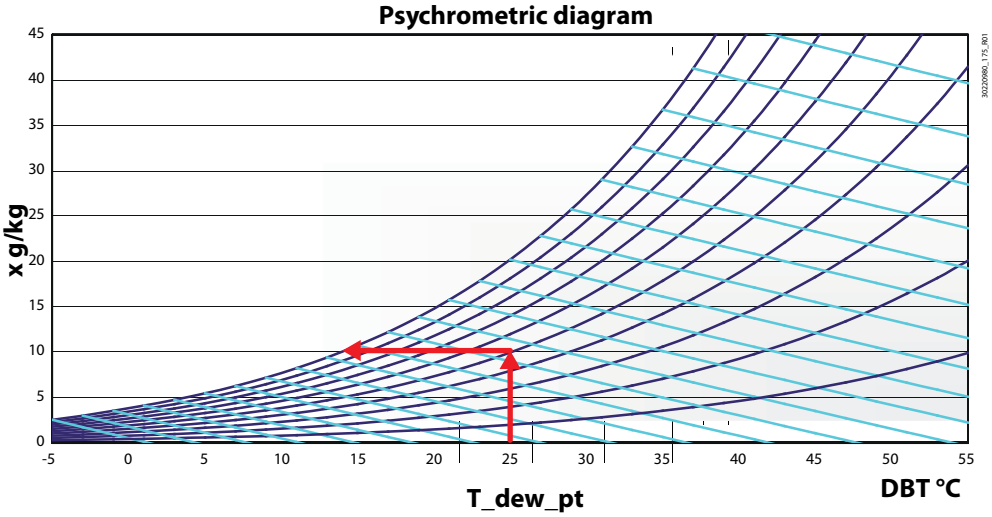


Fig. 9.am

Note: for both control functions, dehumidification mode acts on the cooling coil only when the unit is in dehumidification status. This status is activated when the humidity control request is greater than 20%. Dehumidification status is visible in the unit status information on the main screen.

9.16 Freecooling/free heating

Freecooling and freeheating are free energy sources, activated with priority in cascade control in cooling and heating mode. The freecooling/freeheating function can be activated in two modes:

- Temperature
- Enthalpy

For temperature control, the function is enabled when the following conditions are met:

- Return or room temperature probe available
- Outside air temperature probe available
- Modulating dampers, modulating fans or both available

For enthalpy control, the function is enabled when the following conditions are met:

- Return or room temperature and humidity probe available
- Outside air temperature and humidity probe available
- Modulating dampers, modulating fans or both available

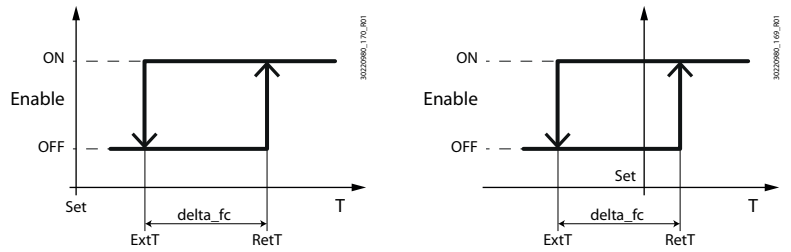
The freecooling/freeheating request from the first stage of the main temperature sequential PID is used to gradually open the fresh air damper and subsequently increase the fan speed, always in accordance with the fan operating mode. Fixed speed fans are activated at maximum speed. For fans with pressure/flow control, the speed increases due to an increase in the set point (similarly to what happens for air quality control). Use of dampers is enabled on screen Ca12, and use of freecooling via ventilation on screen Ba15.
The freecooling/freeheating request is always subject to verification of the activation conditions, based on the set mode.

9.16.1 Activation conditions

Freecooling can only be activated if an outside air temperature probe is available, without alarms, if the outside temperature deviates from the control temperature (room or recovery) by a certain delta (settable) and if the outside temperature is above a certain limit (settable).

Note: the following graphs assume a fixed outside temperature.

FREECOOLING (cooling request active)

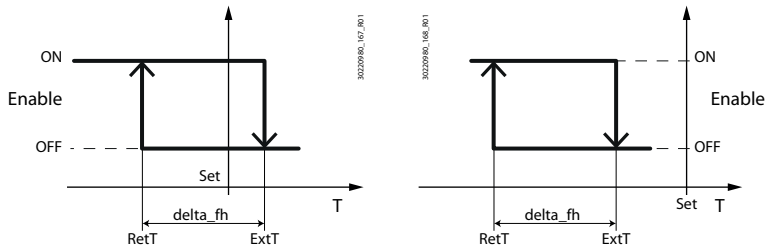


Key	
RetT	Return temperature or enthalpy
ExtT	Outside temperature or enthalpy
T	Temperature or enthalpy
Set	Set point (temperature or enthalpy)
delta_fh	Freeheating activation delta (temperature or enthalpy)
delta_fc	Freecooling activation delta (temperature or enthalpy)

Fig. 9.an

ON : RetT-ExtT> delta_fc ; OFF : RetT-ExtT<0

FREEHEATING (heating request active)



Key	
RecT	Return temperature or enthalpy
ExtT	Outside temperature or enthalpy
T	Temperature or enthalpy
Set	Set point(temperature or enthalpy)
delta_fh	Freeheating activation delta (temperature or enthalpy)
delta_fc	Freecooling activation delta (temperature or enthalpy)

Fig. 9.ao

ON : ExtT-RetT> delta_fh ; OFF : ExtT-RetT<0

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ac37	Freecooling/Freeheating selection type (0=Temperature, 1=Enthalpy)	0	0	1	-	R/W	HR1978	PIV4030
Ac38	Freecooling activation delta by temperature	3.0	0.0	20.0	K	R/W	HR1323	AV2831
	Freeheating activation delta by temperature	3.0	0.0	20.0	K	R/W	HR1324	AV2832
	Freecooling activation delta by enthalpy	5.0	0.0	20.0	KJ/kg	R/W	HR1979	AV4031
	Freeheating activation delta by enthalpy	5.0	0.0	20.0	KJ/kg	R/W	HR1980	AV4032
Ac39	Free cooling external temperature limit	5.0	-999.9	999.9	K	R/W	HR2144	AV4497
	Free heating external temperature limit	40.0	-999.9	999.9	K	R/W	HR2145	AV4498
Ac40	Free cooling PID parameters - Proportional gain	8.0	0.0	999.9	-	R/W	HR1325	AV2833
	Free cooling PID parameters - Integral time	120	0	999	-	R/W	HR1326	PIV2834
Ac42	Free heating PID parameters - Proportional gain	8.0	0.0	999.9	-	R/W	HR1327	AV2835
	Free heating PID parameters - Integral time	120	0	999	-	R/W	HR1328	PIV2836

Tab. 9.ad

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
FANS								
Ba15	Enable fan regulation in case of FreeCooling/FreeHeating	FALSE	0	1	-	R/W	CS247	BV247
Ba33	Fan temperature regulation PID parameters - Proportional gain	8.0	- 999.9	999.9	-	R/W	HR1513	AV3014
	Fan temperature regulation PID parameters - Integral time	120	0	65535	-	R/W	HR1514	PIV3015

Tab. 9.ae

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
DAMPERS								
Ca12	Enable dampers regulation in case of FreeCooling/FreeHeating	FALSE	0	1	-	R/W	CS290	BV290

Tab. 9.af

The activation temperature differentials are needed to determine how efficient it is to use freecooling/freeheating, considering that the greater the difference between the outside air temperature and the return temperature, the more efficient the action will be.

For units with modulating fresh air dampers, the conditions for activating freecooling/freeheating are the same, however free-cooling/freeheating is considered as the first stage in cascade control. The controller adjusts the modulating fresh air damper (in sync with the mixing damper), and the bypass damper, if fitted, is opened completely.

Note: when the freecooling activation conditions are active, the heat recovery stage is disabled..

9.17 Heat recovery

The heat recovery unit is an additional device that provides free energy. If the conditions are favourable, the heat contained in the exhaust air is recovered and transferred to the primary air, so as to pre-heat or pre-cool it. The heat recovery unit, if enabled on Ac01, is always available as a control stage in the main sequential temperature control PID. However, the freecooling/freeheating conditions must not be true at the same time, as these are mutually exclusive.

k.air can manage the following types of heat recovery unit:

Type	Signal/actuator	Control
Cross-flow	On/off bypass	The bypass damper is activated when the return/room temperature is below the set point by a set delta in cooling mode, or when the return/room temperature is above the set point by a set delta in heating mode
	Modulating bypass	The bypass damper is managed by the heat recovery function when the freecooling/freeheating conditions are not present. The modulation signal is set by the main sequential temperature control PID.
Wheel	Rotor modulation signal	The bypass damper is managed by the heat recovery function when the freecooling/freeheating conditions are not present. The modulation signal is set by the main sequential temperature control PID.
Double on/off coil	Pump on/off signal	The on/off signal is activated when the return/room temperature is below the set point by a set delta in cooling mode, or when the return/room temperature is above the set point by a set delta in heating mode
Double modulating coil	Modulating pump signal	The modulation signal is set by the main sequential temperature control PID. In the I/O menu, the digital output used to enable the analogue signal can be set.

Tab. 9.ag

When heat recovery is enabled, an input can be selected for signalling if the heat recovery unit is clogged. This is signal-only, with no effect on control.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ac01	Fans type (0: On/Off; 1: 3 speeds; 2: Modulating; 3: Modbus RTU)	2	0	3	-	R/W	HR1292	PIV2800
	Number of Modbus RTU fans	1	0	4	-	R/W	HR1987	PIV4058
	Enable return fan	FALSE	0	1	-	R/W	CS225	BV225
	Heating exchanger type	0	0	4	-	R/W	HR1293	PIV2801
	For mask usage	-	0	1	-	R	DI696	BV1154
	Return fan configuration error	-	0	1	-	R	DI697	BV1155

Tab. 9.ah

Note: also see the chapter on heat recovery unit defrost.

The activation temperature differentials are needed to determine how efficient it is to use freecooling/freeheating, considering that the greater the difference between the outside air temperature and the return temperature, the more efficient the action will be.

For units with modulating fresh air dampers, the conditions for activating freecooling/freeheating are the same, however free-cooling/freeheating is considered as the first stage in cascade control. The controller adjusts the modulating fresh air damper (in sync with the mixing damper), and the bypass damper, if fitted, is opened completely.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
HEAT RECOVERY								
E001	Heat recovery delta for bypass damper in cooling mode	4.0	- 99.9	99.9	K	R/W	HR1458	AV2966
	Heat recovery delta for bypass damper in heating mode	4.0	- 99.9	99.9	K	R/W	HR1459	AV2967
E004	Heat exchanger PID parameters - Proportional gain	8.0	0.0	999.9	-	R/W	HR1460	AV2968
	Heat exchanger PID parameters - Integral time	120	0	999	-	R/W	HR1461	PIV2969
E008	Heating exchanger type	0	0	4	-	R	HR1293	PIV2801
	Bypass damper: minimum opening threshold	-5.0	- 50.0	30.0	°C	R/W	HR1462	AV2970
	Bypass damper: maximum opening threshold	- 10.0	- 50.0	30.0	°C	R/W	HR1463	AV2971
E012	Minimum time between heat exchanger defrost	15	0	999	min	R/W	HR1464	PIV2972
	Maximum defrost heat exchanger duration	15	0	999	min	R/W	HR1466	PIV2973
E016	Exhaust temperature threshold for defrost	20.0	- 50.0	90.0	°C	R/W	HR1468	AV2974
E020	Stratification correction factor of the room temperature	0.0	0.0	10.0	K	R/W	HR1469	AV2975

Tab. 9.ai

9.17.1 Heat recovery efficiency

air provides for the calculation of heat recovery efficiency. The calculated efficiency is only visible via screen Qa82 with prior access via the service user..

Note: Efficiency = (RetTemp - –xhTemp) / (RetTemp - –xtTemp.) * 100

Key:

RetTemp	Return temperature
ExtTemp	Outside temperature
ExhTemp	Exhaust temperature
Delta	Conversion factor taking into account temperature difference based on height (stratification)

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
HEAT RECOVERY EFFICIENCY								
Qa82	Calculated Heat Rec. efficiency value	-	0.0	100.0	%	R	IR839	AV4282
	Daily Heat Rec. efficiency average	-	0.0	100.0	%	R	IR840	AV4283
	Monthly Heat Rec. efficiency average	-	0.0	100.0	%	R	IR841	AV4284

Tab. 9.aj

9.18 Fans

k.air handles up to eight fans, four supply and four return, which may be of the following types:
- On/off;
- Modulating;
- 3-speed modulating;
- Modulating EBMpapst via Modbus;
- Modulating Ziehlabegg via Modbus;

The return fan is optional, and if enabled it will be the same type as the supply fan. The configuration is available on screen Ac01 and subsequently in menu B.Fans.
The following table summarises the control functions available

Type	Control	Description
On/Off	-	The fans are activated when the unit is switched on
3-speed modulating	-	The supply fan operates at three speeds (configured under B.Fans), selected on Th-Tune or PGD, while the return fan operates at a percentage offset from the supply fan.
Modulating and modulating via Modbus	Fixed speed	The supply fan works at a fixed speed set in menu B.Fans, while the return fan operates at a percentage offset from the supply fan. When the unit is switched on, the fans are activated at the set speed.
	Static pressure	Each fan has PID control based on the pressure transducer reading and a set point available in the set point menu
	Flow-rate	Each fan has PID control based on the pressure transducer reading, converted to air flow-rate, and a set point available in the set point menu
	CO2 air quality (additional option)	Air quality management using the fans is an additional option that can be combined with fixed speed, static pressure or flow-rate control. The fans will gradually increase air flow according to the air quality control request. See the chapter on Air quality control.
	Freecooling (additional option)	Freecooling using the fans is an additional option that can be combined with fixed speed, static pressure or flow-rate control. The fans will gradually increase air flow according to the request form the first stage of main temperature control. See the chapter on freecooling/freeheating.

Tab. 9.ak

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
FANS								
Ba0 1	Only for mask usage	TRUE	0	1	-	R	DI701	BV1159
	Fan regulation type (0: Static pressure; 1: Air flow; 2: Fixed speed)	2	0	2	-	R/W	HR1491	PIV299 2
	Supply fan configuration error	-	0	1	-	R	DI702	BV1160
Ba0 3	Enable air quality regulation for fans	FALS E	0	1	-	R/W	CS245	BV245
	Enable air quality regulation for fresh air OR mixing damper	FALS E	0	1	-	R	CS289	BV289
	Air Quality - Fans PID parameters - Proportional gain	1.0	0.0	999.9	-	R/W	HR1492	AV2993
	Air Quality - Fans PID parameters - Integral time	60	0	999	-	R/W	HR1493	PIV299 4
Ba1 5	Enable fan regulation in case of FreeCooling/FreeHeating	FALS E	0	1	-	R/W	CS247	BV247

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
FANS								
Ba2 7	Fan fixed speed request	30.0	0.0	100.0	%	R/W	HR1507	AV3008
	(0 = SPEED1; 1= SPEED2; 2= SPEED 3) Three speed fan request in fixed speed regulation	2	0	2	-	R/W	HR1508	PIV300 9
	3 speeds fan type enabled	-	0	1	-	R	DI704	BV1162
	Three speed fan limit 1	33.0	0.0	Fans Three-Speed 2	%	R/W	HR1509	AV3010
	3 speeds fan type enabled	-	0	1	-	R	DI704	BV1162
	Three speed fan limit 2	66.0	Fans Three-Speed 1	Fans Three-Speed 3	%	R/W	HR1510	AV3011
	3 speeds fan type enabled	-	0	1	-	R	DI704	BV1162
	Three speed fan limit 3	100.0	Fan-sThree-Speed 2	100.0	%	R/W	HR1511	AV3012
Ba3 0	Fan air quality minimum request	10.0	0.0	100.0	%	R/W	HR1512	AV3013
Ba3 3	Fan temperature regulation PID parameters - Proportional gain	8.0	-999.9	999.9	-	R/W	HR1513	AV3014
	Fan temperature regulation PID parameters - Integral time	120	0	65535	-	R/W	HR1514	PIV301 5
Ba3 6	Proportional gain	8.0	0.0	999.9	-	R/W	HR1515	AV3016
	Integral time	120	0	999	-	R/W	HR1516	PIV301 7
	Dead band	0.0	-999.9	999.9	-	R/W	HR1517	AV3018
	Supply air flow deadband	0.0	0.0	3000.0	m^3/ h	R/W	HR1518	AV3019
	Dead band	0.0	-999.9	999.9	-	R/W	HR1517	AV3018

Tab. 9.al

9.18.1 Fan speed control based on pressure/flow-rate

The fan speed is automatically modulated based on the differential pressure/air flow-rate set points. The PI control parameters are the same for both. The differential pressure sensor is used in both pressure and flow-rate mode; the conversion between the values depends on the coefficient K.

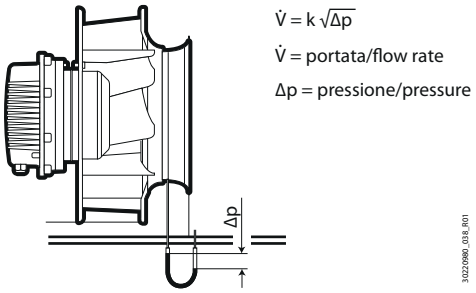


Fig. 9.ap

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
FANS								
Bb07	Supply fan - Fan K factor for air flow calculations	100.0	0.0	99999.0	-	R/W	HR1506	AV3007
Bc07	Return fan - K factor for air flow calculations	100.0	0.0	99999.0	-	R/W	HR2149	AV4503

Tab. 9.am

The example below shows PID control

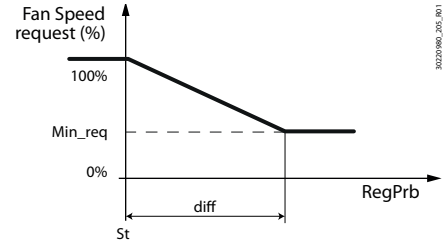


Fig. 9.aq

Key

St	Set point
Diff	Differential (100/kp)
Min_req	Minimum request
RegPrb	Air flow-rate or static pressure

Note: a post- ventilation time can be set to extend operation of the fans after the unit shutdown command. The function is useful and sometimes necessary when electric heaters are used, to avoid overheating after switching off.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
FANS								
Bb06	Supply fan: Minimum regulation value	0.0	0.0	100.0	%	R/W	HR1896	AV3376
	Supply fan: Maximum regulation value	100.0	0.0	100.0	%	R/W	HR1897	AV3377
Bc06	Return fan: Minimum regulation value	0.0	0.0	100.0	%	R/W	HR1898	AV3378
	Return fan: Maximum regulation value	100.0	0.0	100.0	%	R/W	HR1899	AV3379

Tab. 9.an

9.18.2 Fan speed control by temperature

In k.air it is possible to increase the fan speed according to the control temperature (option not available with supply-only control probe). The control will follow the unit setpoint.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
FANS								
Ba12	Fan post ventilation time	10	0	600	s		R/W	HR1500
	Enable fan temperature regulation	FALSE	0	1	-		R/W	CS479 BV4369
	Enabling the selection of the temperature regulation for the fans	-	0	1	-		R	DI703 BV1161
	Enable fan temperature limit regulation	FALSE	0	1	-		R/W	CS246 BV246

Tab. 9.ao

9.18.3 Flow and thermal overload alarm

On k.air the following digital contacts can be enabled to check correct functioning of the fans

- Supply fan thermal protector, total unit shutdown
- Return fan thermal protector, fans stopped
- Fan thermal protector, total unit shutdown. The thermal protectors for the two fans must be connected in series
- Supply fan flow, total unit shutdown with semi-automatic alarm
- Return fan flow, exhaust fan shutdown with semi-automatic alarm
- Fan flow, total unit shutdown. The flow switches for the two fans must be connected in series, semi- automatic alarm

In addition to the digital inputs for flow control, the differential pressure probes can be used to determine correct operation of the fans. In this case, the pressure threshold must be configured on screen Ba09. See chapter "Check flow switch" for a complete description of the flow control function.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
FANS								
Ba06	Air flow switch check type: 0=none; 1=common; 2=separated;	0	0	3	-	R/W	HR1494	PIV2995
	Air flow check type	0	0	2	-	R/W	HR1495	PIV2996
	Number of retry after return or supply air flow switch error detected during start up procedure before turn off the unit	3	0	9	-	R/W	HR1496	PIV2997
	Timeout for air flow switch detection (seconds)	15	1	999	s	R/W	HR1497	PIV2998
	Air flow switch alarm delay time in running mode (s)	3	0	999	s	R/W	HR1498	PIV2999
Ba09	Air flow check pressure threshold	50.0	0.0	9999.0	Pa	R/W	HR1499	AV3000
	Priority between minimum ventilation and night free cooling (FALSE: minimum ventilation; TRUE: free cooling)	FALSE	0	1	-	R/W	CS249	BV249

Tab. 9.ap

9.18.4 Functional check of modulating fans

In k.air it is possible to configure two digital contacts (supply and return if enabled) to receive feedback on correct fan operation. If this is not the case, an alarm is generated which switches the unit off. Contacts are only available with modulating fans.

9.18.5 Fan speed in the event of control probe alarm

In the event of a control probe alarm (differential pressure or air quality probe), the supply/return fans are forced on at a fixed speed, which can be set by parameter.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
FANS								
Bb01	Supply fan request in case of air pressure probe error	25.0	0.0	100.0	-	R/W	HR1563	AV3063
Bc01	Return fan request in case of air pressure probe error	35.0	0.0	100.0	-	R/W	HR1470	AV2976

Tab. 9.aq

9.18.6 Night freecooling and ventilation

At night, based on set start and end times, the minimum ventilation and/or freecooling functions can be enabled. If the conditions for enabling both functions are met, it is possible to decide which of the two will be activated, setting the priority:

1. if night freecooling is activated, the fans can be forced on at maximum speed;
2. if night ventilation is activated, the maximum fan speed limit can be set, so as to attenuate the noise level.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
FANS								
Ba18	Enable night minimum ventilation	FALSE	0	1	-	R/W	CS248	BV248
	Night minimum ventilation: starting hour	22	0	23	h	R/W	HR1501	PIV3002
	Night minimum ventilation: starting minutes	0	0	59	min	R/W	HR1502	PIV3003
	Night minimum ventilation: ending hour	6	0	23	h	R/W	HR1503	PIV3004
	Night minimum ventilation: ending minutes	0	0	59	min	R/W	HR1504	PIV3005
Ba21	Night minimum ventilation request	50.0	0.0	100.0	-	R/W	HR1505	AV3006
	Priority between minimum ventilation and night free cooling (FALSE: minimum ventilation; TRUE: free cooling)	FALSE	0	1	-	R/W	CS249	BV249

Tab. 9.ar

9.18.7 Filters

k.air provides filter monitoring in the following modes::

- Control with digital contact (pressure switch):
  - Supply filter 1 alarm
  - Supply filter 2 alarm
  - Return filter alarm
  - Common filteralarm
- Control with differential pressure sensor:
  - HEPA 1 filter alarm
  - HEPA 2 filter alarm

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ac16	Filters configuration	0	0	6	-	R/W	HR1305	PIV2813
	HEPA Filter configuration (0: None; 1: Filt 1; Filt 1 & 2)	0	0	2	-	R/W	HR1306	PIV2814

Tab. 9.as

The filters generate an alarm signal only, visible from the alarm menu and the dedicated filter alarm digital output. Select the filters installed on the unit on screen Ac16, select the channels used by the filters in the IO configuration menu; for HEPA filters configure the type of transducer and range,
On screen G001 an alarm delay can be entered to be applied individually to each filter alarm and, for HEPA filters, the alarm threshold value can be set, determined by the pressure transducer reading across the filter.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
FILTERS								
G001	Delay time for dirty filter by DIN	10	0	999999	s	R/W	HR1560	PIV3061
	HEPA filter alarm threshold	100.0	-9999.0	9999.0	%	R/W	HR1562	AV3062

Tab. 9.at

k.air provides for the calculation of the specific fan power (SFP). The SPF is a value that quantifies the energy efficiency of fan air movement systems. It is a measure of the electrical power required to drive a fan (or a collection of fans), in relation to the amount of air being circulated through the fan(s). It is not constant for a given fan, but it changes with both air flow rate and increasing fan pressure.
The calculated power is only visible via screen Qa81 with prior access via the service user..

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
SFP								
Qa81	Calculated SFP value	-	0.0	99999.9	kW/(m3/h)	R	IR836	AV4279
	Daily SFP average	-	0.0	99999.9	kW/(m3/h)	R	IR837	AV4280
	Monthly SFP average	-	0.0	99999.9	kW/(m3/h)	R	IR838	AV4281

Tab. 9.au

9.18.8 Smoke/fire alarm management

In k.air it is possible to manage the unit in the event of a smoke/fire alarm. Management involves interaction with the configured dampers and fans. When the alarm is active, the unit will perform one of the following actions:

- Stop the fans
- Supply fans forced to maximum speed
- Return fans forced to maximum speed
- Both types of fans forced to maximum speed

Depending on the chosen action, the dampers will behave as described in the following table

	Damper Behaviour					
Action	**External**	**Exhaust**	**Mixing**	**Bypass**	**Supply**	**Return**
Fans stop	Follows behaviour during unit shut-down	Follows behaviour during unit shut-down	Follows behaviour during unit shut-down	Follows behaviour during unit shut-down	Follows behaviour during unit shut-down	Follows behaviour during unit shut-down
Only supply fans	OPEN	CLOSED	CLOSED	OPEN	OPEN	CLOSED
Only return fans	CLOSED	OPEN	CLOSED	OPEN	CLOSED	OPEN
Both fans	OPEN	OPEN	CLOSED	OPEN	OPEN	OPEN

Tab. 9.av

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
FIRE/SMOKE MANAGEMENT								
Ba39	Fire Smoke management (0=Stop fans - -=Only supply fans - -= Only return fans - -=No stop)	0	0	3	-	R/W	HR2024	PIV4285

Tab. 9.aw

9.19 Air quality control

Air quality control involves the use of the CO2 sensor, and works by increasing the supply of fresh air. Consequently, it can only be enabled and implemented if there is at least one modulating actuator, either a damper or a fan. The possible combinations are shown below:

Modulating actuator 1	Modulating actuator 2	Control
Fresh air damper	-	The air quality control function increases the supply of fresh air by further opening the fresh air damper, closing the recirculation damper or acting on both together. All within the control limits set for the dampers.
Mixing damper	-	
Modulating fresh air and mixing dampers	-	
-	Modulating fixed-speed fan	The air quality control function increases the supply of fresh air by increasing fan speed, from the fixed value to the maximum limit.
-	Modulating fan with flow- rate or static pressure control	The air quality control function increases the supply of fresh air by increasing the fan speed, due to an increase in the flow-rate set point or static pressure set point, starting from the nominal set point up to the maximum setting (specific parameter).
At least one modulating damper	Modulating fan	Compared to the previous settings, which are single- point, in this case sequential PID control is enabled. This involves a first stage, which modulates the opening of the dampers, and a second stage, which modulates the fan speed. In each of these stages, the behaviour is the same as for single-point control, and therefore it is possible to combine one or more modulating dampers with modulating fan control, without a differential pressure sensor or more advanced functions, through cascade control of the air flow-rate.

Tab. 9.ax

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
FANS								
Ba03	Enable air quality regulation for fans	FALSE	0	1	-	R/W	CS245	BV245
	Enable air quality regulation for fresh air OR mixing damper	FALSE	0	1	-	R	CS289	BV289
	Air Quality - Fans PID parameters - Proportional gain	1.0	0.0	999.9	-	R/W	HR1492	AV2993
	Air Quality - Fans PID parameters - Integral time	60	0	999	-	R/W	HR1493	PIV2994

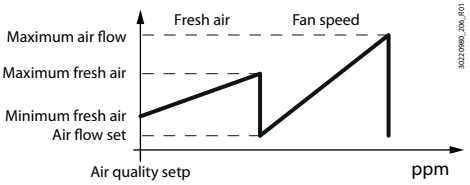
Tab. 9.ay

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
DAMPERS								
Ca03	Enable air quality regulation for fresh air OR mixing damper	FALSE	0	1	-	R/W	CS289	BV289
	Air Quality - Dampers PID parameters - Proportional gain	1.0	0.0	999.9	-	R/W	HR1640	AV3135
	Air Quality - Dampers PID parameters - Integral time	60	0	999	-	R/W	HR1641	PIV3136

Tab. 9.az

Note:
- Both air quality control and freecooling tend to increase the supply of fresh outside air. For this reason, when both are active, the dampers are controlled based on the higher of the two requests.
- If the flow- rate or static pressure set point is set to the maximum allowable value, air quality control will no longer have any effect on the fans, as there is no more margin for modulation.

The figure shows the modulating fresh air damper + fan configuration with flow-rate control.



Key

Maximum air flow	Maximum air flow-rate or static pressure set point
Minimum fresh air	Minimum fresh air damper opening
Maximum fresh air	Maximum fresh air damper opening
Air flow set	Air flow-rate or static pressure set point
Fresh air	Contribution to the supply of fresh air via the dampers
Fan speed	Contribution to the supply of fresh air by increasing fan speed

Fig. 9.ar

Consequently, air quality control requires the following:
1. Enable a modulating actuator
2. Enable air quality control (with modulating dampers and fans, it only needs to be active on one of the two)
3. Configure CO2 probe channel in the IO configuration menu.
4. Configure the PID parameters for dampers and fans (if enabled for air quality control).
5. If the fan with flow-rate or pressure control is enabled, set the maximum air quality limit in m3/h or Pa
6. Set the air quality set point in the set point menu.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Aa18	Unit setpoints – Air quality – Comfort	800.0	MinVal	MaxVal	ppm	R/W	HR1140	AV2650
	Unit setpoints – Air quality – Economy	800.0	MinVal	MaxVal	ppm	R/W	HR1135	AV2644
	Unit setpoints – Air quality – Pre-Comfort	800.0	MinVal	MaxVal	ppm	R/W	HR1137	AV2647
	Air quality setpoint – minimum value	800.0	AirQuality_CO2. MinVal_RW	MaxVal	ppm	R/W	HR1141	AV2651
	Air quality setpoint – maximum value	800.0	MinVal	AirQuality_CO2. MaxVal_RW	ppm	R/W	HR1142	AV2652

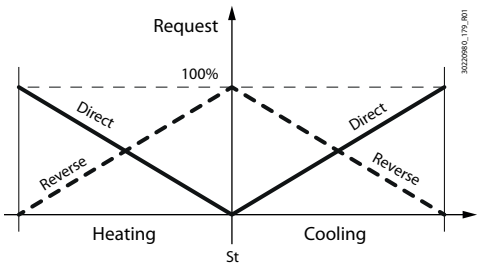
Tab. 9.ba

9.20 Generic/auxiliary control

In addition to the specific functions dedicated to the air handling unit, k.Air also allows to configure up to 4 generic controllers to drive devices not explicitly mentioned. Each controller can be adjusted according to a dedicated probe or can use a probe already in use for other controls.

Note: auxiliary control is available if there is a sufficient number of free inputs and outputs. After enabling 1 to 4 auxiliaryloops (Ac80), the following need to be selected for each of them:
- the input probe, which can be either one of the main probes or a dedicated auxiliary probe;
- the type of output, ON/OFF or modulating;
- whether the function is always active or only when switching on the unit, the fan, or manually controlled;
- the working set point, selected from: independent set point, supply or return temperature set point, humidity set point;
- the PID and configuration parameters.

Auxiliary control can drive a system actuator or an actuator with direct effect on indoor comfort. In the latter case, the set point is made available via the quick menu on the main screen, after selecting "enable quick menu". This allows the set point to be defined by the end user with unprotected access.



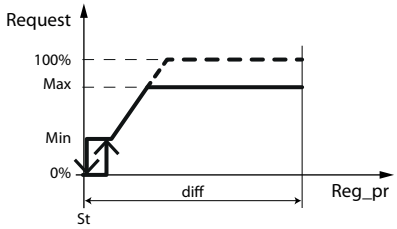


Fig. 9.as

Key

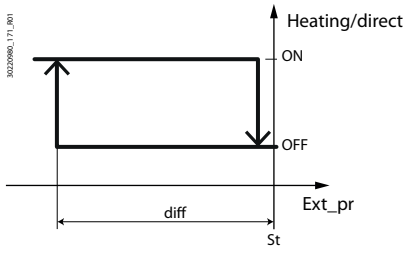
St	Set point
Reg_pr	Control probe
Max	Maximum modulating output value
Diff	Differential
Min	Minimum modulating output value

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
AUXILIARY_REGULATION								
H001	Auxiliary Regulation 1 - Input selection	0	0	13	-	R/W	HR1584	PIV3079
	Auxiliary Regulation 1 - Output selection	0	0	1	-	R/W	HR1585	PIV3080
H003	Auxiliary Regulation 1 - Dout: Error value	FALSE	0	1	-	R/W	CS261	BV261
	Auxiliary Regulation 1 - Modulating: Error value	0.0	0.0	100.0	-	R/W	HR1586	AV3081
	Auxiliary Regulation 1 - Enable selection	0	0	5	-	R/W	HR1587	PIV3082
	Auxiliary Regulation 1 - Enable selection: Manual enabling	FALSE	0	1	-	R/W	CS262	BV262
H005	Auxiliary Regulation 1 - Setpoint selection	0	0	4	-	R/W	HR1588	PIV3083
	Auxiliary Regulation 1 - Regulation setpoint	20.0	- 9999.9	9999.9	-	R/W	HR980	AV2502
	Auxiliary Regulation 1 - Modulating: Low limit	0.0	0.0	100.0	-	R/W	HR1589	AV3084
	Auxiliary Regulation 1 - Dout: Differential	20.0	0.0	999.9	-	R/W	HR1590	AV3085
	Auxiliary Regulation 1 - Modulating: High limit	100.0	0.0	100.0	-	R/W	HR1591	AV3086
	Auxiliary Regulation 1 - Enable comfort auxiliary regulation	FALSE	0	1	-	R/W	CS263	BV263
H007	Auxiliary Regulation 1 - Modulating: Kp	8.0	0.0	999.9	-	R/W	HR1592	AV3087
	Auxiliary Regulation 1 - Modulating: Integral time	120	0	999	-	R/W	HR1593	PIV3088
	Auxiliary Regulation 1 - Modulating: Derivative time	0	0	999	-	R/W	HR1594	PIV3089
	Auxiliary Regulation 1 - Modulating: Dead Band	0.0	0.0	999.9	-	R/W	HR1595	AV3090
H009	Auxiliary Regulation 1 - Reverse mode	FALSE	0	1	-	R/W	CS264	BV264
	Auxiliary Regulation 1 - Cooling/Heating mode	FALSE	0	1	-	R/W	CS265	BV265

Tab. 9.bb

Example: electric heater management

The defrost heater is managed as an auxiliary control function, and must be enabled. The control probe in this case is the fresh air probe. The On/Off heater features "direct- heating" activation, with the trend shown in the figure, while for the modulating heater, the action depends on the PID parameters.



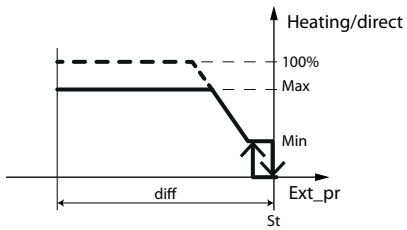


Fig. 9.at

Key

Ext_pr	Outside temperature probe
St	Set point
Diff	Differential

9.21 Sanification device

k.air manages an optional sanification device.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ac06	Enable sanification device	FALSE	0	1	-	R/W	CS461	BV3957
							DI1324	BV3958

Tab. 9.bc

Operation mode

Sanification device is always on when the unit is switched on. In case of unit off by supervisor or scheduler, sanification device status can be set.

k.air manages a digital input alarm for sanification device. If it is activated, ventilation works in normal operation but unit switches to full fresh air (externa damper full open, mixing damper full closed).

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ac88	Mode sanification during off by BMS or sched (0:OFF, 1:ON, 2:INTERMITTENT)	0	0	2	-	R/W	HR1944	PIV3961
	Sanification time on intermittent	0	0	999	s	R/W	HR1945	PIV3962
	Sanifcation time off intermittent	0	0	999	s	R/W	HR1946	PIV3963

Tab. 9.bd

9.22 Purge function

k.air manages a purge function. The function can be enabled:

- manual mode, by PGD1 or BMS, always available
- Daily scheduler at fixed time
- Daily scheduler before first unit start up whenever unit scheduler is enabled
- Both last two modes

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ac66	Purge function - Time	10	0	999	min	R/W	HR1949	PIV3972
	Purge function - Automatic mode	0	0	3	-	R/W	HR1950	PIV3973
	Purge function - Start hour	0	0	23	h	R/W	HR1951	PIV3974
	Purge function - Start minute	0	0	59	min	R/W	HR1952	PIV3975

Tab. 9.be

Operation mode

Purge function forces damper and fans at maximum load for a set delay. The purge can be activated with unit off or unit on. In case of unit off, purge doesn't affect temperature and humidity regulation. Viceversa, in case of unit on, thermoregulation devices calculate new thermal load.

Purge function are stopped in case of blackout.

9.23 Frost protection

The frost protection function (also referred to as antifreeze) is used to protect the unit against particularly harsh temperature conditions. In particular, it is used to stop ice forming on the water coils and damaging them. This function can be enabled both when the unit is On and in Off (useful for units installed outdoors).

Activation

Frost protection can be activated by:

- Frost protection thermostat (digital input)
- Outside temperature probe
- Defrost temperature probe

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ac52	Antifreeze type (0: NONE; 1: Ext.Temp.; 2: AFreeze Temp.; 3: DigitalInput)	0	0	3	-	R/W	HR1348	PIV2856

Tab. 9.bf

If the thermostat is active or the temperature read by the frost protection control probe falls below the threshold for longer than the "warning delay", the unit goes into "Frost protection" status.

If it remain in this mode for the "alarm delay" time, the unit switches off, going into "Off by alarm" or "Frost Off" status, if enabled.

Deactivation

Frost protection is deactivated when the frost protection thermostat switches or the value read by the frost protection probe is greater than the frost protection threshold plus a settable differential.

ACTIVATION BYTHERMOSTAT

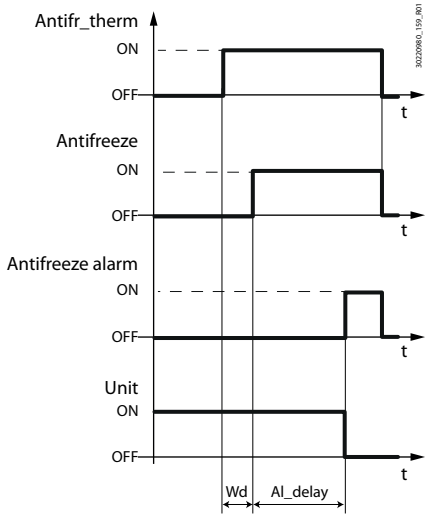


Fig. 9.au

Key

Antifr_therm	Frost protection thermostat
Antifreeze alarm	Frost protection alarm
Wd	Warning delay
t	time
Antifreeze	Frost protection
Unit	Unit status
Al_delay	Frost protection alarm

ACTIVATION BYPROBE

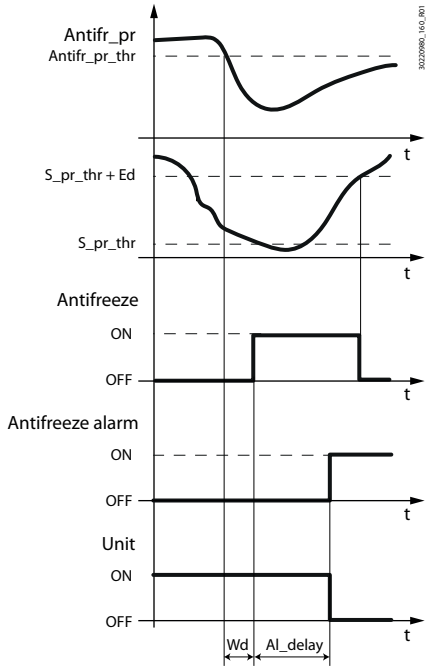


Fig. 9.av

Key

Antifr_pr	Frost protection temperature
Antifr_pr_thr	Frost protection temperature threshold
Antifreeze alarm	Frost protection alarm
Wd	Warning delay
S_pr_th	Supply probe threshold
Antifr_pr	Frost protection temperature
Antifr_pr_thr	Frost protection temperature threshold
Antifreeze alarm	Frost protection alarm
Wd	Warning delay
S_pr_th	Supply probe threshold

Control

If the condition for ending frost protection does not occur before the "Warning delay" time, the unit goes into frost protection status and the corresponding procedure is started.

9.23.1 Frost protection procedure in normal operation

The unit is in frost protection status.

1. The supply fan (and return fan, if featured) goes to the set speed if there is a mixing damper, otherwise it switches off, while the heating/cooling/mixed coil valve opens to the value set for the parameter.
2. if there is a mixing damper, this is opened completely, the fresh air and exhaust dampers are closed completely;
3. the fans are switched off. If there is an electric heater, this is switched off first and then the fans are switched off after the post-ventilation time.

Frost prevention

The frost prevention function aims to bring the unit back to normal control by reducing the supply of fresh outside air.

Procedure:

The fresh air and exhaust dampers start closing and the fans begin to decrease speed until reaching the condition for activating frost protection.

FROST PREVENTION

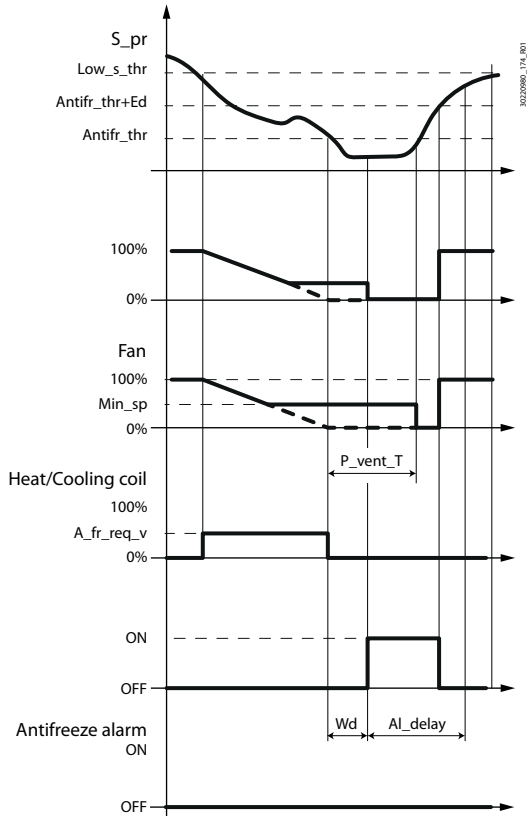


Fig. 9.aw

Key

S_pr	Supply probe
Antifr_thr	Frost protection activation threshold
Antifr_thr+Ed	Frost protection deactivation threshold
A_fr_req_v	Frost protection heater request
P_vent_T	Post-ventilation time
Al_delay	Alarm delay
t	time
Ext/Exh_ damp	Fresh air/exhaust damper
Min_lim	Fresh air damper min limit
Fan	Fan
Min_sp	Minimum fan speed
Wd	Frost protection warning delay
Low_s_thr	Low temperature threshold

9.23.2 Frost protection procedure when OFF

If the frost protection alarm with automatic reset occurs, the unit immediately switches OFF. When OFF, if frost protection is enabled, the coils are activated at a fixed percentage.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ac54	Antifreeze temperature threshold	2.0	-50.0	20.0	°C	R/W	HR1349	AV2857
	Antifreeze ending delta	3.0	0.0	15.0	K	R/W	HR1350	AV2858
Ac56	Anti freeze warning delay time	30	0	999	s	R/W	HR1351	PIV2859
	Antifreeze alarm delay time	5	0	999	s	R/W	HR1352	PIV2860
	Enable antifreeze during off state	FALSE	0	1	-	R/W	CS229	BV229
Ac58	Prevent antifreeze threshold	5.0	-99.9	99.9	°C	R/W	HR1353	AV2861

Tab. 9.bg

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
FANS								
Bb03	Minimum fan speed during antifreeze	10.0	0.0	100.0	%	R/W	HR1564	AV3064
Bc03	Return fan offset request	10.0	-100.0	100.0	-	R/W	HR1471	AV2977

Tab. 9.bh

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
DAMPERS								
Da12	Heating coil request during antifreeze off status	50.0	0.0	100.0	%	R/W	HR1664	AV3159
Db06	PreHeating coil request during antifreeze off status	50.0	0.0	100.0	%	R/W	HR1673	AV3168
Dc06	PostHeating coil request during antifreeze off status	50.0	0.0	100.0	%	R/W	HR1681	AV3176

Tab. 9.bi

9.24 Heat recovery unit defrost

During the winter, the outside air reaches low temperatures and this may cause ice to form on the heat recovery unit. The heat recovery unit is defrosted by modulating the opening of the bypass damper (for a plate heat recovery unit) or by reducing the speed of the thermal wheel.

Notes:
- in very cold climates, to prevent the formation of ice, a heater can be installed that heats the air entering upstream of the heat recovery unit, using an auxiliary control function (see the corresponding paragraph).
- the above- mentioned devices act independently, therefore if enabled, they can be activated simultaneously.

Important: the heater used to defrost the heat recovery unit is managed independently of the main control function, using the auxiliary loops.

Defrost prevention

The selection of the type of heat exchanger affects the type of action used to obtain the same effect of minimum/maximum heat exchange. See the following table for the actions corresponding to the same heat exchange effect.

		HEAT RECOVERYTYPE	
		Plate	**Wheel**
HEAT EXCHANGE	Min	Bypass damper open	Thermal wheel at minimum speed
	Max	Bypass damper closed	Thermal wheel at maximum speed

Tab. 9.bj

The controller therefore opens the bypass damper and adjusts the speed of the thermal wheel using the same modulating output, to prevent defrosting.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
HEAT RECOVERY								
E008	Heating exchanger type	0	0	4	-	R	HR1293	PIV2801
	Bypass damper: minimum opening threshold	-5.0	-50.0	30.0	°C	R/W	HR1462	AV2970
	Bypass damper: maximum opening threshold	-10.0	-50.0	30.0	°C	R/W	HR1463	AV2971
E012	Minimum time between heat exchanger defrost	15	0	999	min	R/W	HR1464	PIV2972
	Maximum defrost heat exchanger duration	15	0	999	min	R/W	HR1466	PIV2973
E016	Exhaust temperature threshold for defrost	20.0	-50.0	90.0	°C	R/W	HR1468	AV2974

Tab. 9.bk

9.24.1 Plate heat recovery unit

The bypass damper opens according to the outside temperature value so as to reduce the amount of fresh outside air entering the heat exchanger. It continues to be crossed by the flow of warm exhaust air (~20°C), so as to assist defrosting.

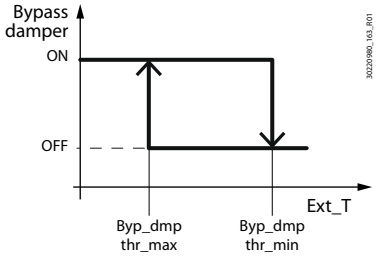


Fig. 9.ax

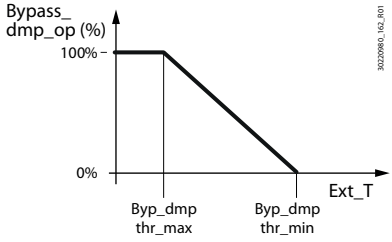


Fig. 9.ay

Key

Bypass_ dmp_op	Bypass damper opening
Byp_dmp_ thr_max	Bypass damper maximum opening threshold
Byp_dmp_ thr_min	Bypass damper minimum opening threshold
Ext_T	Outside temperature

9.24.2 Thermal wheel

To prevent activation of frost protection, the thermal wheel, starting from the minimum bypass damper opening threshold, decreases speed until stopping, reducing heat exchange between exhaust air (warm) and fresh air (cool).

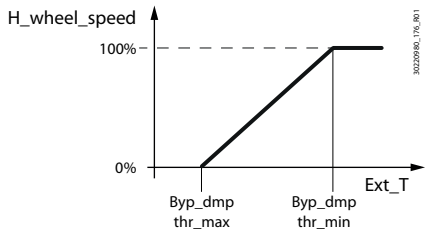


Fig. 9.az

Key

H_wheel_speed	Thermal wheel speed
Byp_dmp_thr_max	Bypass damper maximum opening threshold
Byp_dmp_thr_min	Bypass damper minimum opening threshold
Ext_T	Outside temperature

Condition for entering defrost mode

The unit starts defrosting when the following condition occurs:

- Outside temperature < Bypass damper maximum opening threshold (default = 5°C);
- Exhaust temperature < Exhaust temperature threshold

End defrost conditions

The unit ends the defrosting procedure if one of these conditions occurs:

- Exhaust temperature > Exhaust temperature threshold, or
- The "Maximum defrost duration" time has elapsed from when defrost mode starts.

Note: when the outside temperature is very low, and the minimum time has elapsed between successive defrosts, defrosting starts again.

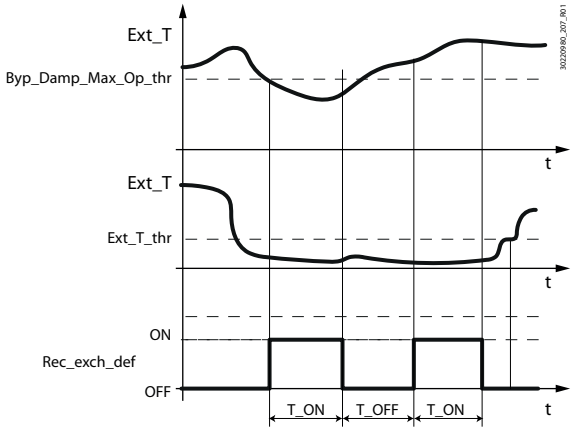


Fig. 9.ba

Key	
Exh_T	Exhaust temperature
Ext_T	Outside temperature
Byp_Damp_ Max_Op_thr	Start defrost threshold
Exh_T_thr	End defrost threshold
Rec_exch_def	Heat recovery unit defrost
T_ON	Maximum defrost duration
T_OFF	Minimum time between defrosts
t	time

9.25 Evaporator defrost

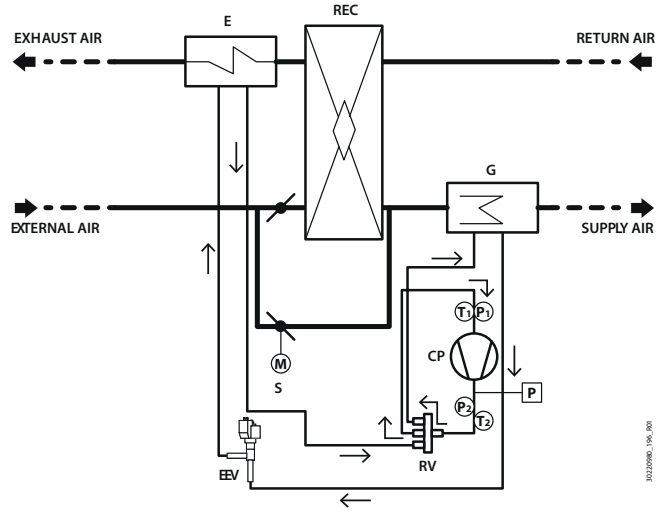


Fig. 9.bb

Key	
Bypass_dmp_op	Bypass damper opening
Byp_dmp_ thr_max	Bypass damper maximum opening threshold
Byp_dmp_ thr_min	Bypass damper minimum opening threshold
Ext_T	Outside temperature

During the winter, the outside air reaches low temperatures and consequently the exhaust air temperature is also lower: this can cause the formation of ice on the evaporator in the cooling circuit. The evaporator can be defrosted:

1. by opening the bypass damper
2. by stopping the compressor
3. by reversing the cycle

These three actions are performed in sequence, so as to optimise energy savings, and only if the previous action does not obtain the desired effect. The actions to be applied during defrost can also be enabled or disabled (using the parameter available on screen Ua09).

Conditions for entering defrost mode

The unit starts defrosting if these three conditions occur simultaneously:

1. unit in heating mode
2. compressor on
3. evaporation temperature (conversion from suction pressure) < start defrost threshold During defrosting, the fans operate at the speed set for "Defrost fan request".

End defrost conditions

The unit ends the defrosting procedure if one of these conditions occurs:

1. condensing temperature > end defrost threshold
2. "defrost step 3: maximum time" has elapsed since the cycle was reversed

Step 1 - Action on bypass damper

When the three conditions are met, the unit activates the defrost procedure and a timer starts counting ("Defrost step 1: start delay").

Actions:

1. The bypass damper opens according to the outside temperature value, in order to reduce the amount of cold air entering the heat exchanger. It continues to be crossed by the flow of warm exhaust air (~20°C), in order to assist defrosting.

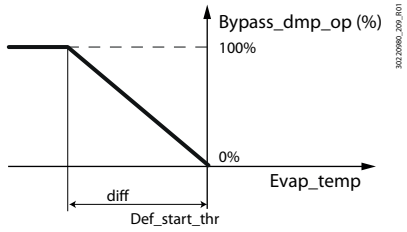


Fig. 9.bc

Key

Def_start_thr	Start defrost threshold
Diff	Evaporation temperature delta
Bypass_dmp_op	Bypass damper opening
Evap_Temp	Evaporation temperature

2. If within the Start delay time the evaporator temperature does exceed the "Start defrost threshold + 1°C", the unit goes to step 2.

Step 2 - Action on the compressor

For the "Delay before reversing cycle" time, depending on the type of compressor, the action is as follows:

- On-Off: switches off
- BLDC: goes to minimum speed

In this way, the refrigerant temperature increases and the evaporator is cooled less.
If within the "Compressor OFF time" and after the "Delay before reversing cycle" time has elapsed, the evaporator temperature does not exceed the "Defrost start threshold plus 1°C", the unit goes to step 3.

Step 3 - Reverse cycle

When the refrigeration cycle is reversed, the roles of the evaporator and condenser are exchanged.

1. the 4-way valve reverses the cycle
2. a timer starts, used to calculate the "Defrost step 3: minimum and maximum time"
3. the compressor:
   - On-Off: starts and remains on for a time between "Min time - step 3" and "Max time - step 3";
   - BLDC: goes to maximum speed for a time between "Min time - step 3" and "Max time - step 3"
4. the unit ends the defrosting procedure when the end defrost conditions occur.

The minimum defrost time is used to guarantee a minimum defrost duration. The maximum defrost time is a safety feature that avoids any abnormal conditions (end defrost threshold not reached). The time between defrosts is needed to prevent the unit from defrosting too frequently and thus only partly meeting demand.

The actions in this step are as follows:

- Decreased compressor capacity to end defrost (B): the procedure reduces compressor capacity to the minimum and reverses the cycle. The fan operates at the defrost speed and the reversing valve is activated in the heat pump position, controlled based on the difference between discharge and suction pressure. As soon as this difference drops below the minimum valve actuation delta (reversing valve pressure delta), or at most after 60 s, the cycle is reversed.
- Dripping (C), phase in which the compressor is stopped (On/Off) or goes to minimum speed (BLDC) and the fans go to the speed set for "Fan request during dripping", awaiting the coil to complete defrosting by thermal inertia and finish dripping; the duration can be set for "Defrosting step3: dripping time";
- Post-dripping (D), phase in which the fans go to the speed set for "Fan request after post-dripping" (Ua07) so as to completely expel any water that is still on the coil. The post-dripping duration can be set, and once it ends the compressor starts again in normal heat pump operation.

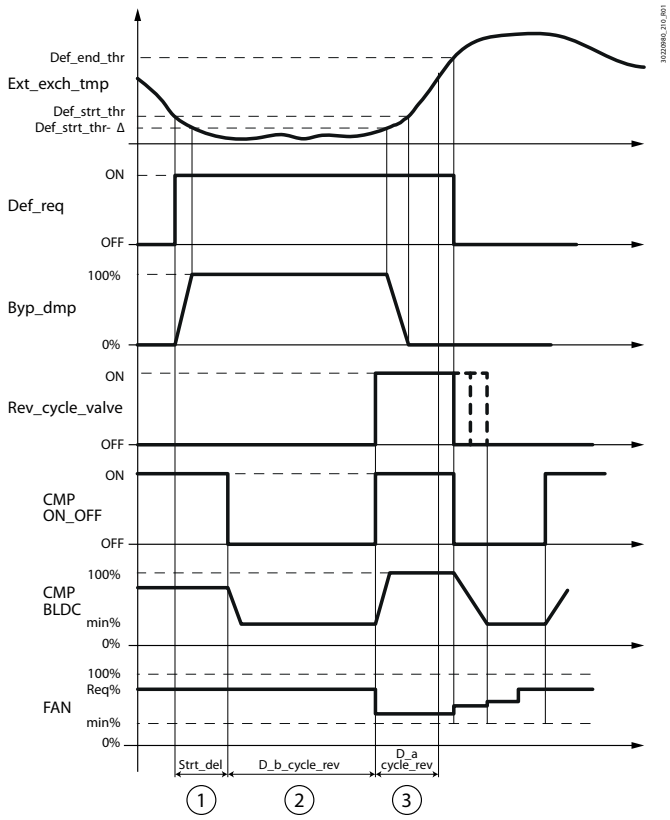


Fig. 9.bd

Key	
Ext_exch_tmp(*)	Outside coil temperature
Def_end_thr	End defrost threshold
Def_strt_thr	Start defrost threshold
Δ	Evaporation temperature delta
D_b_cycle_rev	Delay before reversing cycle
A	Defrost by reversing the cycle
D	Post-dripping
Def_req	Defrost request
Byp_dmp	Heat recovery bypass damper
Rev_Cycle_valve	Reversing valve
Strt_del	Delay at start-up
D_a_cycle_rev	Delay after reversing cycle
B	Decreased compressor cap. for defrost
CMP	On/off compressor
CMP_BLDC	BLDC compressor
Fan	Fan
Cmp_off_t	Compressor OFF time
t	time
C	Dripping

(*) The start defrost temperature = evaporation temperature, end defrost temperature = condensing temperature.

9.25.1 Plate heat recovery unit

The bypass damper opens according to the outside temperature value so as to reduce the amount of fresh outside air entering the heat exchanger. It continues to be crossed by the flow of warm exhaust air (~20°C), so as to assist defrosting.

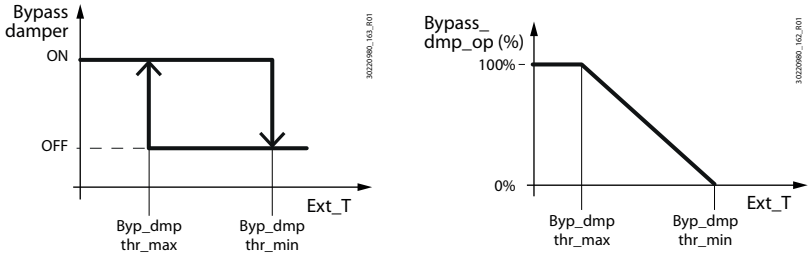


Fig. 9.be

Key	
Bypass_ dmp_op	Bypass damper opening
Byp_dmp_ thr_max	Bypass damper maximum opening threshold
Byp_dmp_ thr_min	Bypass damper minimum opening threshold
Ext_T	Outside temperature

9.25.2 Thermal wheel

To prevent activation of frost protection, the thermal wheel, starting from the minimum bypass damper opening threshold, decreases speed until stopping, reducing heat exchange between exhaust air (warm) and fresh air (cool).

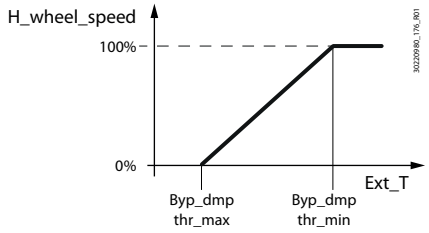


Fig. 9.bf

Key	
H_wheel_speed	Thermal wheel speed
Byp_ dmp_ thr_ max	Bypass damper maximum opening threshold
Byp_ dmp_ thr_ min	Bypass damper minimum opening threshold
Ext_T	Outside temperature

Condition for entering defrost mode

The unit starts defrosting when the following condition occurs:

- Outside temperature < Bypass damper maximum opening threshold (default = 5°C);
- Exhaust temperature < Exhaust temperature threshold

End defrost conditions

The unit ends the defrosting procedure if one of these conditions occurs:

- Exhaust temperature > Exhaust temperature threshold, or
- The "Maximum defrost duration" time has elapsed from when defrost mode starts.

Note: when the outside temperature is very low, and the minimum time has elapsed between successive defrosts, defrosting starts again.

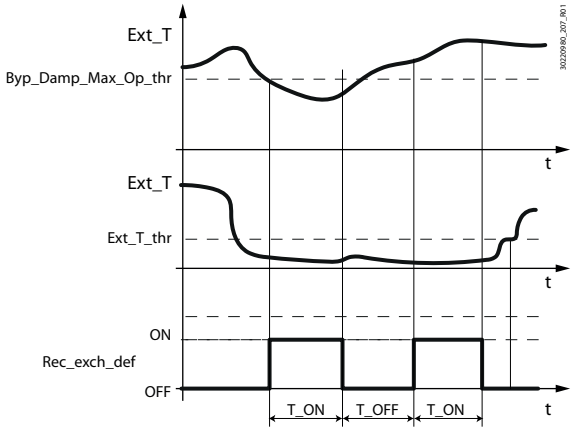


Fig. 9.bg

Key

Exh_T	Exhaust temperature
Ext_T	Outside temperature
Byp_ Damp_ Max_ Op_thr	Start defrost threshold
Exh_T_thr	End defrost threshold
Rec_exch_def	Heat recovery unit defrost
T_ON	Maximum defrost duration
T_OFF	Minimum time between defrosts
t	time

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
COMPRESSOR								
Ua09	Evaporator defrost start threshold	-1.0	-10.0	5.0	°C	R/W	HR1526	AV3027
	Evaporator defrost end threshold	50.0	DfrStart-Thrsh	99.9	°C	R/W	HR1527	AV3028
	Enable defrost actions (0=None, 1=Only phase 1, 2=Only phase 2, 3=Phase 1 and 2)	3	0	3	-	R/W	HR1967	PIV4024
Ua12	Defrost delta bypass damper	3.0	0.0	10.0	K	R/W	HR1528	AV3029
	Evaporator defrost start delay time	5	0	65535	min	R/W	HR1529	PIV3030
Ua15	Enable refrigerant ciruit for active heat recovery unit	-	0	1	-	R	DI705	BV1163
	Defrost time for stop compressor	5	0	65535	min	R/W	HR1530	PIV3031
Ua18	Defrost minimum time	1	0	65535	min	R/W	HR1531	PIV3032
	Defrost maximum time	5	0	65535	min	R/W	HR1532	PIV3033
	Time between two defrost	30	0	65535	min	R/W	HR1533	PIV3034
Ua21	Defrost dripping time	90	0	9999	s	R/W	HR1534	PIV3035
	Post-dripping time [s]	30	0	9999	s	R/W	HR1535	PIV3036
Ua24	BLDC minimum speed in defrost	40.0	-999.9	999.9	-	R/W	HR1536	AV3037
	Reverse valve delta P	3.0	0.0	5.0	bar	R/W	HR1537	AV3038
Ua27	Defrost: delay time before change over	20	0	900	s	R/W	HR1538	PIV3039
	Defrost: delay time after change over	10	0	900	s	R/W	HR1539	PIV3040
Ua30	Fans request during evaporator defrost	3	0	3	%	R/W	HR1540	PIV3041
	Fans request during evaporator defrost	30.0	0.0	100.0	%	R/W	HR1541	AV3042
	Fans request during evaporator defrost	0	0	100	%	R/W	HR1542	PIV3043
	Fans request during evaporator defrost: dripping	2	0	3	%	R/W	HR1543	PIV3044
	Fans request during evaporator defrost: dripping	30.0	0.0	100.0	%	R/W	HR1544	AV3045
	Fans request during evaporator defrost: dripping	100	0	100	%	R/W	HR1545	PIV3046
	Fans request during evaporator defrost: post dripping	2	0	3	%	R/W	HR1546	PIV3047
	Fans request during evaporator defrost: post dripping	30.0	0.0	100.0	%	R/W	HR1547	AV3048
	Fans request during evaporator defrost: post dripping	100	0	100	%	R/W	HR1548	PIV3049
Ua33	Disable Low supply temperature alarm	TRUE	0	1	-	R/W	CS250	BV250

Tab. 9.bl

9.26 Probe error management

The k.Air controller software features specific device management and/or control functions in the event of probe errors. Normally, the device or function associated with a probe alarm is deactivated, so as to avoid control being based on inaccurate values, however in some special cases the devices can be managed by setting a fixed percentage, so as to allow the unit to continue operating, albeit without guaranteeing optimal control.

There are two special cases:

1. fan control in the event of air quality/pressure probe error: the value can be set on screen Bb01 (supply fan) and Bc01 (return fan).
2. auxiliary control in the event of an error on the corresponding probe the value can be set on screen H02.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
AUXILIARY_REGULATION								
H003	Auxiliary Regulation 1 - Dout: Error value	FALSE	0	1	-	R/W	CS261	BV261
	Auxiliary Regulation 1 - Modulating: Error value	0.0	0.0	100.0	-	R/W	HR1586	AV3081
	Auxiliary Regulation 1 - Enable selection	0	0	5	-	R/W	HR1587	PIV3082
	Auxiliary Regulation 1 - Enable selection: Manual enabling	FALSE	0	1	-	R/W	CS262	BV262
H013	Auxiliary Regulation 2 - Dout: Error value	FALSE	0	1	-	R/W	CS268	BV268
	Auxiliary Regulation 2 - Modulating: Error value	0.0	0.0	100.0	-	R/W	HR1599	AV3094
	Auxiliary Regulation 2 - Enable selection	0	0	5	-	R/W	HR1600	PIV3095
	Auxiliary Regulation 2 - Enable selection: Manual enabling	FALSE	0	1	-	R/W	CS269	BV269
H023	Auxiliary Regulation 3 - Dout: Error value	FALSE	0	1	-	R/W	CS275	BV275
	Auxiliary Regulation 3 - Modulating: Error value	0.0	0.0	100.0	-	R/W	HR1613	AV3108
	Auxiliary Regulation 3 - Enable selection	0	0	5	-	R/W	HR1614	PIV3109
	Auxiliary Regulation 3 - Enable selection: Manual enabling	FALSE	0	1	-	R/W	CS276	BV276
H033	Auxiliary Regulation 4 - Dout: Error value	FALSE	0	1	-	R/W	CS282	BV282
	Auxiliary Regulation 4 - Modulating: Error value	0.0	0.0	100.0	-	R/W	HR1627	AV3122
	Auxiliary Regulation 4 - Enable selection	0	0	5	-	R/W	HR1628	PIV3123
	Auxiliary Regulation 4 - Enable selection: Manual enabling	FALSE	0	1	-	R/W	CS283	BV283

Tab. 9.bm

In addition, control probe errors are managed specifically, involving various devices. In this case, the following can be selected:

- shut the unit down (Off), or switch off all of the devices after the corresponding delay times (post ventilation, damper closing time, compressor times).
- set a fixed percentage of operation for each device.

These values are available (if the function is enabled) on screens Ac70, Ac72, Ac74. In this case, all of the alarms still remain active. It is also possible to enable this function even when the unit is Off, in which case only the water coils are forced to the set percentage for frost protection, as otherwise this cannot be correctly controlled. This function has priority over any other special functions.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ac70	Fresh air damper request in case of regulation probe error: modulating	0.0	0.0	100.0	%	R/W	HR1362	AV2870
	Fresh air damper request in case of regulation probe error: on/off	0	0	100	%	R/W	HR1363	PIV2871
	Bypass damper request in case of regulation probe error: modulating	0.0	0.0	100.0	%	R/W	HR1364	AV2872
	Thermal wheel request in case of regulation probe error: modulating	0.0	0.0	100.0	%	R/W	HR1365	AV2873
	Bypass damper request in case of regulation probe error: on/off	0	0	100	%	R/W	HR1366	PIV2874
	Mixing damper request in case of regulation probe error	0.0	0.0	100.0	%	R/W	HR1367	AV2875
	Mixing damper request in case of regulation probe error	0	0	100	%	R/W	HR1368	PIV2876
	Exhaust damper request in case of regulation probe error	0.0	0.0	100.0	%	R/W	HR1369	AV2877
	Exhaust damper request in case of regulation probe error	0	0	100	%	R/W	HR1370	PIV2878
Ac72	Supply damper request in case of regulation probe error	0.0	0.0	100.0	%	R/W	HR1371	AV2879
	Supply damper request in case of regulation probe error	0	0	100	%	R/W	HR1372	PIV2880
	Return damper request in case of regulation probe error	0.0	0.0	100.0	%	R/W	HR1373	AV2881
	Return damper request in case of regulation probe error	0	0	100	%	R/W	HR1374	PIV2882
	Main coil request in case of regulation probe error	0.0	0.0	100.0	%	R/W	HR1375	AV2883
	PreHeating coil request in case of regulation probe error	50.0	0.0	100.0	%	R/W	HR1376	AV2884
	PostHeating coil request in case of regulation probe error	50.0	0.0	100.0	%	R/W	HR1377	AV2885
Ac74	Supply fan speed request in case of regulation probe error	0	0	3	%	R/W	HR1378	PIV2886
	Supply fan speed request in case of regulation probe error	0.0	0.0	100.0	%	R/W	HR1379	AV2887
	Supply fan speed request in case of regulation probe error	0	0	100	%	R/W	HR1380	PIV2888
	Supply fan speed request in case of regulation probe error	0	0	3	%	R/W	HR1381	PIV2889
	Return fan speed request in case of regulation probe error	0.0	0.0	100.0	%	R/W	HR1382	AV2890
	Supply fan speed request in case of regulation probe error	0	0	100	%	R/W	HR1383	PIV2891
	Compressor request in case of regulation probe error: BLDC	0.0	0.0	100.0	%	R/W	HR1384	AV2892
	Compressor request in case of regulation probe error: On/off	0	0	100	%	R/W	HR1385	PIV2893
	Humidification request in case of regulation probe error	0.0	0.0	100.0	%	R/W	HR1386	AV2894
	IEC: request in case of regulation probe error	0.0	0.0	100.0	%	R/W	HR1387	AV2895

Tab. 9.b

Example:
In the event of a fan control probe error and a supply temperature probe error, the fan is activated based on the request set for a supply temperature probe error.

Note: in the event of a room probe error, the controller will use the supply temperature probe reading and the last set point set on the user interface. The room control offset is set to zero.

9.27 Operating profiles

The controller has four operating profiles, which are selected when setting the time bands: Off (off), Economy, Precomfort, Comfort. See chapter "User interface". For each operating mode, the following can be set: heating and cooling temperature set point, according to the selected control probe, differential pressure/air flow-rate set point, air quality set point, room humidity set point.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Aa03	Unit setpoints - Temperature setpoint - Summer - Comfort	26.0	MinVal	MaxVal	°C	R/W	HR1074	AV2584
	Unit setpoints - Temperature setpoint - Summer - Economy	28.0	MinVal	MaxVal	°C	R/W	HR1062	AV2572
	Unit setpoints - Temperature setpoint - Summer – Pre-comfort	26.0	MinVal	MaxVal	°C	R/W	HR1068	AV2578
Aa06	Unit setpoints - Temperature setpoint - Winter - Comfort	20.0	MinVal	MaxVal	°C	R/W	HR1075	AV2585
	Unit setpoints - Temperature setpoint - Winter - Economy	18.0	MinVal	MaxVal	°C	R/W	HR1063	AV2573
	Unit setpoints - Temperature setpoint - Winter – Pre-comfort	20.0	MinVal	MaxVal	°C	R/W	HR1069	AV2579
Aa09	Temperature setpoint – minimum value	18.0	0.0	MaxVal	°C	R/W	HR1076	AV2586
	Temperature setpoint – maximum value	28.0	MinVal	100.0	°C	R/W	HR1077	AV2587
Aa12	Unit setpoints – Supply static pressure setpoint – Comfort	400.0	MinVal	MaxVal	Pa	R/W	HR1122	AV2632
	Unit setpoints – Supply static pressure setpoint – Economy	400.0	MinVal	MaxVal	Pa	R/W	HR1116	AV2626
	Unit setpoints – Supply static pressure setpoint – Pre-comfort	400.0	MinVal	MaxVal	Pa	R/W	HR1119	AV2629
	Supply static pressure setpoint – minimum value	200.0	SupplyAirP_ MinVal_RW	MaxVal	Pa	R/W	HR1123	AV2633
	Supply static pressure setpoint – maximum value	600.0	MinVal	SupplyAirP_ MaxVal_RW	Pa	R/W	HR1124	AV2634
Aa15	Unit setpoints – Supply air flow setpoint – Comfort	5000	MinVal	MaxVal	m^3/h	R/W	HR1129	PIV2641
	Unit setpoints – Supply air flow setpoint – Economy	5000	MinVal	MaxVal	m^3/h	R/W	HR1125	PIV2635
	Unit setpoints – Supply air flow setpoint – Pre-comfort	5000	MinVal	MaxVal	m^3/h	R/W	HR1127	PIV2638
	Supply air flow setpoint – minimum value	2000	0	MaxVal	m^3/h	R/W	HR1131	PIV2642
	Supply air flow setpoint – maximum value	6000	MinVal	999999	m^3/h	R/W	HR1133	PIV2643
Aa18	Unit setpoints – Air quality CO2 setpoint – Comfort	800.0	MinVal	MaxVal	ppm	R/W	HR1140	AV2650
	Unit setpoints – Air quality CO2 setpoint – Economy	800.0	MinVal	MaxVal	ppm	R/W	HR1135	AV2647
	Unit setpoints – Air quality CO2 setpoint – Pre-comfort	800.0	MinVal	MaxVal	ppm	R/W	HR1137	AV2644
	Air quality CO2 setpoint – minimum value	100.0	AirQuali-tyCO2_Min-Val_RW	MaxVal	ppm	R/W	HR1141	AV2651
	Air quality CO2 setpoint – maximum value	600.0	MinVal	AirQuali-tyCO2_Ma-xVal_RW	ppm	R/W	HR1142	AV2652
Aa21	Unit setpoints – Air quality VOC setpoint – Comfort	50.0	MinVal	MaxVal	%	R/W	HR1960	AV4021
	Unit setpoints – Air quality VOC setpoint – Economy	60.0	MinVal	MaxVal	%	R/W	HR1963	AV4015
	Unit setpoints – Air quality VOC setpoint – Pre-comfort	55.0	MinVal	MaxVal	%	R/W	HR1966	AV4018
	Air quality VOC setpoint – minimum value	20.0	AirQuality-VOC_Min-Val_RW	MaxVal	%	R/W	HR1959	AV4022
	Air quality VOC setpoint – maximum value	80.0	MinVal	AirQuality-VOC_Max-Val_RW	%	R/W	HR1958	AV4023
Aa24	Unit setpoints – Return static pressure setpoint – Comfort	400.0	MinVal	MaxVal	Pa	R/W	HR1149	AV2659
	Unit setpoints – Return static pressure setpoint – Economy	400.0	MinVal	MaxVal	Pa	R/W	HR1143	AV2653
	Unit setpoints – Return static pressure setpoint – Pre-comfort	400.0	MinVal	MaxVal	Pa	R/W	HR1146	AV2656
	Return static pressure setpoint – minimum value	200.0	RetAirP_ MinVal_RW	MaxVal	Pa	R/W	HR1150	AV2660
	Return static pressure setpoint – maximum value	600.0	MinVal	RetAirP_Ma-xVal_RW	Pa	R/W	HR1151	AV2661
Aa27	Unit setpoints – Return air flow setpoint – Comfort	5000	MinVal	MaxVal	m^3/h	R/W	HR1156	PIV2668
	Unit setpoints – Return air flow setpoint – Economy	5000	MinVal	MaxVal	m^3/h	R/W	HR1152	PIV2662
	Unit setpoints – Return air flow setpoint – Pre-comfort	5000	MinVal	MaxVal	m^3/h	R/W	HR1154	PIV2665
	Return air flow setpoint – minimum value	2000	0	MaxVal	m^3/h	R/W	HR1158	PIV2669
	Return air flow setpoint – maximum value	6000	MinVal	999999	m^3/h	R/W	HR1160	PIV2670
Aa30	Unit setpoints - Humidity setpoint - Summer - Comfort	60.0	MinVal	MaxVal	%rH	R/W	HR1173	AV2683
	Unit setpoints - Humidity setpoint - Summer - Economy	50.0	MinVal	MaxVal	%rH	R/W	HR1162	AV2671
	Unit setpoints - Humidity setpoint - Summer – Pre-comfort	55.0	MinVal	MaxVal	%rH	R/W	HR1167	AV2677
Aa33	Unit setpoints - Humidity setpoint - Winter - Comfort	60.0	MinVal	MaxVal	%rH	R/W	HR1174	AV2684
	Unit setpoints - Humidity setpoint - Winter - Economy	50.0	MinVal	MaxVal	%rH	R/W	HR1163	AV2672
	Unit setpoints - Humidity setpoint - Winter – Pre-comfort	55.0	MinVal	MaxVal	%rH	R/W	HR1168	AV2678
Aa36	Humidity setpoint – minimum value	40.0	0.0	MaxVal	%rH	R/W	HR1175	AV2685
	Humidity setpoint – maximum value	60.0	MinVal	100.0	%rH	R/W	HR1176	AV2686

Tab. 9.bn

9.28 Time bands

The time bands are managed by the k.air controller Scheduler function; this function features a weekly schedule, special days (up to 15) and vacations (up to 3). For each of these three groups, either a fixed profile (Off, Comfort, Precomfort, Economy) or a daily program chosen from four pre-settable configurations can be selected. Each daily program comprises 10 time bands; when enabled, a specific profile can be set for each band (Off, Comfort, Precomfort, Economy). For each profile, the reference values can be set under Unit configuration > set points.

Scheduler

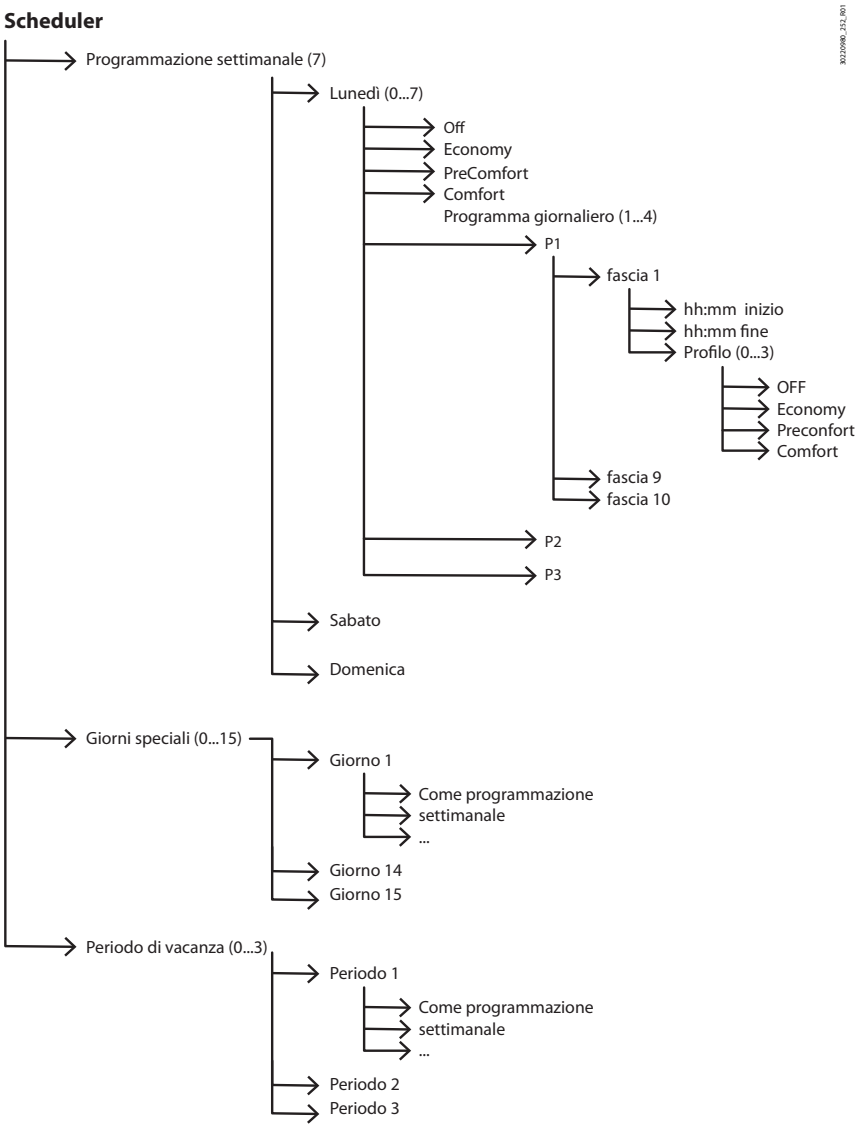
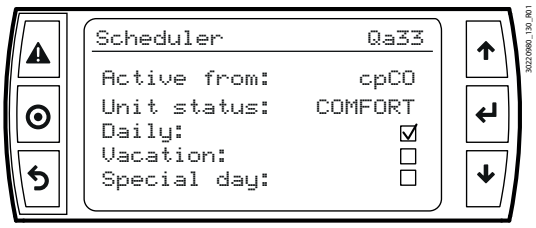
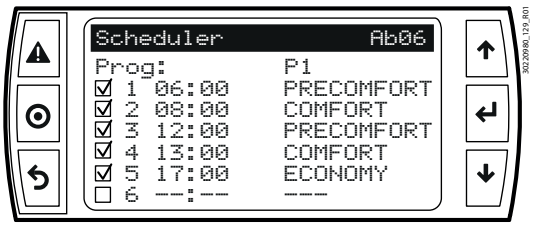


Fig. 9.bh

PROGRAMMING EXAMPLE 1: setting the time bands and copying them from one day to another.

1. Press Esc one or more times to go to the standard display;
2. Press Prg to access the main menu. Enter the Service password;
3. Press UP/DOWN to go to category A. Unit, press Enter and UP/DOWN to view the subcategories;
4. Select b. Scheduler and press ENTER to enter screen Ab01: "SCHEDULER".
5. Press ENTER to go to the next field and press UP/DOWN to enable the scheduler, confirm by pressing ENTER;
6. Got to screen Ab03 by pressing DOWN:
    1. 1. select daily program P1 to P4 set by pressing ENTER and UP/DOWN
    2. 2. go to screen Ab06.
    3. 3. press ENTER to select check box 1;
    4. 4. press UP/DOWN to check the box;
    5. 5. press Enter and UP/DOWN to set the hour and minutes for the start of the first time band and the corresponding operating mode: OFF, ECONOMY, PRECOMFORT, COMFORT
    6. repeat the setting for time bands 2, 3, 4, 5 and 6;
    7. go to screen Ab09 by pressing DOWN;
    8. repeat the setting for time bands 7, 8, 9 and 10;
    9. save the data (relating to the current program);
    10. if necessary, copy the current program settings to another or all programs (ALL);
7. go to screen Ab12 by pressing DOWN:
8. press Enter and UP/DOWN to set the daily program for each day of the week (P1, ... P4, OFF, ECONOMY, PRECOMFORT, COMFORT)
9. save the data (relating to the current weekly schedule);
10. a message is shown on screen Qa33 indicating that the time bands are now active and the current unit operating mode.





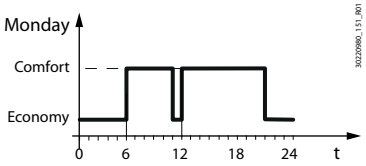


Fig. 9.bi

PROGRAMMING EXAMPLE 2: vacations and special days (continued)

1. Program the time bands and go to screen Ab15;
2. Set the vacation periods, in the same way as shown in the previous example;

Vacation periods last at least two days, and the selected operating mode has priority over any daily programs.
Go to screens Ab18, Ab21, Ab24 and set the special days.
Special days last just one day, have priority over the time bands and vacations, and the selected operating mode can be:

- OFF, ECONOMY, PRECOMFORT, COMFORT

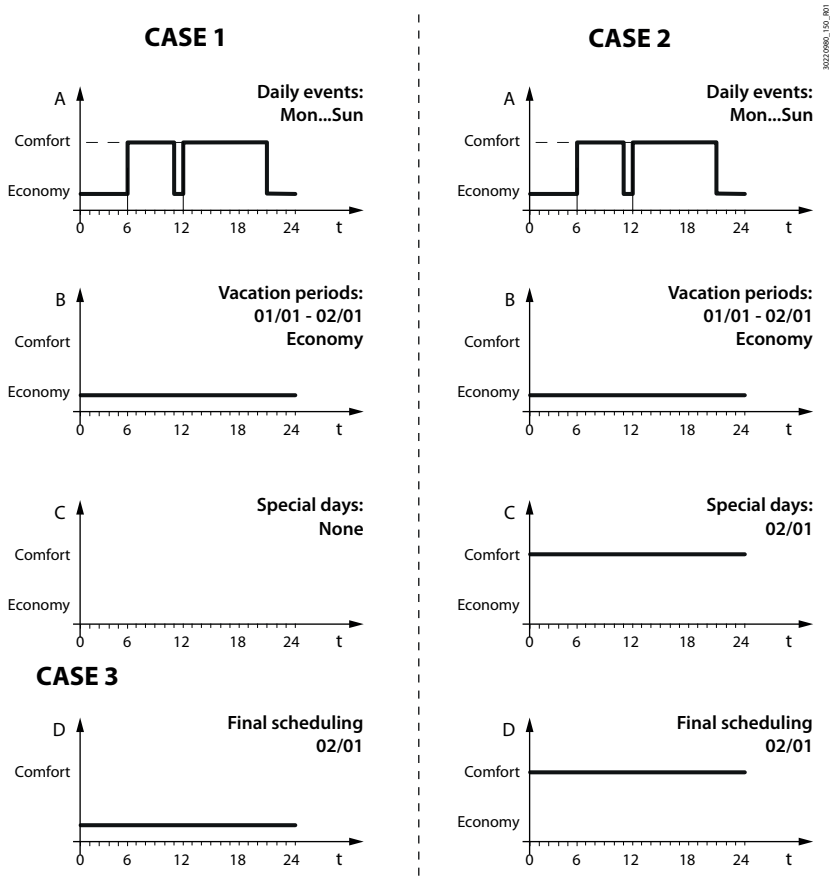


Fig. 9.bj

Note: for the daily programs, the time bands must be in chronological order, and midnight (00:00), where necessary, must be the first set band.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ab01	Actual hour	-	0	99	-	R	IR306	PIV3687
	Actual minute	-	0	99	-	R	IR307	PIV3688
	Day of week	-	0	9	d	R	IR383	PIV3760
	Actual day	-	0	99	d	R	IR358	PIV3739
	Actual month	-	0	99	month	R	IR359	PIV3740
	Actual year	-	0	99	y	R	IR360	PIV3741
	Scheduler: configuration - Enabled	FALSE	0	1	-	R/W	CS064	BV64
Ab06	Enable event 1	-	0	1	-	R/W	CS196	BV196
	Start hours event 1	-	0	23	-	R/W	HR1187	PIV2696
	Start minutes event 1	-	0	59	-	R/W	HR1188	PIV2697
	0=OFF; 1=Economy; 2=Comfort	-	0	3	-	R/W	HR1189	PIV2698
	Enable event 2	-	0	1	-	R/W	CS197	BV197
	Start hours event 2	-	0	23	-	R/W	HR1190	PIV2699
	Start minutes event 2	-	0	59	-	R/W	HR1191	PIV2700
	0=OFF; 1=Economy; 2=Comfort	-	0	3	-	R/W	HR1192	PIV2701
	Enable event 3	-	0	1	-	R/W	CS198	BV198
	Start hours event 3	-	0	23	-	R/W	HR1193	PIV2702
	Start minutes event 3	-	0	59	-	R/W	HR1194	PIV2703
	0=OFF; 1=Economy; 2=Comfort	-	0	3	-	R/W	HR1195	PIV2704
	Enable event 4	-	0	1	-	R/W	CS199	BV199
	Start hours event 4	-	0	23	-	R/W	HR1196	PIV2705
	Start minutes event 4	-	0	59	-	R/W	HR1197	PIV2706
	0=OFF; 1=Economy; 2=Comfort	-	0	3	-	R/W	HR1198	PIV2707
	Enable event 5	-	0	1	-	R/W	CS200	BV200
	Start hours event 5	-	0	23	-	R/W	HR1199	PIV2708
	Start minutes event 5	-	0	59	-	R/W	HR1200	PIV2709
	0=OFF; 1=Economy; 2=Comfort	-	0	3	-	R/W	HR1201	PIV2710
	Enable event 6	-	0	1	-	R/W	CS201	BV201
	Start hours event 6	-	0	23	-	R/W	HR1202	PIV2711
	Start minutes event 6	-	0	59	-	R/W	HR1203	PIV2712
	0=OFF; 1=Economy; 2=Comfort	-	0	3	-	R/W	HR1204	PIV2713
Ab09	Enable event 7	-	0	1	-	R/W	CS202	BV202
	Start hours event 7	-	0	23	-	R/W	HR1205	PIV2714
	Start minutes event 7	-	0	59	-	R/W	HR1206	PIV2715
	0=OFF; 1=Economy; 2=Comfort	-	0	3	-	R/W	HR1207	PIV2716
	Enable event 8	-	0	1	-	R/W	CS203	BV203
	Start hours event 8	-	0	23	-	R/W	HR1208	PIV2717
	Start minutes event 8	-	0	59	-	R/W	HR1209	PIV2718
	0=OFF; 1=Economy; 2=Comfort	-	0	3	-	R/W	HR1210	PIV2719
	Enable event 9	-	0	1	-	R/W	CS204	BV204
	Start hours event 9	-	0	23	-	R/W	HR1211	PIV2720
	Start minutes event 9	-	0	59	-	R/W	HR1212	PIV2721
	0=OFF; 1=Economy; 2=Comfort	-	0	3	-	R/W	HR1213	PIV2722
	Enable event 10	-	0	1	-	R/W	CS205	BV205
	Start hours event 10	-	0	23	-	R/W	HR1214	PIV2723
	Start minutes event 10	-	0	59	-	R/W	HR1215	PIV2724
	0=OFF; 1=Economy; 2=Comfort	-	0	3	-	R/W	HR1216	PIV2725
Ab12	Monday program	OFF	0	7	-	R/W	HR1221	PIV2729
	Tuesday program	OFF	0	7	-	R/W	HR1222	PIV2730
	Wednesday program	OFF	0	7	-	R/W	HR1223	PIV2731
	Thursday program	OFF	0	7	-	R/W	HR1224	PIV2732
	Friday program	OFF	0	7	-	R/W	HR1225	PIV2733
	Saturday program	OFF	0	7	-	R/W	HR1226	PIV2734
	Sunday program	OFF	0	7	-	R/W	HR1227	PIV2735
Ab15	Enable vacation 1	-	0	1	-	R/W	CS206	BV206
	Start day 1	-	1	31	d	R/W	HR1229	PIV2737
	Start month 1	-	1	12	m	R/W	HR1230	PIV2738
	End day 1	-	1	31	d	R/W	HR1231	PIV2739
	End month 1	-	1	12	m	R/W	HR1232	PIV2740
	Program	-	0	7	-	R/W	HR1233	PIV2741
	Enable vacation 2	-	0	1	-	R/W	CS207	BV207
	Start day 2	-	1	31	d	R/W	HR1234	PIV2742
	Start month 2	-	1	12	m	R/W	HR1235	PIV2743
	End day 2	-	1	31	d	R/W	HR1236	PIV2744
	End month 2	-	1	12	m	R/W	HR1237	PIV2745
	Program	-	0	7	-	R/W	HR1238	PIV2746
	Enable vacation 3	-	0	1	-	R/W	CS208	BV208
	Start day 3	-	1	31	d	R/W	HR1239	PIV2747
Ab15	Start month 3	-	1	12	m	R/W	HR1240	PIV2748
	End day 3	-	1	31	d	R/W	HR1241	PIV2749
	End month 3	-	1	12	m	R/W	HR1242	PIV2750
	Program	-	0	7	-	R/W	HR1243	PIV2751
	Save vacation	-	0	1	-	R/W	HR1244	PIV2752

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ab18	Enable special day 1	-	0	1	-	R/W	CS209	BV209
	Day 1	-	1	31	d	R/W	HR1245	PIV2753
	Month 1	-	1	12	m	R/W	HR1246	PIV2754
	Program	-	0	7	-	R/W	HR1247	PIV2755
	Enable special day 2	-	0	1	-	R/W	CS210	BV210
	Day 2	-	1	31	d	R/W	HR1248	PIV2756
	Month 2	-	1	12	m	R/W	HR1249	PIV2757
	Program	-	0	7	-	R/W	HR1250	PIV2758
	Enable special day 3	-	0	1	d	R/W	CS211	BV211
	Day 3	-	1	31	m	R/W	HR1251	PIV2759
	Month 3	-	1	12	m	R/W	HR1252	PIV2760
	Program	-	0	7	-	R/W	HR1253	PIV2761
	Enable special day 4	-	0	1	-	R/W	CS212	BV212
	Day 4	-	1	31	d	R/W	HR1254	PIV2762
	Month 4	-	1	12	m	R/W	HR1255	PIV2763
	Program	-	0	7	-	R/W	HR1256	PIV2764
	Enable special day 5	-	0	1	-	R/W	CS213	BV213
	Day 5	-	1	31	d	R/W	HR1257	PIV2765
	Month 5	-	1	12	m	R/W	HR1258	PIV2766
	Program	-	0	7	-	R/W	HR1259	PIV2767
	Enable special day 6	-	0	1	-	R/W	CS214	BV214
	Day 6	-	1	31	d	R/W	HR1260	PIV2768
	Month 6	-	1	12	m	R/W	HR1261	PIV2769
	Program	-	0	7	-	R/W	HR1262	PIV2770
Ab21	Enable special day 7	-	0	1	-	R/W	CS215	BV215
	Day 7	-	1	31	d	R/W	HR1263	PIV2771
	Monht 7	-	1	12	m	R/W	HR1264	PIV2772
	Program	-	0	7	-	R/W	HR1265	PIV2773
	Enable special day 8	-	0	1	-	R/W	CS216	BV216
	Day 8	-	1	31	d	R/W	HR1266	PIV2774
	Month 8	-	1	12	m	R/W	HR1267	PIV2775
	Program	-	0	7	-	R/W	HR1268	PIV2776
	Enable special day 9	-	0	1	-	R/W	CS217	BV217
	Day 9	-	1	31	d	R/W	HR1269	PIV2777
	Month 9	-	1	12	m	R/W	HR1270	PIV2778
	Program	-	0	7	-	R/W	HR1271	PIV2779
	Enable special day 10	-	0	1	-	R/W	CS218	BV218
	Day 10	-	1	31	d	R/W	HR1272	PIV2780
	Month 10	-	1	12	m	R/W	HR1273	PIV2781
	Program	-	0	7	-	R/W	HR1274	PIV2782
	Enable special day 11	-	0	1	-	R/W	CS219	BV219
	Day11	-	1	31	d	R/W	HR1275	PIV2783
	Month 11	-	1	12	m	R/W	HR1276	PIV2784
	Program	-	0	7	-	R/W	HR1277	PIV2785
	Enable special day 12	-	0	1	-	R/W	CS220	BV220
	Day 12	-	1	31	d	R/W	HR1278	PIV2786
	Month 12	-	1	12	m	R/W	HR1279	PIV2787
	Program	-	0	7	-	R/W	HR1280	PIV2788
Ab24	Enable special day 13	-	0	1	-	R/W	CS221	BV221
	Day 13	-	1	31	d	R/W	HR1281	PIV2789
	Month 13	-	1	12	m	R/W	HR1282	PIV2790
	Program	-	0	7	-	R/W	HR1283	PIV2791
	Enable special day 14	-	0	1	-	R/W	CS222	BV222
	Day 14	-	1	31	d	R/W	HR1284	PIV2792
	Month 14	-	1	12	m	R/W	HR1285	PIV2793
	Program	-	0	7	-	R/W	HR1286	PIV2794
	Enable special day 15	-	0	1	-	R/W	CS223	BV223
	Day 15	-	1	31	d	R/W	HR1287	PIV2795
	Month 15	-	1	12	m	R/W	HR1288	PIV2796
	Program	-	0	7	-	R/W	HR1289	PIV2797
Ab27	Enable Party mode from c.pCO	FALSE	0	1	-	R/W	CS224	BV224
	Party mode duration	120	0	10080	min	R/W	HR1291	PIV2799

Tab. 9.bo

9.29 VDI 6022-1 management

k.air provides a function, based on the VDI 6022-1 standard, to improve system hygiene. Both operational and maintenance functions are provided. VDI management, enabled on screen Ac86, includes:

1. A specific menu used to finely calibrate the active control logic for scheduled maintenance.
2. Requirement to install a supply humidity probe if a humidifier is used. If no probe is installed, humidification is interlocked and an incorrect configuration alarm is shown (AL242). The maximum supply limit cannot exceed 90%. See maximum supply humidity management under "Humidification"
3. Startup due to inactivity. If the unit remains off for longer than 48 hours (Ja01, settable), a forced start-up procedure will be activated for 5 minutes (Ja01, settable) before returning to the previous status or remaining active if, in the meantime, a request has been received to switch the unit on. This logic allows cyclical ventilation so as to avoid the formation of stagnant condensate.

4. Startup with saturation probe. This function can be enabled on screen Ac86 and requires the installation of a saturation humidity probe (downstream of the main coil). If when the unit is switched on, the saturation probe measures a humidity higher than 80% (modifiable, with the corresponding differential, on screen Ja01), a drying phase is activated, keeping the humidifier and the coil cooling off, irrespective of the request may be. The unit status on main screen is shown as "Rh startup". This startup phase ends when reaching a threshold minus a differential.
5. Configurable, scheduled maintenance based on 29 counters, taken from the main checks to be carried out on the unit as per VDI 6022-1.

Scheduled maintenance

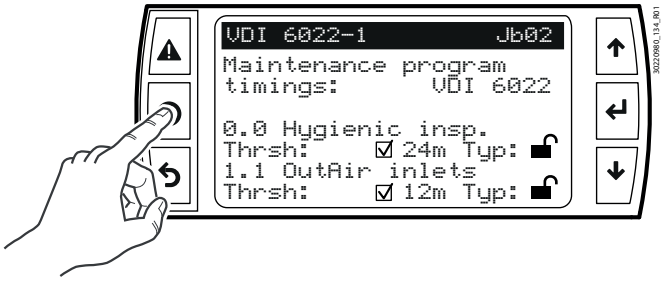
Scheduled maintenance uses 29 counters that are started when the unit is first switched ON. The time is then counted continuously, independently of the unit being switched off or any power failures. Each counter can be customised in three ways: enabled or disabled, programmed control threshold - either 1, 3, 6, 12, 24 or 36 months, and the possibility to select whether the deadline will be signal- only or an alarm with unit shutdown. The 29 counters refer to an extract of the checks to be carried out as per VDI 6022. Not all 29 counters may be present, as some are disabled if the corresponding device is not fitted on the unit (e.g. checks the heat recovery exchanger).

Here is the extract of the checks to be carried out:

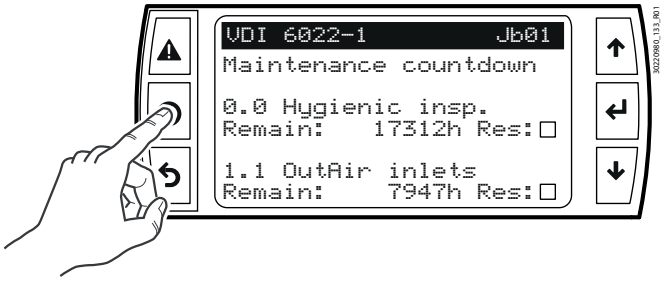
ID	Description	Availability	Action	Expiry (months)
0.0	Hygiene inspection		Check	24
1.1	Outdoor- air inlets. Check for contamination, damage and corrosion		Check, clean and repair	12
3.1	Dehumidifier. Check for contamination, damage and corrosion	Cooling coil	Check, clean	3
3.2	Dehumidifier. Functional check of drain and trap	Cooling coil	Check, clean and repair	3
3.3	Dehumidifier. Clean wet cooler, mist collector and condensate tray	Cooling coil	Check	6
4.1	Air handling unit housing. Check for contamination, damage and corrosion on the air side		Check, clean and repair	12
4.2	Air handling unit housing. Check for water precipitation		Check, clean	6
4.3	Air handling unit housing. Check empty housings for contamination, damage, and corrosion		Check, clean and repair	12
6.2.1	Air humidifier operating without recirculating water. Check for contamination, damage, microbial growth and corrosion	Humidifier	Check, clean and repair	3
6.2.2	Air humidifier operating without recirculating water. Check for condensate precipitation in thehumidifier chamber	Humidifier	Check, clean and repair	1
6.2.3	Air humidifier operating without recirculating water. Check steam distribution system for deposits	Isothermal humidifier	Check, clean	6
6.2.4	Air humidifier operating without recirculating water. Check spray nozzle for deposits	Adiabatic humidifier	Check, clean or replace nozzles	1
6.2.5	Air humidifier operating without recirculating water Check drain	Humidifier	Check, clean	3
6.2.6	Air humidifier operating without recirculating water Determine number of CFU in the humidifier water	Adiabatic humidifier	Measure bacterial colonies in the water, if > 1000 CFU/ml proceed with disinfection, clean and rinse in general.	6
6.2.7	Air humidifier operating without recirculating water Functional check of control valve	Humidifier	Check, clean and repair	6
6.2.8	Air humidifier operating without recirculating water. Check humidity limiter	Humidifier	Check, clean and repair	6
8.1	Air filters. Check for unacceptable contamination, damage (leakage) and odours		Check, clean and if necessary replace filters	3
8.2	Air filters. Check differential pressure		Replace filters if necessary	6
8.3	Air filters. Maximum interval until first filter stage is to be changed		Replace filters	12
8.4	Air filters. Maximum interval until second filter stage is to be changed	Second supply filter	Replace filters	24
9.1	Air ducts. Check accessible duct section for damage		Check and repair	12
9.2	Air ducts. Check two or three representative locations on inner duct surface for contamination, corrosion, and water precipitation		Check and clean, not only the visible part	12
11.1	Silencers. Check silencers for contamination, damage, and corrosion		Check, clean and repair	12
12.1	Fan. Check for contamination, damage, and corrosion		Check, clean and repair, check condensate drain	6
13.1	Heat exchanger. Visual inspection of air- to- air plate or cross-flow heat exchanger for contamination, damage and corrosion	Cross-flow or two-coil heat recovery unit	Check, clean and repair	6
13.2	Heat exchanger. Visual inspection of air- to- air rotary heat exchanger for contamination, damage and corrosion	Thermal wheel	Check, clean and repair	6
13.4	Heat exchanger heaters: Check for contamination damage, corrosion and tightness	Heat recovery defrost heater	Check, clean and repair	6
13.5	Heat exchanger coolers: Check tube bundles, mist collectors and condensate tray for contamination, corrosion, damage and tightness	IEC	Check, clean and repair	3
13.6	Heat exchanger. Functional check of drain and trap	Heat recovery unit	Check, clean and repair	3

Tab. 9.bp

The characteristics of each single counter can be customised on screens Ja02 to Ja42, after setting the type as "CUSTOM" on Ja02. To restore the default values, reset the type to "VDI 6022".



Following configuration of the counters, the scheduled maintenance function is operational. Progress of the counters can be viewed at any time in the Jb-VDI status menu.
When the counter expires, the signal will be shown on the alarm menu, and the unit may shut down (if the shutdown alarm indicated by the closed padlock has been selected in the configuration). Simply go to the Jb- VDI Status menu to reset the counter and reset the signal. It is recommended to evaluate whether there are other checks that are nearing expiry, and carry them out before resetting.



Note:
The dirty filter scheduled maintenance warning, configurable on Ae09, is disabled if VDI management is activated. This is because it is redundant with the checks required under VDI 6022.
The pGDE only shows the title of the counter, refer to the ID present on the screen and in the table shown here in the manual.

Important: the VDI 6022-1 function is provided to assist in managing the unit in accordance with the requirements of the standard, as described above. The user is however always responsible for correct functioning of the equipment.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
VDI								
Ja01	VDI Inactivity startup activation delay	48	0	65535	h	R/W	HR1686	PIV3181
	VDI Inactivity startup duration	5	0	65535	min	R/W	HR1687	PIV3182
	VDI high saturation humidity threshold	80.0	0.0	99.0	%rh	R/W	HR1688	AV3183
	VDI high saturation humidity differential	2.0	0.0	99.0	%rh	R/W	HR1689	AV3184
Ja02	VDI Type: 0: Standard; 1: Custom	0	0	1	-	R/W	HR1690	PIV3185
	Enable of the VDI function	TRUE	0	1	-	R/W	CS296	BV296
	Month selection variable	4	0	5	-	R/W	HR1691	PIV3186
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS297	BV297
	Enable of the VDI function	TRUE	0	1	-	R/W	CS298	BV298
	Month selection variable	3	0	5	-	R/W	HR1692	PIV3187
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS299	BV299
Ja03	Enable of the VDI function	TRUE	0	1	-	R/W	CS300	BV300
	Month selection variable	1	0	5	-	R/W	HR1693	PIV3188
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS301	BV301
	Enable of the VDI function	TRUE	0	1	-	R/W	CS302	BV302
	Month selection variable	3	0	5	-	R/W	HR1694	PIV3189
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS303	BV303
Ja06	Enable of the VDI function	TRUE	0	1	-	R/W	CS304	BV304
	Month selection variable	2	0	5	-	R/W	HR1695	PIV3190
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS305	BV305
	Enable of the VDI function	TRUE	0	1	-	R/W	CS306	BV306
	Month selection variable	2	0	5	-	R/W	HR1696	PIV3191
	Reset timings after the inspection	-	0	1	-	R/W	CS307	BV307
Ja09	Enable of the VDI function	TRUE	0	1	-	R/W	CS308	BV308
	Month selection variable	2	0	5	-	R/W	HR1697	PIV3192
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS309	BV309
	Enable of the VDI function	TRUE	0	1	-	R/W	CS310	BV310
	Month selection variable	2	0	5	-	R/W	HR1698	PIV3193
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS311	BV311
Ja12	Enable of the VDI function	TRUE	0	1	-	R/W	CS312	BV312
	Month selection variable	1	0	5	-	R/W	HR1699	PIV3194
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS313	BV313
	Enable of the VDI function	TRUE	0	1	-	R/W	CS314	BV314
	Month selection variable	1	0	5	-	R/W	HR1700	PIV3195
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS315	BV315

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
VDI								
Ja15	Enable of the VDI function	TRUE	0	1	-	R/W	CS316	BV316
	Month selection variable	1	0	5	-	R/W	HR1701	PIV3196
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS317	BV317
	Enable of the VDI function	TRUE	0	1	-	R/W	CS318	BV318
	Month selection variable	1	0	5	-	R/W	HR1702	PIV3197
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS319	BV319
Ja18	Enable of the VDI function	TRUE	0	1	-	R/W	CS320	BV320
	Month selection variable	2	0	5	-	R/W	HR1703	PIV3198
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS321	BV321
	Enable of the VDI function	TRUE	0	1	-	R/W	CS322	BV322
	Month selection variable	3	0	5	-	R/W	HR1704	PIV3199
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS323	BV323
Ja21	Enable of the VDI function	TRUE	0	1	-	R/W	CS324	BV324
	Month selection variable	2	0	5	-	R/W	HR1705	PIV3200
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS325	BV325
	Enable of the VDI function	TRUE	0	1	-	R/W	CS326	BV326
	Month selection variable	3	0	5	-	R/W	HR1706	PIV3201
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS327	BV327
Ja24	Enable of the VDI function	TRUE	0	1	-	R/W	CS328	BV328
	Month selection variable	1	0	5	-	R/W	HR1707	PIV3202
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS329	BV329
	Enable of the VDI function	TRUE	0	1	-	R/W	CS330	BV330
	Month selection variable	0	0	5	-	R/W	HR1708	PIV3203
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS331	BV331
Ja27	Enable of the VDI function	TRUE	0	1	-	R/W	CS332	BV332
	Month selection variable	2	0	5	-	R/W	HR1709	PIV3204
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS333	BV333
	Enable of the VDI function	TRUE	0	1	-	R/W	CS334	BV334
	Month selection variable	0	0	5	-	R/W	HR1710	PIV3205
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS335	BV335
Ja30	Enable of the VDI function	TRUE	0	1	-	R/W	CS336	BV336
	Month selection variable	2	0	5	-	R/W	HR1711	PIV3206
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS337	BV337
	Enable of the VDI function	TRUE	0	1	-	R/W	CS338	BV338
	Month selection variable	2	0	5	-	R/W	HR1712	PIV3207
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS339	BV339
Ja33	Enable of the VDI function	TRUE	0	1	-	R/W	CS340	BV340
	Month selection variable	2	0	5	-	R/W	HR1713	PIV3208
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS341	BV341
	Enable of the VDI function	TRUE	0	1	-	R/W	CS342	BV342
	Month selection variable	1	0	5	-	R/W	HR1714	PIV3209
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS343	BV343
Ja36	Enable of the VDI function	TRUE	0	1	-	R/W	CS344	BV344
	Month selection variable	2	0	5	-	R/W	HR1715	PIV3210
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS345	BV345
	Enable of the VDI function	TRUE	0	1	-	R/W	CS346	BV346
	Month selection variable	3	0	5	-	R/W	HR1716	PIV3211
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS347	BV347
Ja39	Enable of the VDI function	TRUE	0	1	-	R/W	CS348	BV348
	Month selection variable	4	0	5	-	R/W	HR1717	PIV3212
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS349	BV349
	Enable of the VDI function	TRUE	0	1	-	R/W	CS350	BV350
	Month selection variable	3	0	5	-	R/W	HR1718	PIV3213
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS351	BV351
Ja42	Enable of the VDI function	TRUE	0	1	-	R/W	CS352	BV352
	Month selection variable	3	0	5	-	R/W	HR1719	PIV3214
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS353	BV353
Jb02	Countdown before the next inspection	-	0	65535	-	R	IR518	PIV3832
	Reset timings after the inspection	-	0	1	-	R/W	CS354	BV354
	Countdown before the next inspection	-	0	65535	-	R	IR519	PIV3833
	Reset timings after the inspection	-	0	1	-	R/W	CS355	BV355
Jb03	Countdown before the next inspection	-	0	65535	-	R	IR520	PIV3834
	Reset timings after the inspection	-	0	1	-	R/W	CS356	BV356
	Countdown before the next inspection	-	0	65535	-	R	IR521	PIV3835
	Reset timings after the inspection	-	0	1	-	R/W	CS357	BV357
Jb06	Countdown before the next inspection	-	0	65535	-	R	IR522	PIV3836
	Reset timings after the inspection	-	0	1	-	R/W	CS358	BV358
	Countdown before the next inspection	-	0	65535	-	R	IR523	PIV3837
	Reset timings after the inspection	-	0	1	-	R/W	CS307	BV307
Jb09	Countdown before the next inspection	-	0	65535	-	R	IR524	PIV3838
	Reset timings after the inspection	-	0	1	-	R/W	CS359	BV359
	Countdown before the next inspection	-	0	65535	-	R	IR525	PIV3839
	Reset timings after the inspection	-	0	1	-	R/W	CS360	BV360
Jb12	Countdown before the next inspection	-	0	65535	-	R	IR526	PIV3840
	Reset timings after the inspection	-	0	1	-	R/W	CS361	BV361
	Countdown before the next inspection	-	0	65535	-	R	IR527	PIV3841
	Reset timings after the inspection	-	0	1	-	R/W	CS362	BV362
Jb15	Countdown before the next inspection	-	0	65535	-	R	IR528	PIV3842
	Reset timings after the inspection	-	0	1	-	R/W	CS363	BV363
	Countdown before the next inspection	-	0	65535	-	R	IR529	PIV3843
	Reset timings after the inspection	-	0	1	-	R/W	CS364	BV364
Jb18	Countdown before the next inspection	-	0	65535	-	R	IR530	PIV3844
	Reset timings after the inspection	-	0	1	-	R/W	CS365	BV365
	Countdown before the next inspection	-	0	65535	-	R	IR531	PIV3845
	Reset timings after the inspection	-	0	1	-	R/W	CS366	BV366

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
VDI								
Jb21	Countdown before the next inspection	-	0	65535	-	R	IR532	PIV3846
	Reset timings after the inspection	-	0	1	-	R/W	CS367	BV367
	Countdown before the next inspection	-	0	65535	-	R	IR533	PIV3847
	Reset timings after the inspection	-	0	1	-	R/W	CS368	BV368
Jb24	Countdown before the next inspection	-	0	65535	-	R	IR534	PIV3848
	Reset timings after the inspection	-	0	1	-	R/W	CS369	BV369
	Countdown before the next inspection	-	0	65535	-	R	IR535	PIV3849
	Reset timings after the inspection	-	0	1	-	R/W	CS370	BV370
Jb27	Countdown before the next inspection	-	0	65535	-	R	IR536	PIV3850
	Reset timings after the inspection	-	0	1	-	R/W	CS371	BV371
	Countdown before the next inspection	-	0	65535	-	R	IR537	PIV3851
	Reset timings after the inspection	-	0	1	-	R/W	CS372	BV372
Jb30	Countdown before the next inspection	-	0	65535	-	R	IR538	PIV3852
	Reset timings after the inspection	-	0	1	-	R/W	CS373	BV373
	Countdown before the next inspection	-	0	65535	-	R	IR539	PIV3853
	Reset timings after the inspection	-	0	1	-	R/W	CS374	BV374
Jb33	Countdown before the next inspection	-	0	65535	-	R	IR540	PIV3854
	Reset timings after the inspection	-	0	1	-	R/W	CS375	BV375
	Countdown before the next inspection	-	0	65535	-	R	IR541	PIV3855
	Reset timings after the inspection	-	0	1	-	R/W	CS376	BV376
Jb36	Countdown before the next inspection	-	0	65535	-	R	IR542	PIV3856
	Reset timings after the inspection	-	0	1	-	R/W	CS377	BV377
	Countdown before the next inspection	-	0	65535	-	R	IR543	PIV3857
	Reset timings after the inspection	-	0	1	-	R/W	CS378	BV378
Jb39	Countdown before the next inspection	-	0	65535	-	R	IR544	PIV3858
	Reset timings after the inspection	-	0	1	-	R/W	CS379	BV379
	Countdown before the next inspection	-	0	65535	-	R	IR545	PIV3859
	Reset timings after the inspection	-	0	1	-	R/W	CS380	BV380
Jb42	Countdown before the next inspection	-	0	65535	-	R	IR546	PIV3860
	Reset timings after the inspection	-	0	1	-	R/W	CS381	BV381

Tab. 9.bq

9.30 k.water integration

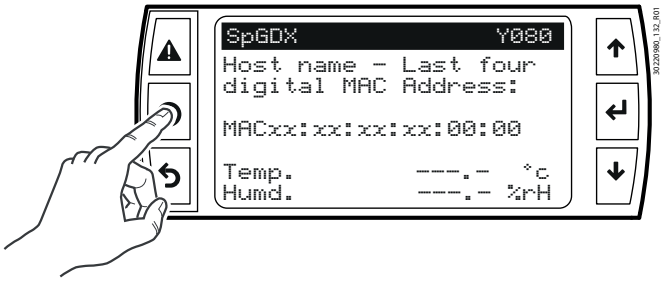
k.air has been developed to interact with k.water, a product for managing heating/cooling and hydronic distribution systems.

In summary, k.water:

- manages the heating, cooling, domestic hot water and solar thermal functions by controlling the request sent to the heating or cooling appliances, based on the outside air conditions and the demand for thermal energy from the terminal units
- guarantees the correct water temperature conditions in the distribution networks by controlling the actuators (pumps, valves, etc.), so as to ensure the correct level of indoor comfort, minimising energy consumption.

Shared pGDX terminal

The pGDX terminal can be shared in a network of 1 k.water and up to 10 k.air units. The webserver HMI can easily switch between the k.water and k.air controllers, meaning only one graphic terminal needs to be installed in the room. This is done following the commissioning procedure, see the paragraph below.



A further feature of the pGDX is the possibility to use its built-in temperature and humidity probe as a configurable signal in the I/O menu, for both k.air and k.water simultaneously. The last four digits of the MAC address, available on the pGDX product label, need to be entered on screen Y080. Once the coordinates have been entered, the values will be available on the same screen. Then enter the I/O configuration menu, select the room temperature probe, for example, and associate the pGDX channel by setting "SERIAL pGDX"

Shared outside temperature signal between k.air to k.water

k.air provides the outside temperature value, which can be used as an input channel by k.water. On k.water, screen Ba08, select which k.air, from those available on the network, the outside air temperature will be read from.

Shared outside temperature signal between k.air to k.water

k.water provides the outside temperature value, which can be used as an input channel by k.air. On k.air, configuration screen Wb01, select the "kwater text" input channel.

Shared unit status

When k.air and k.water are connected together, they exchange information useful for commissioning the system and to centralise data when only k.water is connected to supervisor. For each k.air connected, k.water displays: unit status, supply and return temperature, and humidity if enabled, outside air temperature, on/off fan status and speed. k.air displays the status of the k.water unit, the operating mode (heating or cooling), the outside air temperature if enabled, and the supply temperature of the associated k.air service circuit.

Enable start-up or operating mode signal

k.air and k.water can mutually send and receive signals to enable start- up and change the operating mode. This makes it easier to start the entire system and change operating mode using just one single command, chosen from among those available on the network.

The possible interactions are:

- general signal to enable k.air from k.water, set on k.air screen Ac80
- change operating mode on k.air from k.water, set on k.air screen Ac22
- general signal to enable k.water from an online k.air, set on k.water screen Ba06
- change operating mode on k.water from a k.air in the network, set on k.water screen Ba07

⚠ **Important:** do not reciprocate the enabling or change mode signals between k.air and k.water.

Note: it is not recommended to use change k.water operating mode from k.air with automatic heating/cooling control, as the k.air control temperatures will dynamically change the k.water operating mode.

Dehumidification optimisation

k.air and k.water interact with each other to optimise the dehumidification function in radiant cooling systems. k.air receives a dehumidification set point, calculated by k.water based on the conditions in the radiant cooling circuits, either mixed or mixed plus circuits. k.water considers the lowest temperature from all of the active mixed and mixed plus circuits. This option can be enabled on screen Ac34, only when the absolute humidity control option is enabled on screen Ac32. The calculated set point will be available on the info screen Qa24, and in any case considers the set point set by the user, with control based on the lower of the two (always converted into an absolute humidity value).

Commissioning

k.air - k.water integration, after the network wiring has been completed, is activated using the auto discovery function on k.water. Go to k.water screen Fe12 and follow the procedure described in the manual +030220990.

At the end of the procedure, the integrated HMI, available as webserver and pGDx, will show the k.air navigation menu.

Fig. 9.bk

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ac22	Machine type (0: COOLING; 1: HEATING; 2: COOL/HEAT)	2	0	2	-	R/W	HR1310	PIV2818
	Machine type cooling/heating enabled	-	0	1	-	R	DI700	BV1158
	Unit cooling heating mode configuration	0	0	6	-	R/W	HR1311	PIV2819
	Auxiliary regulation type	0	0	4	-	R/W	HR1389	PIV2897
Ac80	Enable on/off request by BMS	-	0	1	-	R/W	CS234	BV234
	OnOff by k.water enabling	FALSE	0	1	-	R/W	CS235	BV235

Tab. 9.br

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
SETTINGS								
Y065	PGDx Browser - MAC Address Last Four Digit - Part 1 -	48	48	101	-	R/W	HR1900	PIV3380
	PGDx Browser - MAC Address Last Four Digit - Part 2 -	48	48	101	-	R/W	HR1901	PIV3381
	PGDx Browser - MAC Address Last Four Digit - Part 3 -	48	48	101	-	R/W	HR1902	PIV3382
	PGDx Browser - MAC Address Last Four Digit - Part 4 -	48	48	101	-	R/W	HR1903	PIV3383
	pGDx - Room temperature	-	-99.9	99.9	°C	R	-	-
	pGDx - Room humidity	-	0.0	99.9	%rh	R	-	-

Tab. 9.bs

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
INFORMATIONS								
Qa45	KWater modbus variables - Cooling/Heating mode	-	0	1	-	R	DI660	BV1118
	KWater modbus variables - External temperature	-	-999.9	999.9	-	R	IR258	AV3646
	KWater modbus variables - KAir circuit temperature	-	-999.9	999.9	-	R	IR259	AV3647
	Unit status kwater	-	0	99	-	R	IR260	PIV3648

Tab. 9.bt

9.31 Impostazioni di rete

Menu Y contains the screens for setting the serial line protocol and communication parameters (see chap. Commissioning for setting the device addresses in the serial network): BMS/Fieldbus serial network protocol; Baud rate; Parity; Stop bits.

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
SETTINGS								
Y001	BMS Line (0=None; 1=Modbus; 2=BACnet)	0	0	2	-	R/W	HR1904	PIV3384
	BMS2 Line (0=None; 1=Modbus; 2=BACnet)	0	0	2	-	R/W	HR1905	PIV3385
	Ethernet Line (0=None; 1=Modbus)	1	0	1	-	R/W	HR1906	PIV3386
	Ethernet 2 Line (0=None; 1=BACnet)	0	0	1	-	R/W	HR1907	PIV3387
	Warning: SPV Configuration error	-	0	1	-	R	DI769	BV1227
Y002	BMS address	1	1	247	-	R/W	HR1727	PIV3221
	BMS timeout	60	0	255	-	R/W	HR1728	PIV3222
Y003	BACnet Device Instance (and Station address in MSTP)	1	1	BACnet_ ID_Max	-	R/W	HR1908	PIV3388
	BACnet timeout	60	0	255	s	R/W	HR1910	PIV3389
	Warning: SPV License not compatible	-	0	1	-	R	DI770	BV1228
Y004	BMS baudrate (0=9600; 1=19200; 2=38400)	1	0	2	-	R/W	HR1729	PIV3223
	BMS parity	0	0	2	-	R/W	HR1730	PIV3224
	BMS stopbit	2	1	2	-	R/W	HR1731	PIV3225
Y005	BMS baudrate (0=9600; 1=19200; 2=38400)	1	0	2	-	R/W	HR1911	PIV3390
	BMS 2 parity	0	0	2	-	R/W	HR1912	PIV3391
	BMS 2 stopbit	2	1	2	-	R/W	HR1913	PIV3392
Y010	BMS baudrate (0=9600; 1=19200; 2=38400)	1	0	2	-	R/W	HR1732	PIV3226
	Fieldbus parity	0	0	2	-	R/W	HR1733	PIV3227
	Fieldbus stopbit	2	1	2	-	R/W	HR1734	PIV3228
Y015	EBM1 Supply - Serial interface settings - Network address for Ebmpapst fan	30	0		-	R/W	HR1570	PIV3069
	EBM2 Supply - Serial interface settings - Network address for Ebmpapst fan	31	0	999999		R/W	HR1988	PIV4059
	EBM3 Supply - Serial interface settings - Network address for Ebmpapst fan	32	0	999999		R/W	HR1990	PIV4060
	EBM4 Supply - Serial interface settings - Network address for Ebmpapst fan	33	0	999999		R/W	HR1992	PIV4061
Y020	EBM1 Return - Serial interface settings - Network address for Ebmpapst fan	31	0	999999	-	R/W	HR1477	PIV2982
	EBM2 Return - Serial interface settings - Network address for Ebmpapst fan	35	0	999999		R/W	HR1994	PIV4062
	EBM3 Return - Serial interface settings - Network address for Ebmpapst fan	36	0	999999		R/W	HR1996	PIV4063
	EBM4 Return - Serial interface settings - Network address for Ebmpapst fan	37	0	999999		R/W	HR1998	PIV4064
Y025	ZA1 Supply - Serial interface parameters - Fan Network address	30	1	247	-	R/W	HR1580	PIV3076
	ZA2 Supply - Serial interface parameters - Fan Network address	31	1	247		R/W	HR2000	PIV4065
	ZA3 Supply - Serial interface parameters - Fan Network address	32	1	247		R/W	HR2002	PIV4066
	ZA4 Supply - Serial interface parameters - Fan Network address	33	1	247		R/W	HR2004	PIV4067
Y030	ZA1 Return - Serial interface parameters - Fan Network address	31	1	247	-	R/W	HR1487	PIV2989
	ZA2 Return - Serial interface parameters - Fan Network address	35	1	247	-	R/W	HR2006	PIV4068
	ZA3 Return - Serial interface parameters - Fan Network address	36	1	247	-	R/W	HR2008	PIV4069
	ZA4 Return - Serial interface parameters - Fan Network address	37	1	247	-	R/W	HR2010	PIV4070
Y035	PowerPlus address	1	1	247	-	R/W	HR1735	PIV3229
Y040	uChiller address	10	0	255	-	R/W	HR1737	PIV3230
Y045	IEC Humifog address	7	0	999999	-	R/W	HR1738	PIV3231
Y050	Humisonic address	5	1	247	-	R/W	HR1740	PIV3232
	Modbus timeout for Humisonic (delete after Humisonic library update)	500	0	9999	ms	R/W	HR1742	PIV3233
	Modbus command delay for Humisonic (delete after Humisonic library update)	4	0	9999	ms	R/W	HR1744	PIV3234
Y055	Humifog address	6	0	999999	-	R/W	HR1746	PIV3235
Y057	HumiSteam - Device address	1	0	999	-	R/W	HR2072	PIV4339
	HumiSteam - Modbus timeout for UEY	200	0	9999	ms	R/W	HR2074	PIV4340
	HumiSteam - Modbus command delay for UEY	10	0	9999	ms	R/W	HR2076	PIV4341
Y060	Serial device configuration - Device address	9	1	247	-	R/W	HR1748	PIV3236
Y099	7seg number	0	1	10	-	R/W	HR1750	PIV3237
	DHCP enabled	-	0	1	-	R	DI725	BV1183
	IP Address (XXX.xxx.xxx.xxx)	-	0	255	-	R	IR550	PIV3864
	IP Address (xxx.XXX..xxx.xxx)	-	0	255	-	R	IR551	PIV3865
	IP Address (xxx.xxx.XXX.xxx)	-	0	255	-	R	IR552	PIV3866
	IP Address (xxx.xxx.xxx.XXX)	-	0	255	-	R	IR553	PIV3867
	Gateway (XXX.xxx.xxx.xxx)	-	0	255	-	R	IR554	PIV3868
	Gateway (xxx.XXX..xxx.xxx)	-	0	255	-	R	IR555	PIV3869
	Gateway (xxx.xxx.XXX.xxx)	-	0	255	-	R	IR556	PIV3870
	Gateway (xxx.xxx.xxx.XXX)	-	0	255	-	R	IR557	PIV3871
	Netmask (XXX.xxx.xxx.xxx)	-	0	255	-	R	IR558	PIV3872
	Netmask (xxx.XXX..xxx.xxx)	-	0	255	-	R	IR559	PIV3873
	Netmask (xxx.xxx.XXX.xxx)	-	0	255	-	R	IR560	PIV3874
	Netmask (xxx.xxx.xxx.XXX)	-	0	255	-	R	IR561	PIV3875
	DNS (XXX.xxx.xxx.xxx)	-	0	255	-	R	IR562	PIV3876
	DNS (xxx.XXX..xxx.xxx)	-	0	255	-	R	IR563	PIV3877
	DNS (xxx.xxx.XXX.xxx)	-	0	255	-	R	IR564	PIV3878
	DNS (xxx.xxx.xxx.XXX)	-	0	255	-	R	IR565	PIV3879

Tab. 9.c

9.32 Third-party serial probe management

In k.air, up to 5 third-party Modbus serial probes (Y070) can be configured and customised, each capable of reading a maximum of 2 temperatures, 2 humidities, 2 pressures and 2 flow rates. The configuration consists of indicating the number of the modbus register (Input Register type), present in screens Y072-Y073, from which to read the value and assign it to the I/O function (Wb01). In the same screens, it is possible to set a multiplication or division factor that will then be calculated into the final value assigned to the assigned I/O function.
A value range can be configured for each probe type to consider the probe reading as functioning (Y074). If the value read exceeds the minimum or maximum value, a broken probe alarm will be generated.

⚠ **Important**: whenever a communication parameter is changed, such as address or register, it will be necessary to restart the control to see the effective changes.
Note: to disable reading of a specific register, set the value 65535..

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
SETTINGS								
Y070	Custom serial probe 1 - –evice address	0	0	254	-	R/W	HR2025	PIV4296
	Custom serial probe 2 - –evice address	0	0	254	-	R/W	HR2027	PIV4297
	Custom serial probe 3 - –evice address	0	0	254	-	R/W	HR2029	PIV4298
	Custom serial probe 4 - –evice address	0	0	254	-	R/W	HR2031	PIV4299
Y071	Custom serial probe - –odbus - –imeout	200	0	9999	ms	R/W	HR2067	PIV4325
	Custom serial probe - –odbus - –md delay	10	0	9999	ms	R/W	HR2068	PIV4326
Y072	Custom serial probe - –erial address - –emp1	65535	0	65535	-	R/W	HR2035	PIV4301
	Custom serial probe - –actor Operator - –emp1	0	0	1	-	R/W	CS466	BV4288
Y072	Custom serial probe - –actor - –emp1	1	0	999	-	R/W	HR2043	IV4309
	Custom serial probe - –erial address – Temp2	65535	0	65535	-	R/W	HR2036	PIV4302
	Custom serial probe - –actor Operator – Temp2	0	0	1	-	R/W	CS467	BV4289
	Custom serial probe - –actor – Temp2	1	0	999	-	R/W	HR2044	IV4310
	Custom serial probe - –erial address – Hum1	65535	0	65535	-	R/W	HR2037	PIV4303
	Custom serial probe - –actor Operator - –um1	0	0	1	-	R/W	CS468	BV4290
	Custom serial probe - –actor - –um1	1	0	999	-	R/W	HR2045	IV4311
	Custom serial probe - –erial address – Hum2	65535	0	65535	-	R/W	HR2038	PIV4304
	Custom serial probe - –actor Operator – Hum2	0	0	1	-	R/W	CS469	BV4291
	Custom serial probe - –actor – Hum2	1	0	999	-	R/W	HR2046	IV4312
Y073	Custom serial probe - –erial address – Press1	65535	0	65535	-	R/W	HR2039	PIV4305
	Custom serial probe - –actor Operator - –ress1	0	0	1	-	R/W	CS470	BV4292
	Custom serial probe - –actor - –ress1	1	0	999	-	R/W	HR2047	IV4313
	Custom serial probe - –erial address – Press2	65535	0	65535	-	R/W	HR2040	PIV4306
	Custom serial probe - –actor Operator – Press2	0	0	1	-	R/W	CS471	BV4293
	Custom serial probe - –actor – Press2	1	0	999	-	R/W	HR2048	IV4314
	Custom serial probe - –erial address – Flow1	65535	0	65535	-	R/W	HR2041	PIV4307
	Custom serial probe - –actor Operator - –low1	0	0	1	-	R/W	CS472	BV4294
	Custom serial probe - –actor - –low1	1	0	999	-	R/W	HR2049	IV4315
	Custom serial probe - –erial address – Flow2	65535	0	65535	-	R/W	HR2042	PIV4308
	Custom serial probe - –actor Operator – Flow2	0	0	1	-	R/W	CS473	BV4295
	Custom serial probe - –actor – Flow2	1	0	999	-	R/W	HR2050	IV4316
Y074	Custom serial probe - –emp. minimum value limit for trigger alarm	-999	-999	999		R/W	HR2051	AV4317
	Custom serial probe - –emp. maximum value limit for trigger alarm	999	-999	999		R/W	HR2053	AV4318
	Custom serial probe - –um. minimum value limit for trigger alarm	-999	-999	999		R/W	HR2055	AV4319
	Custom serial probe - –um. maximum value limit for trigger alarm	999	-999	999		R/W	HR2057	AV4320
	Custom serial probe - –ress. minimum value limit for trigger alarm	-999	-999	999		R/W	HR2059	AV4321
	Custom serial probe - –ress. maximum value limit for trigger alarm	99999	-999	99999		R/W	HR2061	AV4322
	Custom serial probe - –low minimum value limit for trigger alarm	-999	-999	999		R/W	HR2063	AV4323
	Custom serial probe - –low maximum value limit for trigger alarm	999999	-999	999999		R/W	HR2065	AV4324

Tab. 9.bu

10. PARAMETER TABLE

The k.Air controller can be programmed in three levels, with access to different parameters based on the password entered (see the parameter table):

1. U = user (password=0000);
2. S = service (password=1234);
3. M = manufacturer (password=5678).

The k.Air parameters can be reset to the default values using the command available on screen Ac34.

Ref.	Description	Def.	UOM	Min	Max
Ac34	Reset parameters to default values	No	-	No	Yes

Tab. 10.a

⚠ **Important:** the operation to reset the default values is not reversible, unless a user configuration has been previously saved; see the paragraph on commissioning.

10.1 Parameter table

10.1.1 A. Unit

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Aa03	Unit setpoints - Temperature setpoint - Summer - Comfort	26.0	MinVal	MaxVal	°C	R/W	HR1074	AV2584
	Unit setpoints - Temperature setpoint - Summer - Economy	28.0	MinVal	MaxVal	°C	R/W	HR1062	AV2572
	Unit setpoints - Temperature setpoint - Summer – Pre-comfort	26.0	MinVal	MaxVal	°C	R/W	HR1068	AV2578
Aa06	Unit setpoints - Temperature setpoint - Winter - Comfort	20.0	MinVal	MaxVal	°C	R/W	HR1075	AV2585
	Unit setpoints - Temperature setpoint - Winter - Economy	18.0	MinVal	MaxVal	°C	R/W	HR1063	AV2573
	Unit setpoints - Temperature setpoint - Winter – Pre-comfort	20.0	MinVal	MaxVal	°C	R/W	HR1069	AV2579
Aa09	Temperature setpoint – minimum value	18.0	0.0	MaxVal	°C	R/W	HR1076	AV2586
	Temperature setpoint – maximum value	28.0	MinVal	100.0	°C	R/W	HR1077	AV2587
Aa12	Unit setpoints – Supply static pressure setpoint – Comfort	400.0	MinVal	MaxVal	Pa	R/W	HR1122	AV2632
	Unit setpoints – Supply static pressure setpoint – Economy	400.0	MinVal	MaxVal	Pa	R/W	HR1116	AV2626
	Unit setpoints – Supply static pressure setpoint – Pre-comfort	400.0	MinVal	MaxVal	Pa	R/W	HR1119	AV2629
	Supply static pressure setpoint – minimum value	200.0	SupplyAirP_ MinVal_RW	MaxVal	Pa	R/W	HR1123	AV2633
	Supply static pressure setpoint – maximum value	600.0	MinVal	SupplyAirP_ MaxVal_RW	Pa	R/W	HR1124	AV2634
Aa15	Unit setpoints – Supply air flow setpoint – Comfort	5000	MinVal	MaxVal	m^3/h	R/W	HR1129	PIV2641
	Unit setpoints – Supply air flow setpoint – Economy	5000	MinVal	MaxVal	m^3/h	R/W	HR1125	PIV2635
	Unit setpoints – Supply air flow setpoint – Pre-comfort	5000	MinVal	MaxVal	m^3/h	R/W	HR1127	PIV2638
	Supply air flow setpoint – minimum value	2000	0	MaxVal	m^3/h	R/W	HR1131	PIV2642
	Supply air flow setpoint – maximum value	6000	MinVal	999999	m^3/h	R/W	HR1133	PIV2643
Aa18	Unit setpoints – Air quality CO2 setpoint – Comfort	800.0	MinVal	MaxVal	ppm	R/W	HR1140	AV2650
	Unit setpoints – Air quality CO2 setpoint – Economy	800.0	MinVal	MaxVal	ppm	R/W	HR1135	AV2647
	Unit setpoints – Air quality CO2 setpoint – Pre-comfort	800.0	MinVal	MaxVal	ppm	R/W	HR1137	AV2644
	Air quality CO2 setpoint – minimum value	100.0	AirQuali-tyCO2_Min-Val_RW	MaxVal	ppm	R/W	HR1141	AV2651
	Air quality CO2 setpoint – maximum value	600.0	MinVal	AirQuali-tyCO2_Max-Val_RW	ppm	R/W	HR1142	AV2652
Aa21	Unit setpoints – Air quality VOC setpoint – Comfort	50.0	MinVal	MaxVal	%	R/W	HR1960	AV4021
	Unit setpoints – Air quality VOC setpoint – Economy	60.0	MinVal	MaxVal	%	R/W	HR1963	AV4015
	Unit setpoints – Air quality VOC setpoint – Pre-comfort	55.0	MinVal	MaxVal	%	R/W	HR1966	AV4018
	Air quality VOC setpoint – minimum value	20.0	AirQuality-VOC_Min-Val_RW	MaxVal	%	R/W	HR1959	AV4022
	Air quality VOC setpoint – maximum value	80.0	MinVal	AirQuality-VOC_Max-Val_RW	%	R/W	HR1958	AV4023
Aa24	Unit setpoints – Return static pressure setpoint – Comfort	400.0	MinVal	MaxVal	Pa	R/W	HR1149	AV2659
	Unit setpoints – Return static pressure setpoint – Economy	400.0	MinVal	MaxVal	Pa	R/W	HR1143	AV2653
	Unit setpoints – Return static pressure setpoint – Pre-comfort	400.0	MinVal	MaxVal	Pa	R/W	HR1146	AV2656
	Return static pressure setpoint – minimum value	200.0	RetAirP_Min-Val_RW	MaxVal	Pa	R/W	HR1150	AV2660
	Return static pressure setpoint – maximum value	600.0	MinVal	RetAirP_Ma-xVal_RW	Pa	R/W	HR1151	AV2661
Aa27	Unit setpoints – Return air flow setpoint – Comfort	5000	MinVal	MaxVal	m^3/h	R/W	HR1156	PIV2668
	Unit setpoints – Return air flow setpoint – Economy	5000	MinVal	MaxVal	m^3/h	R/W	HR1152	PIV2662
	Unit setpoints – Return air flow setpoint – Pre-comfort	5000	MinVal	MaxVal	m^3/h	R/W	HR1154	PIV2665
	Return air flow setpoint – minimum value	2000	0	MaxVal	m^3/h	R/W	HR1158	PIV2669
	Return air flow setpoint – maximum value	6000	MinVal	999999	m^3/h	R/W	HR1160	PIV2670
Aa30	Unit setpoints - Humidity setpoint - Summer - Comfort	60.0	MinVal	MaxVal	%rH	R/W	HR1173	AV2683
	Unit setpoints - Humidity setpoint - Summer - Economy	50.0	MinVal	MaxVal	%rH	R/W	HR1162	AV2671
	Unit setpoints - Humidity setpoint - Summer – Pre-comfort	55.0	MinVal	MaxVal	%rH	R/W	HR1167	AV2677
Aa33	Unit setpoints - Humidity setpoint - Winter - Comfort	60.0	MinVal	MaxVal	%rH	R/W	HR1174	AV2684
	Unit setpoints - Humidity setpoint - Winter - Economy	50.0	MinVal	MaxVal	%rH	R/W	HR1163	AV2672
	Unit setpoints - Humidity setpoint - Winter – Pre-comfort	55.0	MinVal	MaxVal	%rH	R/W	HR1168	AV2678
Aa36	Humidity setpoint – minimum value	40.0	0.0	MaxVal	%rH	R/W	HR1175	AV2685
	Humidity setpoint – maximum value	60.0	MinVal	100.0	%rH	R/W	HR1176	AV2686
Aa84	Enable setpoint compensation by external temperature	FALSE	0	1	-	R/W	CS195	BV195

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Aa87	Summer: external temperature compensation threshold	25.0	-50.0	90.0	°C	R/W	HR1179	AV2689
	Summer: external temperature compensation delta	7.0	-30.0	30.0	°C	R/W	HR1180	AV2690
	Summer: maximum compensation offset	2.0	-20.0	10.0	°C	R/W	HR1181	AV2691
Aa90	Winter: external temperature compensation threshold	0.0	-50.0	90.0	°C	R/W	HR1182	AV2692
	Winter: external temperature compensation delta	-8.0	-30.0	30.0	°C	R/W	HR1183	AV2693
	Winter: maximum compensation offset	-2.0	-20.0	10.0	°C	R/W	HR1184	AV2694
Ab01	Actual hour	-	0	99	-	R	IR306	PIV3687
	Actual minute	-	0	99	-	R	IR307	PIV3688
	Day of week	-	0	9	d	R	IR383	PIV3760
	Actual day	-	0	99	d	R	IR358	PIV3739
	Actual month	-	0	99	month	R	IR359	PIV3740
	Actual year	-	0	99	y	R	IR360	PIV3741
	Scheduler: configuration - Enabled	FALSE	0	1	-	R/W	CS064	BV64
Ab06	Enable event 1	-	0	1	-	R/W	CS196	BV196
	Start hours event 1	-	0	23	-	R/W	HR1187	PIV2696
	Start minutes event 1	-	0	59	-	R/W	HR1188	PIV2697
	0=OFF; 1=Economy; 2=Comfort	-	0	3	-	R/W	HR1189	PIV2698
	Enable event 2	-	0	1	-	R/W	CS197	BV197
	Start hours event 2	-	0	23	-	R/W	HR1190	PIV2699
Ab06	Start minutes event 2	-	0	59	-	R/W	HR1191	PIV2700
	0=OFF; 1=Economy; 2=Comfort	-	0	3	-	R/W	HR1192	PIV2701
	Enable event 3	-	0	1	-	R/W	CS198	BV198
	Start hours event 3	-	0	23	-	R/W	HR1193	PIV2702
	Start minutes event 3	-	0	59	-	R/W	HR1194	PIV2703
	0=OFF; 1=Economy; 2=Comfort	-	0	3	-	R/W	HR1195	PIV2704
	Enable event 4	-	0	1	-	R/W	CS199	BV199
	Start hours event 4	-	0	23	-	R/W	HR1196	PIV2705
	Start minutes event 4	-	0	59	-	R/W	HR1197	PIV2706
	0=OFF; 1=Economy; 2=Comfort	-	0	3	-	R/W	HR1198	PIV2707
	Enable event 5	-	0	1	-	R/W	CS200	BV200
	Start hours event 5	-	0	23	-	R/W	HR1199	PIV2708
	Start minutes event 5	-	0	59	-	R/W	HR1200	PIV2709
	0=OFF; 1=Economy; 2=Comfort	-	0	3	-	R/W	HR1201	PIV2710
	Enable event 6	-	0	1	-	R/W	CS201	BV201
	Start hours event 6	-	0	23	-	R/W	HR1202	PIV2711
	Start minutes event 6	-	0	59	-	R/W	HR1203	PIV2712
	0=OFF; 1=Economy; 2=Comfort	-	0	3	-	R/W	HR1204	PIV2713
Ab09	Enable event 7	-	0	1	-	R/W	CS202	BV202
	Start hours event 7	-	0	23	-	R/W	HR1205	PIV2714
	Start minutes event 7	-	0	59	-	R/W	HR1206	PIV2715
	0=OFF; 1=Economy; 2=Comfort	-	0	3	-	R/W	HR1207	PIV2716
	Enable event 8	-	0	1	-	R/W	CS203	BV203
	Start hours event 8	-	0	23	-	R/W	HR1208	PIV2717
	Start minutes event 8	-	0	59	-	R/W	HR1209	PIV2718
	0=OFF; 1=Economy; 2=Comfort	-	0	3	-	R/W	HR1210	PIV2719
	Enable event 9	-	0	1	-	R/W	CS204	BV204
	Start hours event 9	-	0	23	-	R/W	HR1211	PIV2720
	Start minutes event 9	-	0	59	-	R/W	HR1212	PIV2721
	0=OFF; 1=Economy; 2=Comfort	-	0	3	-	R/W	HR1213	PIV2722
	Enable event 10	-	0	1	-	R/W	CS205	BV205
	Start hours event 10	-	0	23	-	R/W	HR1214	PIV2723
	Start minutes event 10	-	0	59	-	R/W	HR1215	PIV2724
	0=OFF; 1=Economy; 2=Comfort	-	0	3	-	R/W	HR1216	PIV2725
Ab12	Monday program	OFF	0	7	-	R/W	HR1221	PIV2729
	Tuesday program	OFF	0	7	-	R/W	HR1222	PIV2730
	Wednesday program	OFF	0	7	-	R/W	HR1223	PIV2731
	Thursday program	OFF	0	7	-	R/W	HR1224	PIV2732
	Friday program	OFF	0	7	-	R/W	HR1225	PIV2733
	Saturday program	OFF	0	7	-	R/W	HR1226	PIV2734
	Sunday program	OFF	0	7	-	R/W	HR1227	PIV2735
Ab15	Enable vacation 1	-	0	1	-	R/W	CS206	BV206
	Start day 1	-	1	31	d	R/W	HR1229	PIV2737
	Start month 1	-	1	12	m	R/W	HR1230	PIV2738
	End day 1	-	1	31	d	R/W	HR1231	PIV2739
	End month 1	-	1	12	m	R/W	HR1232	PIV2740
	Program	-	0	7	-	R/W	HR1233	PIV2741
	Enable vacation 2	-	0	1	-	R/W	CS207	BV207
Ab15	Start day 2	-	1	31	d	R/W	HR1234	PIV2742
	Start month 2	-	1	12	m	R/W	HR1235	PIV2743
	End day 2	-	1	31	d	R/W	HR1236	PIV2744
	End month 2	-	1	12	m	R/W	HR1237	PIV2745
	Program	-	0	7	-	R/W	HR1238	PIV2746
	Enable vacation 3	-	0	1	-	R/W	CS208	BV208
	Start day 3	-	1	31	d	R/W	HR1239	PIV2747
	Start month 3	-	1	12	m	R/W	HR1240	PIV2748
	End day 3	-	1	31	d	R/W	HR1241	PIV2749
	End month 3	-	1	12	m	R/W	HR1242	PIV2750
	Program	-	0	7	-	R/W	HR1243	PIV2751
	Save vacation	-	0	1	-	R/W	HR1244	PIV2752
Ab18	Enable special day 1	-	0	1	-	R/W	CS209	BV209
	Day 1	-	1	31	d	R/W	HR1245	PIV2753
	Month 1	-	1	12	m	R/W	HR1246	PIV2754
	Program	-	0	7	-	R/W	HR1247	PIV2755
	Enable special day 2	-	0	1	-	R/W	CS210	BV210
	Day 2	-	1	31	d	R/W	HR1248	PIV2756
	Month 2	-	1	12	m	R/W	HR1249	PIV2757
	Program	-	0	7	-	R/W	HR1250	PIV2758

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ab18	Enable special day 3	-	0	1	d	R/W	CS211	BV211
	Day 3	-	1	31	m	R/W	HR1251	PIV2759
	Month 3	-	1	12	m	R/W	HR1252	PIV2760
	Program	-	0	7	-	R/W	HR1253	PIV2761
	Enable special day 4	-	0	1	-	R/W	CS212	BV212
	Day 4	-	1	31	d	R/W	HR1254	PIV2762
	Month 4	-	1	12	m	R/W	HR1255	PIV2763
	Program	-	0	7	-	R/W	HR1256	PIV2764
	Enable special day 5	-	0	1	-	R/W	CS213	BV213
	Day 5	-	1	31	d	R/W	HR1257	PIV2765
	Month 5	-	1	12	m	R/W	HR1258	PIV2766
	Program	-	0	7	-	R/W	HR1259	PIV2767
	Enable special day 6	-	0	1	-	R/W	CS214	BV214
	Day 6	-	1	31	d	R/W	HR1260	PIV2768
	Month 6	-	1	12	m	R/W	HR1261	PIV2769
	Program	-	0	7	-	R/W	HR1262	PIV2770
Ab21	Enable special day 7	-	0	1	-	R/W	CS215	BV215
	Day 7	-	1	31	d	R/W	HR1263	PIV2771
	Monht 7	-	1	12	m	R/W	HR1264	PIV2772
	Program	-	0	7	-	R/W	HR1265	PIV2773
	Enable special day 8	-	0	1	-	R/W	CS216	BV216
	Day 8	-	1	31	d	R/W	HR1266	PIV2774
	Month 8	-	1	12	m	R/W	HR1267	PIV2775
	Program	-	0	7	-	R/W	HR1268	PIV2776
	Enable special day 9	-	0	1	-	R/W	CS217	BV217
	Day 9	-	1	31	d	R/W	HR1269	PIV2777
	Month 9	-	1	12	m	R/W	HR1270	PIV2778
	Program	-	0	7	-	R/W	HR1271	PIV2779
	Enable special day 10	-	0	1	-	R/W	CS218	BV218
	Day 10	-	1	31	d	R/W	HR1272	PIV2780
	Month 10	-	1	12	m	R/W	HR1273	PIV2781
	Program	-	0	7	-	R/W	HR1274	PIV2782
	Enable special day 11	-	0	1	-	R/W	CS219	BV219
	Day11	-	1	31	d	R/W	HR1275	PIV2783
Ab21	Month 11	-	1	12	m	R/W	HR1276	PIV2784
	Program	-	0	7	-	R/W	HR1277	PIV2785
	Enable special day 12	-	0	1	-	R/W	CS220	BV220
	Day 12	-	1	31	d	R/W	HR1278	PIV2786
	Month 12	-	1	12	m	R/W	HR1279	PIV2787
	Program	-	0	7	-	R/W	HR1280	PIV2788
Ab24	Enable special day 13	-	0	1	-	R/W	CS221	BV221
	Day 13	-	1	31	d	R/W	HR1281	PIV2789
	Month 13	-	1	12	m	R/W	HR1282	PIV2790
	Program	-	0	7	-	R/W	HR1283	PIV2791
	Enable special day 14	-	0	1	-	R/W	CS222	BV222
	Day 14	-	1	31	d	R/W	HR1284	PIV2792
	Month 14	-	1	12	m	R/W	HR1285	PIV2793
	Program	-	0	7	-	R/W	HR1286	PIV2794
	Enable special day 15	-	0	1	-	R/W	CS223	BV223
	Day 15	-	1	31	d	R/W	HR1287	PIV2795
	Month 15	-	1	12	m	R/W	HR1288	PIV2796
	Program	-	0	7	-	R/W	HR1289	PIV2797
Ab27	Enable Party mode from c.pCO	FALSE	0	1	-	R/W	CS224	BV224
	Party mode duration	120	0	10080	min	R/W	HR1291	PIV2799
Ac01	Fans type (0: On/Off; 1: 3 speeds; 2: Modulating; 3: Modbus RTU)	2	0	3	-	R/W	HR1292	PIV2800
	Number of Modbus RTU fans	1	0	4	-	R/W	HR1987	PIV4058
	Enable return fan	FALSE	0	1	-	R/W	CS225	BV225
	Heating exchanger type	0	0	4	-	R/W	HR1293	PIV2801
	For mask usage	-	0	1	-	R	DI696	BV1154
	Return fan configuration error	-	0	1	-	R	DI697	BV1155
Ac04	Humidifier type (0: None; 1: Isothermal; 2: Adiabatic; 3: Humisonic; 4: Humifog; 5: HumiSteam)	0	0	4	-	R/W	HR1294	PIV2802
	Enable dehumidification regulation	FALSE	0	1	-	R/W	CS226	BV226
	IEC type (0: None; 1: OnOff; 2: Modulating; 3: Humisonic)	0	0	3	-	R/W	HR1295	PIV2803
	IEC: IO configuration warning	-	0	1	-	R	DI698	BV1156
							DI699	BV1157
Ac08	PreHeating coil type	0	0	5	-	R/W	HR1296	PIV2804
	Main coil type	0	0	7	-	R/W	HR1297	PIV2805
	PostHeating coil type	0	0	5	-	R/W	HR1298	PIV2806
Ac12	Fresh air damper type (0: None; 1: On/Off; 2: Modulating)	0	0	2	-	R/W	HR1299	PIV2807
	Exhaust air damper type (0: None; 1: On/Off; 2: Modulating)	0	0	2	-	R/W	HR1300	PIV2808
	Mixing air damper type (0: None; 1: On/Off; 2: Modulating)	0	0	2	-	R/W	HR1301	PIV2809
	Supply air damper type (0: None; 1: On/Off; 2: Modulating)	0	0	2	-	R/W	HR1302	PIV2810
	Return air damper type (0: None; 1: On/Off; 2: Modulating)	0	0	2	-	R/W	HR1303	PIV2811
	Bypass damper type (0: None; 1: On/Off; 2: Modulating)	0	0	1	-	R/W	HR1304	PIV2812
Ac14	Quality signal used (0: NONE, 1:CO2; 2: VOC;3:CO2 + VOC)	1	0	3	-	R/W	HR1943	PIV3959
Ac16	Filters configuration	0	0	6	-	R/W	HR1305	PIV2813
	HEPA Filter configuration (0: None; 1: Filt 1; Filt 1 & 2)	0	0	2	-	R/W	HR1306	PIV2814
Ac18	Regulation type (0: Supply only; 1:Return only; 2: Room only; 3: Return + Supply; 4: Room + Supply; 5: Disabled)	5	0	5	-	R/W	HR1307	PIV2815
Ac20	Regulation set point offset: proportional gain	5.0	0.0	999.9	-	R/W	HR1308	AV2816
	Regulation set point offset: integral time	150	0	999	s	R/W	HR1309	PIV2817
Ac22	Summer/Winter selection type	0	0	7	-	R/W	HR2079	PIV4353
	Summer/Winter mode change delay time	1	0	999	min	R/W	HR2078	PIV4352
	Unit cooling/heating mode configuration (0: Fixed by season; 1: Automatic by temperature regulation)	0	0	1	-	R/W	HR1311	PIV2819
Ac23	Cooling/Heating change offset	2.0	0.0	20.0	°C	R/W	HR2080	AV4354
Ac24	Summer external temperature threshold	28.0	-99.9	99.9	°C	R/W	HR1312	AV2820
	Winter external temperature threshold	18.0	-99.9	99.9	°C	R/W	HR1313	AV2821

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ac25	Summer season starting day	1	1	SummerEnd-Day	-	R/W	HR2087	PIV4360
	Summer season starting month	1	1	SummerEnd-Month	-	R/W	HR2088	PIV4361
	Summer season ending day	1	SummerStar-tDay	31	-	R/W	HR2085	PIV4358
	Summer season ending month	1	Summer-StartMonth	12	-	R/W	HR2086	PIV4359
Ac28	Summer coil water temperature threshold	15.0	-99.9	99.9	°C	R/W	HR1314	AV2822
	Winter coil water temperature threshold	25.0	-99.9	99.9	°C	R/W	HR1315	AV2823
Ac30	Main coil: water temperature out of range warning delay time	5	1	999	min	R/W	HR1316	PIV2824
	Coil water temperature: action configuration	0	0	4	-	R/W	HR1317	PIV2825
Ac31	Unit automatic mode configuration (0: Standard; 1: Energy saving)	0	0	1	-	R/W	HR2084	PIV4357
Ac32	Humidification/Dehumidification: Control probe	0	0	2	-	R/W	HR1318	PIV2826
	Humidification/Dehumidification: Control type	0	0	1	-	R/W	HR1319	PIV2827
Ac34	Dehumidification: Regulation type	0	0	1	-	R/W	HR1320	PIV2828
	Dehumidification: enable kwater dew point calculation	FALSE	0	1	-	R/W	CS227	BV227
Ac35	Unit humidification/dehumidification mode configuration (0: Fixed by season; 1: Automatic by humidity regulation)	0	0	1	-	R/W	HR1310	PIV2818
Ac36	Humidification/Dehumidification: Regulation band	20.0	1.0	99.0	%rh	R/W	HR1321	AV2829
	Humidification/Dehumidification: Regulation change delay time	5	0	99	min	R/W	HR1322	PIV2830
Ac37	Freecooling/Freeheating selection type (0=Temperature, 1=Enthalpy)	0	0	1	-	R/W	HR1978	PIV4030
Ac38	Freecooling activation delta	3.0	0.0	20.0	K	R/W	HR1323	AV2831
	Freeheating activation delta	3.0	0.0	20.0	K	R/W	HR1324	AV2832
Ac39	Free cooling external temperature limit	5.0	-999.9	999.9	°C	R/W	HR2144	AV4497
	Free heating external temperature limit	40.0	-999.9	999.9	°C	R/W	HR2145	AV4498
Ac40	Free cooling PID parameters - Proportional gain	8.0	0.0	999.9	-	R/W	HR1325	AV2833
	Free cooling PID parameters - Integral time	120	0	999	-	R/W	HR1326	PIV2834
Ac42	Free heating PID parameters - Proportional gain	8.0	0.0	999.9	-	R/W	HR1327	AV2835
	Free heating PID parameters - Integral time	120	0	999	-	R/W	HR1328	PIV2836
Ac44	Enable warm up procedure during start up state	FALSE	0	1	-	R/W	CS228	BV228
	Low external temperature threshold for the activation of warm up procedure	-1.0	-99.0	99.0	°C	R/W	HR1329	AV2837
	Settable delay between return and supply fan activation (seconds). To be used only when warm up procedure is disabled	15	1	999	s	R/W	HR1330	PIV2838
	Warm up delay time	15	1	60	s	R/W	HR1331	PIV2839
	Warm up fan activation delay time	15	0	600	s	R/W	HR1332	PIV2840
Ac46	For mask usage	1	0	3	-	R/W	HR1333	PIV2841
	Supply fan request for automatic warm up	30.0	0.0	100.0	%	R/W	HR1334	AV2842
	For mask usage	0	0	100	-	R/W	HR1335	PIV2843
	Enable return fan	FALSE	0	1	-	R	CS225	BV225
	For mask usage	0	0	3	-	R/W	HR1336	PIV2844
	Return fan request for automatic warm up	30.0	0.0	100.0	%	R/W	HR1337	AV2845
	For mask usage	0	0	100	-	R/W	HR1338	PIV2846
Ac48	PreHeating coil warm up request	0.0	0.0	100.0	-	R/W	HR1339	AV2847
	Main coil warm up request	0.0	0.0	100.0	-	R/W	HR1340	AV2848
	PostHeating coil warm up request	0.0	0.0	100.0	-	R/W	HR1341	AV2849
	Bypass damper warm up request	0.0	0.0	100.0	-	R/W	HR1342	AV2850
	Thermal wheel warm up request	0.0	0.0	100.0	%	R/W	HR1343	AV2851
	For mask usage	0	0	100	-	R/W	HR1344	PIV2852
Ac50	For mask usage	2	0	3	-	R/W	HR1345	PIV2853
	Supply fan request for automatic switch on when warm up is not enabled	25.0	0.0	100.0	%	R/W	HR1346	AV2854
	For mask usage	100	0	100	-	R/W	HR1347	PIV2855
Ac52	Antifreeze type (0: NONE; 1: Ext.Temp.; 2: AFreeze Temp.; 3: DigitalInput)	0	0	3	-	R/W	HR1348	PIV2856
Ac54	Antifreeze temperature threshold	2.0	-50.0	20.0	°C	R/W	HR1349	AV2857
	Antifreeze ending delta	3.0	0.0	15.0	K	R/W	HR1350	AV2858
Ac56	Anti freeze warning delay time	30	0	999	s	R/W	HR1351	PIV2859
	Antifreeze alarm delay time	5	0	999	s	R/W	HR1352	PIV2860
	Enable antifreeze during off state	FALSE	0	1	-	R/W	CS229	BV229
Ac58	Prevent antifreeze threshold	5.0	-99.9	99.9	°C	R/W	HR1353	AV2861
Ac60	Low supply temperature threshold	16.0	0.0	25.0	°C	R/W	HR1354	AV2862
	Low supply temperature alarm delay time at start up	999	0	65535	s	R/W	HR1355	PIV2863
	Low supply temperature alarm delay time at unit in run mode	600	0	65535	s	R/W	HR1356	PIV2864
Ac62	High supply temperature threshold	32.0	0.0	40.0	°C	R/W	HR1357	AV2865
	High supply temperature alarm delay time at start up	999	0	65535	s	R/W	HR1358	PIV2866
	High supply temperature alarm delay time at unit in run mode	600	0	65535	s	R/W	HR1359	PIV2867
Ac64	Low supply temp: proportional part	8.0	0.0	999.0	-	R/W	HR1360	AV2868
	Low supply temp: integral time	120	0	999	s	R/W	HR1361	PIV2869
Ac66	Purge function - Time	10	0	999	min	R/W	HR1949	PIV3972
	Purge function - Automatic mode	0	0	3	-	R/W	HR1950	PIV3973
	Purge function - Start hour	0	0	23	h	R/W	HR1951	PIV3974
	Purge function - Start minute	0	0	59	min	R/W	HR1952	PIV3975
Ac68	Regulation probe error (FALSE=forced off; TRUE=manual activation)	FALSE	0	1	-	R/W	CS230	BV230
	Regulation probe error (FALSE=forced off; TRUE=manual activation)	FALSE	0	1	-	R	CS230	BV230
	Enabling of the regulation probe error status during the off state	FALSE	0	1	-	R/W	CS231	BV231
Ac70	Fresh air damper request in case of regulation probe error: modulating	0.0	0.0	100.0	%	R/W	HR1362	AV2870
	Fresh air damper request in case of regulation probe error: on/off	0	0	100	%	R/W	HR1363	PIV2871
	Bypass damper request in case of regulation probe error: modulating	0.0	0.0	100.0	%	R/W	HR1364	AV2872
	Thermal wheel request in case of regulation probe error: modulating	0.0	0.0	100.0	%	R/W	HR1365	AV2873
	Bypass damper request in case of regulation probe error: on/off	0	0	100	%	R/W	HR1366	PIV2874
	Mixing damper request in case of regulation probe error	0.0	0.0	100.0	%	R/W	HR1367	AV2875
	Mixing damper request in case of regulation probe error	0	0	100	%	R/W	HR1368	PIV2876
	Exhaust damper request in case of regulation probe error	0.0	0.0	100.0	%	R/W	HR1369	AV2877
	Exhaust damper request in case of regulation probe error	0	0	100	%	R/W	HR1370	PIV2878

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
	Supply damper request in case of regulation probe error	0.0	0.0	100.0	%	R/W	HR1371	AV2879
	Supply damper request in case of regulation probe error	0	0	100	%	R/W	HR1372	PIV2880
	Return damper request in case of regulation probe error	0.0	0.0	100.0	%	R/W	HR1373	AV2881
Ac72	Return damper request in case of regulation probe error	0	0	100	%	R/W	HR1374	PIV2882
	Main coil request in case of regulation probe error	0.0	0.0	100.0	%	R/W	HR1375	AV2883
	PreHeating coil request in case of regulation probe error	50.0	0.0	100.0	%	R/W	HR1376	AV2884
	PostHeating coil request in case of regulation probe error	50.0	0.0	100.0	%	R/W	HR1377	AV2885
	Supply fan speed request in case of regulation probe error	0	0	3	%	R/W	HR1378	PIV2886
	Supply fan speed request in case of regulation probe error	0.0	0.0	100.0	%	R/W	HR1379	AV2887
	Supply fan speed request in case of regulation probe error	0	0	100	%	R/W	HR1380	PIV2888
	Supply fan speed request in case of regulation probe error	0	0	3	%	R/W	HR1381	PIV2889
Ac74	Return fan speed request in case of regulation probe error	0.0	0.0	100.0	%	R/W	HR1382	AV2890
	Supply fan speed request in case of regulation probe error	0	0	100	%	R/W	HR1383	PIV2891
	Compressor request in case of regulation probe error: BLDC	0.0	0.0	100.0	%	R/W	HR1384	AV2892
	Compressor request in case of regulation probe error: On/off	0	0	100	%	R/W	HR1385	PIV2893
	Humidification request in case of regulation probe error	0.0	0.0	100.0	%	R/W	HR1386	AV2894
	IEC: request in case of regulation probe error	0.0	0.0	100.0	%	R/W	HR1387	AV2895
Ac76	Enable thTune management	FALSE	0	1	-	R/W	CS232	BV232
Ac80	Auxiliary regulation type	0	0	4	-	R/W	HR1389	PIV2897
	Enable on/off request by BMS	-	0	1	-	R/W	CS234	BV234
	OnOff by k.water enabling	FALSE	0	1	-	R/W	CS235	BV235
Ac82	BMS Offline alarm management (0: Disabled; 1: Only Warning; 2: Alarm; 3: Alarm with timeout)	0	0	3	-	R/W	HR1390	PIV2898
	BMS Offline alarm timeout [s]	120	0	999	s	R/W	HR1391	PIV2899
Ac83	Generic Din1 - alarm management (0: Disabled; 1: Only Warning; 2: Alarm; 3: Alarm with timeout)	0	0	3	-	R/W	HR2139	PIV4482
	Generic Din2 - alarm management (0: Disabled; 1: Only Warning; 2: Alarm; 3: Alarm with timeout)	0	0	3	-	R/W	HR2140	PIV4483
	Generic Din3 - alarm management (0: Disabled; 1: Only Warning; 2: Alarm; 3: Alarm with timeout)	0	0	3	-	R/W	HR2141	PIV4484
	Generic Din4 - alarm management (0: Disabled; 1: Only Warning; 2: Alarm; 3: Alarm with timeout)	0	0	3	-	R/W	HR2142	PIV4485
	Generic Din5 - alarm management (0: Disabled; 1: Only Warning; 2: Alarm; 3: Alarm with timeout)	0	0	3	-	R/W	HR2143	PIV4486
Ac84	pGDx: Main variable selection	1	1	26	-	R/W	HR1392	PIV2900
	pGDx: Second variable selection	11	1	26	-	R/W	HR1393	PIV2901
Ac86	Enable VDI management	FALSE	0	1	-	R/W	CS236	BV236
	VDI high saturation humidity startup enabled	FALSE	0	1	-	R/W	CS237	BV237
Ac87	IAQ configuration - VOC sensibility (0=disabled,1=low,2=medium,3=high)	0	0	3	-	R/W	HR2069	PIV4329
Ac88	Mode sanification during off by BMS or scheduler (0: OFF,1:ON,2:Blink)	0	0	2	-	R/W	HR1944	PIV3961
	Sanification device time on	15	0	540	min	R/W	HR1945	PIV3962
	Sanification device time off	45	0	540	min	R/W	HR1946	PIV3963
Ac97	Set wipe memory	-	0	1	-	R/W	HR1394	PIV2902
Ac99	Drive type (0: Internal public volume; 1: USB pendrive)	-	0	1	-	R/W	HR1015	PIV2537
							HR1018	IV2539
							HR1020	IV2540
							HR1022	IV2541
							HR1024	IV2542
							HR1026	IV2543
							HR1028	IV2544
							HR1030	IV2545
							HR1032	IV2546
							HR1034	IV2547
							HR1036	IV2548
							HR1038	IV2549
							-	-
Ad03	Fresh air damper manual mode enable	FALSE	0	1	-	R/W	CS184	BV184
	Fresh air damper manual mode value	10.0	0.0	100.0	%	R/W	HR1041	AV2551
	For mask usage	0	0	100	%	R/W	HR1042	PIV2552
Ad06	Mixing damper manual mode enable	FALSE	0	1	-	R/W	CS185	BV185
	Mixing damper manual mode value	10.0	0.0	100.0	%	R/W	HR1043	AV2553
	For mask usage	-	0	100	%	R/W	HR1044	PIV2554
Ad09	Exhaust air damper manual mode enable	FALSE	0	1	-	R/W	CS186	BV186
	Exhaust air damper manual mode value	0.0	0.0	100.0	%	R/W	HR1045	AV2555
	For mask usage	0	0	100	%	R/W	HR1046	PIV2556
Ad12	Bypass damper manual mode enable	FALSE	0	1	-	R/W	CS187	BV187
	Bypaas damper manual mode value	10.0	0.0	100.0	-	R/W	HR1047	AV2557
	For mask usage	-	0	100	%	R/W	HR1048	PIV2558
Ad15	Supply fan manual mode enable	FALSE	0	1	-	R/W	CS188	BV188
	For mask usage	-	0	3	-	R/W	HR1049	PIV2559
	Supply fan manual mode value	10.0	0.0	100.0	%	R/W	HR1050	AV2560
	For mask usage	-	0	100	-	R/W	HR1051	PIV2561
Ad18	Return fan manual mode enable	FALSE	0	1	-	R/W	CS189	BV189
	For mask usage	-	0	3	-	R/W	HR1052	PIV2562
	Return fan manual mode value	10.0	0.0	100.0	%	R/W	HR1053	AV2563
	For mask usage	-	0	100	-	R/W	HR1054	PIV2564
Ad21	Pre heating coil manual mode enable	FALSE	0	1	-	R/W	CS190	BV190
	Pre heating coil manual mode value	0.0	0.0	100.0	%	R/W	HR1055	AV2565
Ad24	Main coil manual mode enable	FALSE	0	1	-	R/W	CS191	BV191
	Main coil manual mode value	0.0	0.0	100.0	%	R/W	HR1056	AV2566
Ad27	Post heating coil manual mode enable	FALSE	0	1	-	R/W	CS192	BV192
	Post heating coil manual mode value	0.0	0.0	100.0	%	R/W	HR1057	AV2567
Ad30	BLDC manual mode enable	FALSE	0	1	-	R/W	CS193	BV193
	BLDC manual mode value	10.0	0.0	100.0	%	R/W	HR1058	AV2568
Ad33	Compressor manual mode enable	FALSE	0	1	-	R/W	CS193	BV193
	Compressor manual mode value	0	0	100	%	R/W	HR1059	PIV2569
Ad36	Humidifier manual mode enable	FALSE	0	1	-	R/W	CS194	BV194
	Humidifier manual mode value	30.0	0.0	100.0	-	R/W	HR1060	AV2570

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ad39	Bypass damper manual mode enable	FALSE	0	1	-	R/W	CS187	BV187
	Thermal wheel manual mode value	10.0	0.0	100.0	%	R/W	HR1061	AV2571
Ad42	Auxiliary Regulation 1 - Manual mode enabled	FALSE	0	1	-	R/W	CS266	BV266
	Auxiliary Regulation 1 - Modulating: Manual mode value	0.0	0.0	100.0	-	R/W	HR1596	AV3091
	Auxiliary Regulation 1 - Dout: Manual mode value	FALSE	0	1	-	R/W	CS267	BV267
Ad45	Auxiliary Regulation 2 - Manual mode enabled	FALSE	0	1	-	R/W	CS273	BV273
	Auxiliary Regulation 2 - Modulating: Manual mode value	0.0	0.0	100.0	-	R/W	HR1610	AV3105
	Auxiliary Regulation 2 - Dout: Manual mode value	FALSE	0	1	-	R/W	CS274	BV274
Ad48	Auxiliary Regulation 3 - Manual mode enabled	FALSE	0	1	-	R/W	CS280	BV280
	Auxiliary Regulation 3 - Modulating: Manual mode value	0.0	0.0	100.0	-	R/W	HR1624	AV3119
	Auxiliary Regulation 3 - Dout: Manual mode value	FALSE	0	1	-	R/W	CS281	BV281
Ad51	Auxiliary Regulation 4 - Manual mode enabled	FALSE	0	1	-	R/W	CS287	BV287
	Auxiliary Regulation 4 - Modulating: Manual mode value	0.0	0.0	100.0	-	R/W	HR1638	AV3133
	Auxiliary Regulation 4 - Dout: Manual mode value	FALSE	0	1	-	R/W	CS288	BV288
Ad53	IEC: manual mode enable	FALSE	0	1	-	R/W	CS485	BV4499
	IEC: manual mode value	0.0	0.0	100.0	%	R/W	HR2146	AV4500
Ae01	Unit - Working hours	0	0	99	h	R	IR385	PIV3762
	Unit - Working hours	0	0	99	h	R	IR385	PIV3762
	Unit - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1395	PIV2903
	Unit - Working hours left to the maintenance	-	0	99	h	R	IR387	PIV3763
	Unit - Working hours reset	-	0	1	-	R/W	HR1396	PIV2904
Ae03	Supply Fan - Working hours	0	0	99	h	R	IR389	PIV3764
	Supply Fan - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1397	PIV2905
	Supply Fan - Working hours left to the maintenance	-	0	99	h	R	IR391	PIV3765
	Supply Fan - Working hours reset	-	0	1	-	R/W	HR1398	PIV2906
Ae85	Supply Fan 2 - –orking hours	0	0	99	h	R	IR812	PIV4267
	Supply Fan 2 - –orking hours threshold (1000hrs)	30	0	99	-	R/W	HR2012	PIV4255
	Supply Fan 2 - –orking hours left to the maintenance	-	0	99	h	R	IR814	PIV4268
	Supply Fan 2 - –orking hours reset	-	0	1	-	R/W	HR2013	PIV4256
Ae86	Supply Fan 3 - –orking hours	0	0	99	h	R	IR816	PIV4269
	Supply Fan 3 - –orking hours threshold (1000hrs)	30	0	99	-	R/W	HR2014	PIV4257
	Supply Fan 3 - –orking hours left to the maintenance	-	0	99	h	R	IR818	PIV4270
	Supply Fan 3 - –orking hours reset	-	0	1	-	R/W	HR2015	PIV4258
Ae87	Supply Fan 4 - –orking hours	0	0	99	h	R	IR820	PIV4271
	Supply Fan 4 - –orking hours threshold (1000hrs)	30	0	99	-	R/W	HR2016	PIV4259
	Supply Fan 4 - –orking hours left to the maintenance	-	0	99	h	R	IR822	PIV4272
	Supply Fan 4 - –orking hours reset	-	0	1	-	R/W	HR2017	PIV4260
Ae06	Return Fan - Working hours	0	0	99	h	R	IR393	PIV3766
	Return Fan - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1399	PIV2907
	Return Fan - Working hours left to the maintenance	-	0	99	h	R	IR395	PIV3767
	Return Fan - Working hours reset	-	0	1	-	R/W	HR1400	PIV2908
Ae88	Return Fan 2 - –orking hours	0	0	99	h	R	IR824	PIV4273
	Return Fan 2 - –orking hours threshold (1000hrs)	30	0	99	-	R/W	HR2018	PIV4261
	Return Fan 2 - –orking hours left to the maintenance	-	0	99	h	R	IR826	PIV4274
	Return Fan 2 - –orking hours reset	-	0	1	-	R/W	HR2019	PIV4262
Ae89	Return Fan 3 - –orking hours	0	0	99	h	R	IR828	PIV4275
	Return Fan 3 - –orking hours threshold (1000hrs)	30	0	99	-	R/W	HR2020	PIV4263
	Return Fan 3 - –orking hours left to the maintenance	-	0	99	h	R	IR830	PIV4276
	Return Fan 3 - –orking hours reset	-	0	1	-	R/W	HR2021	PIV4264
Ae90	Return Fan 4 - –orking hours	0	0	99	h	R	IR832	PIV4277
	Return Fan 4 - –orking hours threshold (1000hrs)	30	0	99	-	R/W	HR2022	PIV4265
	Return Fan 4 - –orking hours left to the maintenance	-	0	99	h	R	IR834	PIV4278
	Return Fan 4 - –orking hours reset	-	0	1	-	R/W	HR2023	PIV4266
Ae09	Dirty filters - Working hours	0	0	99	h	R	IR397	PIV3768
	Dirty filters - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1401	PIV2909
	Dirty filters - Working hours left to the maintenance	-	0	99	h	R	IR399	PIV3769
	Dirty filters - Working hours reset	-	0	1	-	R/W	HR1402	PIV2910
Ae12	Thermal wheel - Working hours	0	0	99	h	R	IR401	PIV3770
	Thermal wheel - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1403	PIV2911
	Thermal wheel - Working hours left to the maintenance	-	0	99	h	R	IR403	PIV3771
	Thermal wheel - Working hours reset	-	0	1	-	R/W	HR1404	PIV2912
Ae15	Compressor - Working hours	0	0	99	h	R	IR405	PIV3772
	Compressor - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1405	PIV2913
	Compressor - Working hours left to the maintenance	-	0	99	h	R	IR407	PIV3773
	Compressor - Working hours reset	-	0	1	-	R/W	HR1406	PIV2914
Ae18	IEC - Working hours	0	0	99	h	R	IR409	PIV3774
	IEC - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1407	PIV2915
	IEC - Working hours left to the maintenance	-	0	99	h	R	IR411	PIV3775
	IEC - Working hours reset	-	0	1	-	R/W	HR1408	PIV2916
Ae21	Humidifier - Working hours	0	0	99	h	R	IR413	PIV3776
	Humidifier - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1409	PIV2917
	Humidifier - Working hours left to the maintenance	-	0	99	h	R	IR415	PIV3777
	Humidifier - Working hours reset	-	0	1	-	R/W	HR1410	PIV2918
Ae24	Auxiliary digital output - Working hours	0	0	99	h	R	IR417	PIV3778
	Auxiliary digital output - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1411	PIV2919
	Auxiliary digital output - Working hours left to the maintenance	-	0	99	h	R	IR419	PIV3779
	Auxiliary digital output - Working hours reset	-	0	1	-	R/W	HR1412	PIV2920
Ae27	Auxiliary analogue output - Working hours	0	0	99	h	R	IR421	PIV3780
	Auxiliary analogue output - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1413	PIV2921
	Auxiliary analogue output - Working hours left to the maintenance	-	0	99	h	R	IR423	PIV3781
	Auxiliary analogue output - Working hours reset	-	0	1	-	R/W	HR1414	PIV2922
Ae30	Main coil pump 1 - Working hours	0	0	99	h	R	IR425	PIV3782
	Main coil pump 1 - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1415	PIV2923
	Main coil pump 1 - Working hours left to the maintenance	-	0	99	h	R	IR427	PIV3783
	Main coil pump 1 - Working hours reset	-	0	1	-	R/W	HR1416	PIV2924
Ae33	Main coil pump 2 - Working hours	0	0	99	h	R	IR429	PIV3784
	Main coil pump 2 - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1417	PIV2925
	Main coil pump 2 - Working hours left to the maintenance	-	0	99	h	R	IR431	PIV3785
	Main coil pump 2 - Working hours reset	-	0	1	-	R/W	HR1418	PIV2926

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
UNIT								
Ae36	Main coil analog output - Working hours	0	0	99	h	R	IR433	PIV3786
	Main coil analog output - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1419	PIV2927
	Main coil analog output - Working hours left to the maintenance	-	0	99	h	R	IR435	PIV3787
	Main coil analog output - Working hours reset	-	0	1	-	R/W	HR1420	PIV2928
Ae39	Main coil step 1 - Working hours	0	0	99	h	R	IR437	PIV3788
	Main coil step 1 - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1421	PIV2929
	Main coil step 1 - Working hours left to the maintenance	-	0	99	h	R	IR439	PIV3789
	Main coil step 1 - Working hours reset	-	0	1	-	R/W	HR1422	PIV2930
Ae42	Main coil step 2 - Working hours	0	0	99	h	R	IR441	PIV3790
	Main coil step 2 - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1423	PIV2931
	Main coil step 2 - Working hours left to the maintenance	-	0	99	h	R	IR443	PIV3791
	Main coil step 2 - Working hours reset	-	0	1	-	R/W	HR1424	PIV2932
Ae45	Main coil step 3 - Working hours	0	0	99	h	R	IR445	PIV3792
	Main coil step 3 - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1425	PIV2933
	Main coil step 3 - Working hours left to the maintenance	-	0	99	h	R	IR447	PIV3793
	Main coil step 3 - Working hours reset	-	0	1	-	R/W	HR1426	PIV2934
Ae48	Main coil step 4 - Working hours	0	0	99	h	R	IR449	PIV3794
	Main coil step 4 - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1427	PIV2935
	Main coil step 4 - Working hours left to the maintenance	-	0	99	h	R	IR451	PIV3795
	Main coil step 4 - Working hours reset	-	0	1	-	R/W	HR1428	PIV2936
Ae51	Pre-heat coil pump 1 - Working hours	0	0	99	h	R	IR453	PIV3796
	Pre-heat coil pump 1 - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1429	PIV2937
	Pre-heat coil pump 1 - Working hours left to the maintenance	-	0	99	h	R	IR455	PIV3797
	Pre-heat coil pump 1 - Working hours reset	-	0	1	-	R/W	HR1430	PIV2938
Ae53	Pre-heat coil pump 2 - Working hours	0	0	99	h	R	IR457	PIV3798
	Pre-heat coil pump 2 - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1431	PIV2939
	Pre-heat coil pump 2 - Working hours left to the maintenance	-	0	99	h	R	IR459	PIV3799
	Pre-heat coil pump 2 - Working hours reset	-	0	1	-	R/W	HR1432	PIV2940
Ae55	Pre-heat coil analog output - Working hours	0	0	99	h	R	IR461	PIV3800
	Pre-heat coil analog output - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1433	PIV2941
	Pre-heat coil analog output - Working hours left to the maintenance	-	0	99	h	R	IR463	PIV3801
	Pre-heat coil analog output - Working hours reset	-	0	1	-	R/W	HR1434	PIV2942
Ae57	Pre-heat coil step 1 - Working hours	0	0	99	h	R	IR465	PIV3802
	Pre-heat coil step 1 - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1435	PIV2943
	Pre-heat coil step 1 - Working hours left to the maintenance	-	0	99	h	R	IR467	PIV3803
	Pre-heat coil step 1 - Working hours reset	-	0	1	-	R/W	HR1436	PIV2944
Ae60	Pre-heat coil step 2 - Working hours	0	0	99	h	R	IR469	PIV3804
	Pre-heat coil step 2 - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1437	PIV2945
	Pre-heat coil step 2 - Working hours left to the maintenance	-	0	99	h	R	IR471	PIV3805
	Pre-heat coil step 2 - Working hours reset	-	0	1	-	R/W	HR1438	PIV2946
Ae63	Pre-heat coil step 3 - Working hours	0	0	99	h	R	IR473	PIV3806
	Pre-heat coil step 3 - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1439	PIV2947
	Pre-heat coil step 3 - Working hours left to the maintenance	-	0	99	h	R	IR475	PIV3807
	Pre-heat coil step 3 - Working hours reset	-	0	1	-	R/W	HR1440	PIV2948
Ae66	Pre-heat coil step 4 - Working hours	0	0	99	h	R	IR477	PIV3808
	Pre-heat coil step 4 - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1441	PIV2949
	Pre-heat coil step 4 - Working hours left to the maintenance	-	0	99	h	R	IR479	PIV3809
	Pre-heat coil step 4 - Working hours reset	-	0	1	-	R/W	HR1442	PIV2950
Ae69	Re-heat coil pump 1 - Working hours	0	0	99	h	R	IR481	PIV3810
	Re-heat coil pump 1 - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1443	PIV2951
	Re-heat coil pump 1 - Working hours left to the maintenance	-	0	99	h	R	IR483	PIV3811
	Re-heat coil pump 1 - Working hours reset	-	0	1	-	R/W	HR1444	PIV2952
Ae72	Re-heat coil pump 2 - Working hours	0	0	99	h	R	IR485	PIV3812
	Re-heat coil pump 2 - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1445	PIV2953
	Re-heat coil pump 2 - Working hours left to the maintenance	-	0	99	h	R	IR487	PIV3813
	Re-heat coil pump 2 - Working hours reset	-	0	1	-	R/W	HR1446	PIV2954
Ae75	Re-heat coil analog output - Working hours	0	0	99	h	R	IR489	PIV3814
	Re-heat coil analog output - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1447	PIV2955
	Re-heat coil analog output - Working hours left to the maintenance	-	0	99	h	R	IR491	PIV3815
	Re-heat coil analog output - Working hours reset	-	0	1	-	R/W	HR1448	PIV2956
Ae78	Re-heat coil step 1 - Working hours	0	0	99	h	R	IR493	PIV3816
	Re-heat coil step 1 - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1449	PIV2957
	Re-heat coil step 1 - Working hours left to the maintenance	-	0	99	h	R	IR495	PIV3817
	Re-heat coil step 1 - Working hours reset	-	0	1	-	R/W	HR1450	PIV2958
Ae81	Re-heat coil step 2 - Working hours	0	0	99	h	R	IR497	PIV3818
	Re-heat coil step 2 - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1451	PIV2959
	Re-heat coil step 2 - Working hours left to the maintenance	-	0	99	h	R	IR499	PIV3819
	Re-heat coil step 2 - Working hours reset	-	0	1	-	R/W	HR1452	PIV2960
Ae83	Re-heat coil step 3 - Working hours	0	0	99	h	R	IR501	PIV3820
	Re-heat coil step 3 - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1453	PIV2961
	Re-heat coil step 3 - Working hours left to the maintenance	-	0	99	h	R	IR503	PIV3821
	Re-heat coil step 3 - Working hours reset	-	0	1	-	R/W	HR1454	PIV2962
Ae84	Re-heat coil step 4 - Working hours	0	0	99	h	R	IR505	PIV3822
	Re-heat coil step 4 - Working hours threshold (1000hrs)	30	0	99	-	R/W	HR1455	PIV2963
	Re-heat coil step 4 - Working hours left to the maintenance	-	0	99	h	R	IR507	PIV3823
	Re-heat coil step 4 - Working hours reset	-	0	1	-	R/W	HR1456	PIV2964
Ae99	Reset total working hours counter of all devices	-	0	1	-	R/W	HR1457	PIV2965
	Error communication for Import/Export blocks	-	0	9	-	R	IR509	IV3824
	Error communication for Import/Export blocks	-	0	9	-	R	IR509	IV3824

Tab. 10.a

10.1.2 B. Fans

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
FANS								
Ba01	Only for mask usage	TRUE	0	1	-	R	DI701	BV1159
	Fan regulation type (0: Static pressure; 1: Air flow; 2: Speed)	2	0	2	-	R/W	HR1491	PIV2992
	Supply fan configuration error	-	0	1	-	R	DI702	BV1160
Ba03	Enable air quality regulation for fans	FALSE	0	1	-	R/W	CS245	BV245
	Enable air quality regulation for fresh air OR mixing damper	FALSE	0	1	-	R	CS289	BV289
	Air Quality - Fans PID parameters - Proportional gain	1.0	0.0	999.9	-	R/W	HR1492	AV2993
	Air Quality - Fans PID parameters - Integral time	60	0	999	-	R/W	HR1493	PIV2994
Ba06	Air flow switch check type: 0=none; 1=common; 2=separated;	0	0	3	-	R/W	HR1494	PIV2995
	Air flow check type	0	0	2	-	R/W	HR1495	PIV2996
	Number of retry after return or supply air flow switch error detected during start up procedure before turn off the unit	3	0	9	-	R/W	HR1496	PIV2997
	Timeout for air flow switch detection (seconds)	15	1	999	s	R/W	HR1497	PIV2998
	Air flow switch alarm delay time in running mode (s)	3	0	999	s	R/W	HR1498	PIV2999
Ba09	Air flow check pressure threshold	50.0	0.0	9999.0	Pa	R/W	HR1499	AV3000
Ba12	Fan post ventilation time	10	0	600	s	R/W	HR1500	PIV3001
	Enable fan temperature regulation	FALSE	0	1	-	R/W	CS479	BV4369
	Enabling the selection of the temperature regulation for the fans	-	0	1	-	R	DI703	BV1161
	Enable fan temperature limit regulation	FALSE	0	1	-	R/W	CS246	BV246
Ba15	Enable fan regulation in case of FreeCooling/FreeHeating	FALSE	0	1	-	R/W	CS247	BV247
Ba18	Enable night minimum ventilation	FALSE	0	1	-	R/W	CS248	BV248
	Night minimum ventilation: starting hour	22	0	23	h	R/W	HR1501	PIV3002
	Night minimum ventilation: starting minutes	0	0	59	min	R/W	HR1502	PIV3003
	Night minimum ventilation: ending hour	6	0	23	h	R/W	HR1503	PIV3004
	Night minimum ventilation: ending minutes	0	0	59	min	R/W	HR1504	PIV3005
Ba21	Night minimum ventilation request	50.0	0.0	100.0	-	R/W	HR1505	AV3006
	Priority between minimum ventilation and night free cooling (FALSE: minimum ventilation; TRUE: free cooling)	FALSE	0	1	-	R/W	CS249	BV249
Ba27	Fan fixed speed request	30.0	0.0	100.0	%	R/W	HR1507	AV3008
	(0 = SPEED1; 1= SPEED2; 2= SPEED 3) Three speed fan request in fixed speed regulation	2	0	2	-	R/W	HR1508	PIV3009
	3 speeds fan type enabled	-	0	1	-	R	DI704	BV1162
	Three speed fan limit 1	33.0	0.0	FansThree-Speed2	%	R/W	HR1509	AV3010
	3 speeds fan type enabled	-	0	1	-	R	DI704	BV1162
	Three speed fan limit 2	66.0	FansThree-Speed1	FansThree-Speed3	%	R/W	HR1510	AV3011
	3 speeds fan type enabled	-	0	1	-	R	DI704	BV1162
	Three speed fan limit 3	100.0	FansThree-Speed2	100.0	%	R/W	HR1511	AV3012
Ba30	Fan air quality minimum request	10.0	0.0	100.0	%	R/W	HR1512	AV3013
Ba32	Regulation fans speed: proportional gain	5.0	0.0	999.9	-	R/W	HR2147	-
	Regulation fans speed: derivative time	150	0	999	s	R/W	HR2148	-
Ba33	Fan temperature regulation PID parameters - Proportional gain	8.0	-999.9	999.9	-	R/W	HR1513	AV3014
	Fan temperature regulation PID parameters - Integral time	120	0	65535	-	R/W	HR1514	PIV3015
Ba36	Proportional gain	8.0	0.0	999.9	-	R/W	HR1515	AV3016
	Integral time	120	0	999	-	R/W	HR1516	PIV3017
	Dead band	0.0	-999.9	999.9	-	R/W	HR1517	AV3018
	Supply air flow deadband	0.0	0.0	3000.0	m^3/h	R/W	HR1518	AV3019
	Dead band	0.0	-999.9	999.9	-	R/W	HR1517	AV3018
Ba39	Fire Smoke management (0=Stop fans - -=Only supply fans - -= Only return fans - -=No stop)	0	0	3	-	R/W	HR2024	PIV4285
Bb01	Supply fan request in case of air pressure probe error	25.0	0.0	100.0	-	R/W	HR1563	AV3063
Bb03	Minimum fan speed during antifreeze	10.0	0.0	100.0	%	R/W	HR1564	AV3064
Bb06	Supply fan: Minimum regulation value	0.0	0.0	100.0	%	R/W	HR1896	AV3376
	Supply fan: Maximum regulation value	100.0	0.0	100.0	%	R/W	HR1897	AV3377
Bb07	Supply fan - K factor for air flow calculations	100.0	0.0	99999.0	-	R/W	HR1506	AV3007
Bb09	Automatically generated - Time in [s]for a positive change for fan	10	0	625	s	R/W	HR1565	PIV3065
	Automatically generated - Time in [s] for a negative change of set value for fan	10	0	625	s	R/W	HR1566	PIV3066
	Automatically generated - Preferred running direction (FALSE: left; TRUE: right) for fan	FALSE	0	1	-	R/W	CS254	BV254
Bb12	Settings of the emergency function - Enable emergency function (FALSE: Inactive; TRUE: Active;) for Ebmpapst fan	FALSE	0	1	-	R/W	CS255	BV255
	Fan speed in emergency in rpm	0	0	-	-	R/W	HR1567	IV3067
	Settings of the emergency function - Time in ms before entering in emergency mode for Ebmpapst fan	5000	0	65535	ms	R/W	HR1569	PIV3068
Bb21	Serial interface settings (Address, baudrate, parity configuration) - Frame timeout (ms)	500	0	9999	ms	R/W	HR1574	PIV3072
	Serial interface settings (Address, baudrate, parity configuration) - Command delay time (ms)	4	0	9999	ms	R/W	HR1576	PIV3073
Bc01	Return fan request in case of air pressure probe error	35.0	0.0	100.0	-	R/W	HR1470	AV2976
Bc03	Return fan offset request	10.0	-100.0	100.0	-	R/W	HR1471	AV2977
Bc06	Return fan: Minimum regulation value	0.0	0.0	100.0	%	R/W	HR1898	AV3378
	Return fan: Maximum regulation value	100.0	0.0	100.0	%	R/W	HR1899	AV3379
Bc07	Return fan - K factor for air flow calculations	100.0	0.0	99999.0	-	R/W	HR2149	AV4503
Bc09	Automatically generated - Time in [s]for a positive change for Ebmpapst fan	10	0	625	s	R/W	HR1472	PIV2978
	Automatically generated - Time in [s] for a negative change of set value for Ebmpapst fan	10	0	625	s	R/W	HR1473	PIV2979
	Automatically generated - Preferred running direction (FALSE: left; TRUE: right) for Ebmpapst fan	FALSE	0	1	-	R/W	CS238	BV238
Bc12	Settings of the emergency function - Enable emergency function (FALSE: Inactive; TRUE: Active;) for Ebmpapst fan	FALSE	0	1	-	R/W	CS239	BV239
	Fan speed in emergency in rpm	0	0	MaxSpeed	-	R/W	HR1474	IV2980
	Settings of the emergency function - Time in ms before entering in emergency mode for Ebmpapst fan	5000	0	65535	ms	R/W	HR1476	PIV2981
Bc21	Serial interface settings (Address, baudrate, parity configuration) - Frame timeout (ms)	500	0	9999	ms	R/W	HR1481	PIV2985
	Serial interface settings (Address, baudrate, parity configuration) - Command delay time (ms)	4	0	9999	ms	R/W	HR1483	PIV2986

Tab. 10.b

10.1.3 C. Dampers

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
DAMPERS								
Ca01	Damper opening time	120	0	65535	s	R/W	HR1639	PIV3134
Ca03	Enable air quality regulation for fresh air OR mixing damper	FALSE	0	1	-	R/W	CS289	BV289
	Air Quality - Dampers PID parameters - Proportional gain	1.0	0.0	999.9	-	R/W	HR1640	AV3135
	Air Quality - Dampers PID parameters - Integral time	60	0	999	-	R/W	HR1641	PIV3136
Ca06	Fresh air damper - Minimum regulation value	0.0	0.0	100.0	%	R/W	HR1642	AV3137
	Fresh air damper - Maximum regulation value	100.0	0.0	100.0	%	R/W	HR1643	AV3138
Ca09	Mixing air damper - Minimum regulation value	0.0	0.0	100.0	%	R/W	HR1644	AV3139
	Mixing air damper - Maximum regulation value	100.0	0.0	100.0	%	R/W	HR1645	AV3140
Ca12	Enable dampers regulation in case of FreeCooling/FreeHeating	FALSE	0	1	-	R/W	CS290	BV290

Tab. 10.c

10.1.4 D. Coils

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
COILS								
Da01	Main coil configuration	2	0	2	-	R/W	HR1654	PIV3149
	Main coil steps number	1	1	4	-	R/W	HR1655	PIV3150
	Compressor type (FALSE: ON/OFF; TRUE: BLDC)	TRUE	0	1	-	R/W	CS291	BV291
	Enable EVD emb management	TRUE	0	1	-	R/W	CS292	BV292
Da03	Cooling coil PID parameters - Proportional gain	8.0	0.0	999.9	-	R/W	HR1656	AV3151
	Cooling coil PID parameters - Integral time	120	0	999	-	R/W	HR1657	PIV3152
Da06	Heating coil PID parameters - Proportional gain	8.0	0.0	999.9	-	R/W	HR1658	AV3153
	Heating coil PID parameters - Integral time	120	0	999	-	R/W	HR1659	PIV3154
Da09	Dehumidification PID parameters - Proportional gain	8.0	0.0	999.9	-	R/W	HR1660	AV3155
	Dehumidification PID parameters - Integral time	120	0	999	-	R/W	HR1661	PIV3156
	Dehumidification PID parameters - Derivative time	0	0	999	-	R/W	HR1662	PIV3157
	Maximum dehumidification offset	2.0	-99.9	99.9	K	R/W	HR1663	AV3158
Da12	Heating coil request during antifreeze off status	50.0	0.0	100.0	%	R/W	HR1664	AV3159
Da18	Cooling coil request during antifreeze off status	50.0	0.0	100.0	%	R/W	HR1665	AV3160
Da21	Cooling/Heating coil pumps number	0	0	2	-	R/W	HR1666	PIV3161
	Cooling/Heating coil pumps flow check startup delay	15	0	999	s	R/W	HR1667	PIV3162
	Cooling/Heating coil pumps flow check run delay	5	0	999	s	R/W	HR1668	PIV3163
	Cooling/Heating coil pumps enable antilock function	TRUE	0	1	-	R/W	CS293	BV293
	Cooling/Heating coil pumps rotation time	24	0	999	h	R/W	HR1669	PIV3164
Da24	Coil floating valve:Running time	180	1	999	s	R/W	HR1914	PIV3940
Db01	PreHeating coil steps number	1	1	4	-	R/W	HR1670	PIV3165
Db03	Pre heating PID parameters - Proportional gain	8.0	0.0	999.9	-	R/W	HR1671	AV3166
	Pre heating PID parameters - Integral time	120	0	999	-	R/W	HR1672	PIV3167
Db06	PreHeating coil request during antifreeze off status	50.0	0.0	100.0	%	R/W	HR1673	AV3168
Db09	PreHeating coil pumps number	0	0	2	-	R/W	HR1674	PIV3169
	PreHeating coil pumps flow check startup delay	15	0	999	s	R/W	HR1675	PIV3170
	PreHeating coil pumps flow check run delay	5	0	999	s	R/W	HR1676	PIV3171
	PreHeating coil pumps enable antilock function	TRUE	0	1	-	R/W	CS294	BV294
	PreHeating coil pumps rotation time	24	0	999	h	R/W	HR1677	PIV3172
Db12	Coil floating valve:Running time	180	1	999	s	R/W	HR1914	PIV3940
Dc01	PostHeating coil steps number	1	1	4	-	R/W	HR1678	PIV3173
Dc03	Post heating PID parameters - Proportional gain	8.0	0.0	999.9	-	R/W	HR1679	AV3174
	Post heating PID parameters - Integral time	120	0	999	-	R/W	HR1680	PIV3175
Dc06	PostHeating coil request during antifreeze off status	50.0	0.0	100.0	%	R/W	HR1681	AV3176
Dc09	Post Heating coil pumps number	0	0	2	-	R/W	HR1682	PIV3177
	Re Heating coil pumps flow check startup delay	15	0	999	s	R/W	HR1683	PIV3178
	ReHeating coil pumps flow check run delay	5	0	999	s	R/W	HR1684	PIV3179
	Re Heating coil pumps enable antilock function	TRUE	0	1	-	R/W	CS295	BV295
	Re Heating coil pumps rotation time	24	0	999	h	R/W	HR1685	PIV3180
Dc12	Coil floating valve:Running time	180	1	999	s	R/W	HR1914	PIV3940
Dd01	Outdoor air pre-treatment regulation probe	0	0	4		R/W	HR2183	PIV4575
	Outdoor air pre-treatment setpoint	18.0	-99.9	99.9		R/W	HR2184	PIV4576
	Outdoor air pre-treatment regulation enable	0	0	1		R/W	HR2185	PIV4577
Dd03	Outdoor air pre-treatment steps number	1	1	4		R/W	HR2179	PIV4558
Dd06	Outdoor air pre-treatment PID parameters – proportional gain	8.0	0.0	999.9		R/W	HR2180	PIV4559
	Outdoor air pre-treatment PID parameters – integral time	120	0	999		R/W	HR2181	PIV4560
Dd09	Outdoor air pre-treatment antifreeze request value	50	0	100		R/W	HR2182	PIV4561
Dd12	Coil floating valve:Running time	180	1	999	s	R/W	HR1914	PIV3940

Tab. 10.d

10.1.5 E. Heat recovery

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
HEAT RECOVERY								
E001	Heat recovery delta for bypass damper in cooling mode	4.0	-99.9	99.9	K	R/W	HR1458	AV2966
	Heat recovery delta for bypass damper in heating mode	4.0	-99.9	99.9	K	R/W	HR1459	AV2967
E004	Heat exchanger PID parameters - Proportional gain	8.0	0.0	999.9	-	R/W	HR1460	AV2968
	Heat exchanger PID parameters - Integral time	120	0	999	-	R/W	HR1461	PIV2969
E008	Heating exchanger type	0	0	4	-	R	HR1293	PIV2801
	Bypass damper: minimum opening threshold	-5.0	-50.0	30.0	°C	R/W	HR1462	AV2970
	Bypass damper: maximum opening threshold	-10.0	-50.0	30.0	°C	R/W	HR1463	AV2971
E012	Minimum time between heat exchanger defrost	15	0	999	min	R/W	HR1464	PIV2972
	Maximum defrost heat exchanger duration	15	0	999	min	R/W	HR1466	PIV2973
E016	Exhaust temperature threshold for defrost	20.0	-50.0	90.0	°C	R/W	HR1468	AV2974
E020	Stratification correction factor of the room temperature	0.0	0.0	10.0	K	R/W	HR1469	AV2975

Tab. 10.e

10.1.6 F. Humidifier

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
HUMIDIFIER								
F004	Humidification PID parameters - Proportional gain	8.0	0.0	999.9	-	R/W	HR1549	AV3050
	Humidification PID parameters - Integral time	120	0	999	-	R/W	HR1550	PIV3051
	Humidification PID parameters - Derivative time	0	0	999	-	R/W	HR1551	PIV3052
F008	Humidifier: Max humidity threshold	80.0	1.0	100.0	%rh	R/W	HR1552	AV3053
	Humidifier: Max humidity proportional part	8.0	0.0	999.0	-	R/W	HR1553	AV3054
	Humidifier: Max humidity integral time	50	0	999	s	R/W	HR1554	PIV3055
F012	Low supply temperature threshold	16.0	0.0	25.0	°C	R	HR1354	AV2862
	Humidifier: Min temperature proportional part (Only adiabatic hum)	8.0	0.0	999.0	-	R/W	HR1555	AV3056
	Humidifier: Min temperature integral time (Only adiabatic hum)	100	0	999	s	R/W	HR1556	PIV3057
F020	Parameters for device configuration - Timings for washing operations - Delay time between two consecutive washes (mins)	30	0	999	-	R/W	HR1557	IV3058
	Parameters for device configuration - Timings for washing operations - No production time for inactivity wash (hours)	24	0	999	-	R/W	HR1558	IV3059
	Parameters for device configuration - Timings for washing operations - Washing phase time (fill + drain) (mins)	2	0	99	-	R/W	HR1559	IV3060
F024	Manual drain request: FALSE=no request; TRUE=request to drain	-	0	1	-	R/W	CS252	BV252
F028	Number of working hours left before check the humidifier cylinder	-	0	65535	-	R	IR514	PIV3828
	Parameters for device configuration - Hours counter reset request	-	0	1	-	R/W	CS253	BV253
F032	HumiSteam - Manual management - Enable manual management	-	0	1	-	R/W	CS474	BV4342
	HumiSteam - Manual management - Manual pre cleaning	-	0	1	-	R/W	CS475	BV4343
	HumiSteam - Manual management - Manual drain	-	0	1	-	R/W	CS476	BV4344
F036	HumiSteam - Cylinder hours counter value	-	0	65535	h	R	IR842	IV4346
	HumiSteam - Reset working hours	-	0	1	-	R/W	CS477	BV4345

Tab. 10.f

10.1.7 G. Filters

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
FILTERS								
G001	Delay time for dirty filter by DIN	10	0	999999	s	R/W	HR1560	PIV3061
	HEPA filter alarm threshold	100.0	-9999.0	9999.0	%	R/W	HR1562	AV3062

Tab. 10.g

10.1.8 H. Auxiliary regulation

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
AUXILIARY REGULATION								
H001	Auxiliary Regulation 1 - Input selection	0	0	13	-	R/W	HR1584	PIV3079
	Auxiliary Regulation 1 - Output selection	0	0	1	-	R/W	HR1585	PIV3080
H003	Auxiliary Regulation 1 - Dout: Error value	FALSE	0	1	-	R/W	CS261	BV261
	Auxiliary Regulation 1 - Modulating: Error value	0.0	0.0	100.0	-	R/W	HR1586	AV3081
	Auxiliary Regulation 1 - Enable selection	0	0	5	-	R/W	HR1587	PIV3082
	Auxiliary Regulation 1 - Enable selection: Manual enabling	FALSE	0	1	-	R/W	CS262	BV262
H005	Auxiliary Regulation 1 - Setpoint selection	0	0	4	-	R/W	HR1588	PIV3083
	Auxiliary Regulation 1 - Regulation setpoint	20.0	-9999.9	9999.9	-	R/W	HR980	AV2502
	Auxiliary Regulation 1 - Modulating: Low limit	0.0	0.0	100.0	-	R/W	HR1589	AV3084
	Auxiliary Regulation 1 - Dout: Differential	20.0	0.0	999.9	-	R/W	HR1590	AV3085
	Auxiliary Regulation 1 - Modulating: High limit	100.0	0.0	100.0	-	R/W	HR1591	AV3086
	Auxiliary Regulation 1 - Enable comfort auxiliary regulation	FALSE	0	1	-	R/W	CS263	BV263
H007	Auxiliary Regulation 1 - Modulating: Kp	8.0	0.0	999.9	-	R/W	HR1592	AV3087
	Auxiliary Regulation 1 - Modulating: Integral time	120	0	999	-	R/W	HR1593	PIV3088
	Auxiliary Regulation 1 - Modulating: Derivative time	0	0	999	-	R/W	HR1594	PIV3089
	Auxiliary Regulation 1 - Modulating: Dead Band	0.0	0.0	999.9	-	R/W	HR1595	AV3090
H009	Auxiliary Regulation 1 - Reverse mode	FALSE	0	1	-	R/W	CS264	BV264
	Auxiliary Regulation 1 - Cooling/Heating mode	FALSE	0	1	-	R/W	CS265	BV265
H011	Auxiliary Regulation 2 - Input selection	0	0	13	-	R/W	HR1597	PIV3092
	Auxiliary Regulation 2 - Output selection	0	0	1	-	R/W	HR1598	PIV3093
H013	Auxiliary Regulation 2 - Dout: Error value	FALSE	0	1	-	R/W	CS268	BV268
	Auxiliary Regulation 2 - Modulating: Error value	0.0	0.0	100.0	-	R/W	HR1599	AV3094
	Auxiliary Regulation 2 - Enable selection	0	0	5	-	R/W	HR1600	PIV3095
	Auxiliary Regulation 2 - Enable selection: Manual enabling	FALSE	0	1	-	R/W	CS269	BV269
H015	Auxiliary Regulation 2 - Setpoint selection	0	0	4	-	R/W	HR1601	PIV3096
	Auxiliary Regulation 2 - Regulation setpoint	20.0	-9999.9	9999.9	-	R/W	HR1602	AV3097
	Auxiliary Regulation 2 - Modulating: Low limit	0.0	0.0	100.0	-	R/W	HR1603	AV3098
	Auxiliary Regulation 2 - Dout: Differential	20.0	0.0	999.9	-	R/W	HR1604	AV3099
	Auxiliary Regulation 2 - Modulating: High limit	100.0	0.0	100.0	-	R/W	HR1605	AV3100
	Auxiliary Regulation 2 - Enable comfort auxiliary regulation	FALSE	0	1	-	R/W	CS270	BV270
H017	Auxiliary Regulation 2 - Modulating: Kp	8.0	0.0	999.9	-	R/W	HR1606	AV3101
	Auxiliary Regulation 2 - Modulating: Integral time	120	0	999	-	R/W	HR1607	PIV3102
	Auxiliary Regulation 2 - Modulating: Derivative time	0	0	999	-	R/W	HR1608	PIV3103
	Auxiliary Regulation 2 - Modulating: Dead Band	0.0	0.0	999.9	-	R/W	HR1609	AV3104
H019	Auxiliary Regulation 2 - Reverse mode	FALSE	0	1	-	R/W	CS271	BV271
	Auxiliary Regulation 2 - Cooling/Heating mode	FALSE	0	1	-	R/W	CS272	BV272
H021	Auxiliary Regulation 3 - Input selection	0	0	13	-	R/W	HR1611	PIV3106
	Auxiliary Regulation 3 - Output selection	0	0	1	-	R/W	HR1612	PIV3107
H023	Auxiliary Regulation 3 - Dout: Error value	FALSE	0	1	-	R/W	CS275	BV275
	Auxiliary Regulation 3 - Modulating: Error value	0.0	0.0	100.0	-	R/W	HR1613	AV3108
	Auxiliary Regulation 3 - Enable selection	0	0	5	-	R/W	HR1614	PIV3109
	Auxiliary Regulation 3 - Enable selection: Manual enabling	FALSE	0	1	-	R/W	CS276	BV276

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
AUXILIARY REGULATION								
H025	Auxiliary Regulation 3 - Setpoint selection	0	0	4	-	R/W	HR1615	PIV3110
	Auxiliary Regulation 3 - Regulation setpoint	20.0	-9999.9	9999.9	-	R/W	HR1616	AV3111
	Auxiliary Regulation 3 - Modulating: Low limit	0.0	0.0	100.0	-	R/W	HR1617	AV3112
	Auxiliary Regulation 3 - Dout: Differential	20.0	0.0	999.9	-	R/W	HR1618	AV3113
	Auxiliary Regulation 3 - Modulating: High limit	100.0	0.0	100.0	-	R/W	HR1619	AV3114
	Auxiliary Regulation 3 - Enable comfort auxiliary regulation	FALSE	0	1	-	R/W	CS277	BV277
H027	Auxiliary Regulation 3 - Modulating: Kp	8.0	0.0	999.9	-	R/W	HR1620	AV3115
	Auxiliary Regulation 3 - Modulating: Integral time	120	0	999	-	R/W	HR1621	PIV3116
	Auxiliary Regulation 3 - Modulating: Derivative time	0	0	999	-	R/W	HR1622	PIV3117
	Auxiliary Regulation 3 - Modulating: Dead Band	0.0	0.0	999.9	-	R/W	HR1623	AV3118
H029	Auxiliary Regulation 3 - Reverse mode	FALSE	0	1	-	R/W	CS278	BV278
	Auxiliary Regulation 3 - Cooling/Heating mode	FALSE	0	1	-	R/W	CS279	BV279
H031	Auxiliary Regulation 4 - Input selection	0	0	13	-	R/W	HR1625	PIV3120
	Auxiliary Regulation 4 - Output selection	0	0	1	-	R/W	HR1626	PIV3121
H033	Auxiliary Regulation 4 - Dout: Error value	FALSE	0	1	-	R/W	CS282	BV282
	Auxiliary Regulation 4 - Modulating: Error value	0.0	0.0	100.0	-	R/W	HR1627	AV3122
	Auxiliary Regulation 4 - Enable selection	0	0	5	-	R/W	HR1628	PIV3123
	Auxiliary Regulation 4 - Enable selection: Manual enabling	FALSE	0	1	-	R/W	CS283	BV283
H035	Auxiliary Regulation 4 - Setpoint selection	0	0	4	-	R/W	HR1629	PIV3124
	Auxiliary Regulation 4 - Regulation setpoint	20.0	-9999.9	9999.9	-	R/W	HR1630	AV3125
	Auxiliary Regulation 4 - Modulating: Low limit	0.0	0.0	100.0	-	R/W	HR1631	AV3126
	Auxiliary Regulation 4 - Dout: Differential	20.0	0.0	999.9	-	R/W	HR1632	AV3127
	Auxiliary Regulation 4 - Modulating: High limit	100.0	0.0	100.0	-	R/W	HR1633	AV3128
	Auxiliary Regulation 4 - Enable comfort auxiliary regulation	FALSE	0	1	-	R/W	CS284	BV284
H037	Auxiliary Regulation 4 - Modulating: Kp	8.0	0.0	999.9	-	R/W	HR1634	AV3129
	Auxiliary Regulation 4 - Modulating: Integral time	120	0	999	-	R/W	HR1635	PIV3130
	Auxiliary Regulation 4 - Modulating: Derivative time	0	0	999	-	R/W	HR1636	PIV3131
	Auxiliary Regulation 4 - Modulating: Dead Band	0.0	0.0	999.9	-	R/W	HR1637	AV3132
H039	Auxiliary Regulation 4 - Reverse mode	FALSE	0	1	-	R/W	CS285	BV285
	Auxiliary Regulation 4 - Cooling/Heating mode	FALSE	0	1	-	R/W	CS286	BV286

Tab. 10.h

10.1.9 I. IEC

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
IEC								
I001	IEC: PID parameters - Proportional gain	8.0	0.0	999.9	-	R/W	HR1646	AV3141
	IEC: PID parameters - Integral time	120	0	999	-	R/W	HR1647	PIV3142
I005	IEC: Return humidity activation threshold	75.0	0.0	100.0	%rh	R/W	HR1648	AV3143
	IEC: Return humidity activation differential	2.0	0.0	20.0	%rh	R/W	HR1649	AV3144
I010	IEC: Exhaust humidity limit threshold	95.0	0.0	100.0	%rh	R/W	HR1650	AV3145
	IEC: Exhaust humidity limit proportional gain	10.0	0.0	999.9	-	R/W	HR1651	AV3146
	IEC: Exhaust humidity limit integral time	60	0	999	s	R/W	HR1652	PIV3147
I015	IEC: Fresh air damper maximum limitation	0.0	0.0	100.0	%	R/W	HR1653	AV3148

Tab. 10.i

10.1.10 J. VDI

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
VDI								
Ja01	VDI Inactivity startup activation delay	48	0	65535	h	R/W	HR1686	PIV3181
	VDI Inactivity startup duration	5	0	65535	min	R/W	HR1687	PIV3182
	VDI high saturation humidity threshold	80.0	0.0	99.0	%rh	R/W	HR1688	AV3183
	VDI high saturation humidity differential	2.0	0.0	99.0	%rh	R/W	HR1689	AV3184
Ja02	VDI Type: 0: Standard; 1: Custom	0	0	1	-	R/W	HR1690	PIV3185
	Enable of the VDI function	TRUE	0	1	-	R/W	CS296	BV296
	Month selection variable	4	0	5	-	R/W	HR1691	PIV3186
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS297	BV297
	Enable of the VDI function	TRUE	0	1	-	R/W	CS298	BV298
	Month selection variable	3	0	5	-	R/W	HR1692	PIV3187
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS299	BV299
Ja03	Enable of the VDI function	TRUE	0	1	-	R/W	CS300	BV300
	Month selection variable	1	0	5	-	R/W	HR1693	PIV3188
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS301	BV301
	Enable of the VDI function	TRUE	0	1	-	R/W	CS302	BV302
	Month selection variable	3	0	5	-	R/W	HR1694	PIV3189
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS303	BV303
Ja06	Enable of the VDI function	TRUE	0	1	-	R/W	CS304	BV304
	Month selection variable	2	0	5	-	R/W	HR1695	PIV3190
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS305	BV305
	Enable of the VDI function	TRUE	0	1	-	R/W	CS306	BV306
	Month selection variable	2	0	5	-	R/W	HR1696	PIV3191
	Reset timings after the inspection	-	0	1	-	R/W	CS307	BV307
Ja09	Enable of the VDI function	TRUE	0	1	-	R/W	CS308	BV308
	Month selection variable	2	0	5	-	R/W	HR1697	PIV3192
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS309	BV309
	Enable of the VDI function	TRUE	0	1	-	R/W	CS310	BV310
	Month selection variable	2	0	5	-	R/W	HR1698	PIV3193
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS311	BV311
Ja12	Enable of the VDI function	TRUE	0	1	-	R/W	CS312	BV312
	Month selection variable	1	0	5	-	R/W	HR1699	PIV3194
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS313	BV313
	Enable of the VDI function	TRUE	0	1	-	R/W	CS314	BV314
	Month selection variable	1	0	5	-	R/W	HR1700	PIV3195
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS315	BV315

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
VDI								
Ja15	Enable of the VDI function	TRUE	0	1	-	R/W	CS316	BV316
	Month selection variable	1	0	5	-	R/W	HR1701	PIV3196
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS317	BV317
	Enable of the VDI function	TRUE	0	1	-	R/W	CS318	BV318
	Month selection variable	1	0	5	-	R/W	HR1702	PIV3197
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS319	BV319
Ja18	Enable of the VDI function	TRUE	0	1	-	R/W	CS320	BV320
	Month selection variable	2	0	5	-	R/W	HR1703	PIV3198
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS321	BV321
	Enable of the VDI function	TRUE	0	1	-	R/W	CS322	BV322
	Month selection variable	3	0	5	-	R/W	HR1704	PIV3199
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS323	BV323
Ja21	Enable of the VDI function	TRUE	0	1	-	R/W	CS324	BV324
	Month selection variable	2	0	5	-	R/W	HR1705	PIV3200
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS325	BV325
	Enable of the VDI function	TRUE	0	1	-	R/W	CS326	BV326
	Month selection variable	3	0	5	-	R/W	HR1706	PIV3201
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS327	BV327
Ja24	Enable of the VDI function	TRUE	0	1	-	R/W	CS328	BV328
	Month selection variable	1	0	5	-	R/W	HR1707	PIV3202
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS329	BV329
	Enable of the VDI function	TRUE	0	1	-	R/W	CS330	BV330
	Month selection variable	0	0	5	-	R/W	HR1708	PIV3203
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS331	BV331
Ja27	Enable of the VDI function	TRUE	0	1	-	R/W	CS332	BV332
	Month selection variable	2	0	5	-	R/W	HR1709	PIV3204
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS333	BV333
	Enable of the VDI function	TRUE	0	1	-	R/W	CS334	BV334
	Month selection variable	0	0	5	-	R/W	HR1710	PIV3205
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS335	BV335
Ja30	Enable of the VDI function	TRUE	0	1	-	R/W	CS336	BV336
	Month selection variable	2	0	5	-	R/W	HR1711	PIV3206
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS337	BV337
	Enable of the VDI function	TRUE	0	1	-	R/W	CS338	BV338
	Month selection variable	2	0	5	-	R/W	HR1712	PIV3207
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS339	BV339
Ja33	Enable of the VDI function	TRUE	0	1	-	R/W	CS340	BV340
	Month selection variable	2	0	5	-	R/W	HR1713	PIV3208
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS341	BV341
	Enable of the VDI function	TRUE	0	1	-	R/W	CS342	BV342
	Month selection variable	1	0	5	-	R/W	HR1714	PIV3209
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS343	BV343
Ja36	Enable of the VDI function	TRUE	0	1	-	R/W	CS344	BV344
	Month selection variable	2	0	5	-	R/W	HR1715	PIV3210
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS345	BV345
	Enable of the VDI function	TRUE	0	1	-	R/W	CS346	BV346
	Month selection variable	3	0	5	-	R/W	HR1716	PIV3211
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS347	BV347
Ja39	Enable of the VDI function	TRUE	0	1	-	R/W	CS348	BV348
	Month selection variable	4	0	5	-	R/W	HR1717	PIV3212
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS349	BV349
	Enable of the VDI function	TRUE	0	1	-	R/W	CS350	BV350
	Month selection variable	3	0	5	-	R/W	HR1718	PIV3213
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS351	BV351
Ja42	Enable of the VDI function	TRUE	0	1	-	R/W	CS352	BV352
	Month selection variable	3	0	5	-	R/W	HR1719	PIV3214
	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	TRUE	0	1	-	R/W	CS353	BV353
Jb02	Countdown before the next inspection	-	0	65535	-	R	IR518	PIV3832
	Reset timings after the inspection	-	0	1	-	R/W	CS354	BV354
	Countdown before the next inspection	-	0	65535	-	R	IR519	PIV3833
	Reset timings after the inspection	-	0	1	-	R/W	CS355	BV355
Jb03	Countdown before the next inspection	-	0	65535	-	R	IR520	PIV3834
	Reset timings after the inspection	-	0	1	-	R/W	CS356	BV356
	Countdown before the next inspection	-	0	65535	-	R	IR521	PIV3835
	Reset timings after the inspection	-	0	1	-	R/W	CS357	BV357
Jb06	Countdown before the next inspection	-	0	65535	-	R	IR522	PIV3836
	Reset timings after the inspection	-	0	1	-	R/W	CS358	BV358
	Countdown before the next inspection	-	0	65535	-	R	IR523	PIV3837
	Reset timings after the inspection	-	0	1	-	R/W	CS307	BV307
Jb09	Countdown before the next inspection	-	0	65535	-	R	IR524	PIV3838
	Reset timings after the inspection	-	0	1	-	R/W	CS359	BV359
	Countdown before the next inspection	-	0	65535	-	R	IR525	PIV3839
	Reset timings after the inspection	-	0	1	-	R/W	CS360	BV360
Jb12	Countdown before the next inspection	-	0	65535	-	R	IR526	PIV3840
	Reset timings after the inspection	-	0	1	-	R/W	CS361	BV361
	Countdown before the next inspection	-	0	65535	-	R	IR527	PIV3841
	Reset timings after the inspection	-	0	1	-	R/W	CS362	BV362
Jb15	Countdown before the next inspection	-	0	65535	-	R	IR528	PIV3842
	Reset timings after the inspection	-	0	1	-	R/W	CS363	BV363
	Countdown before the next inspection	-	0	65535	-	R	IR529	PIV3843
	Reset timings after the inspection	-	0	1	-	R/W	CS364	BV364
Jb18	Countdown before the next inspection	-	0	65535	-	R	IR530	PIV3844
	Reset timings after the inspection	-	0	1	-	R/W	CS365	BV365
	Countdown before the next inspection	-	0	65535	-	R	IR531	PIV3845
	Reset timings after the inspection	-	0	1	-	R/W	CS366	BV366
Jb21	Countdown before the next inspection	-	0	65535	-	R	IR532	PIV3846
	Reset timings after the inspection	-	0	1	-	R/W	CS367	BV367
	Countdown before the next inspection	-	0	65535	-	R	IR533	PIV3847
	Reset timings after the inspection	-	0	1	-	R/W	CS368	BV368
Jb24	Countdown before the next inspection	-	0	65535	-	R	IR534	PIV3848
	Reset timings after the inspection	-	0	1	-	R/W	CS369	BV369
	Countdown before the next inspection	-	0	65535	-	R	IR535	PIV3849
	Reset timings after the inspection	-	0	1	-	R/W	CS370	BV370
Jb27	Countdown before the next inspection	-	0	65535	-	R	IR536	PIV3850
	Reset timings after the inspection	-	0	1	-	R/W	CS371	BV371
	Countdown before the next inspection	-	0	65535	-	R	IR537	PIV3851
	Reset timings after the inspection	-	0	1	-	R/W	CS372	BV372

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
VDI								
Jb30	Countdown before the next inspection	-	0	65535	-	R	IR538	PIV3852
	Reset timings after the inspection	-	0	1	-	R/W	CS373	BV373
	Countdown before the next inspection	-	0	65535	-	R	IR539	PIV3853
	Reset timings after the inspection	-	0	1	-	R/W	CS374	BV374
Jb33	Countdown before the next inspection	-	0	65535	-	R	IR540	PIV3854
	Reset timings after the inspection	-	0	1	-	R/W	CS375	BV375
	Countdown before the next inspection	-	0	65535	-	R	IR541	PIV3855
	Reset timings after the inspection	-	0	1	-	R/W	CS376	BV376
Jb36	Countdown before the next inspection	-	0	65535	-	R	IR542	PIV3856
	Reset timings after the inspection	-	0	1	-	R/W	CS377	BV377
	Countdown before the next inspection	-	0	65535	-	R	IR543	PIV3857
	Reset timings after the inspection	-	0	1	-	R/W	CS378	BV378
Jb39	Countdown before the next inspection	-	0	65535	-	R	IR544	PIV3858
	Reset timings after the inspection	-	0	1	-	R/W	CS379	BV379
	Countdown before the next inspection	-	0	65535	-	R	IR545	PIV3859
	Reset timings after the inspection	-	0	1	-	R/W	CS380	BV380
Jb42	Countdown before the next inspection	-	0	65535	-	R	IR546	PIV3860
	Reset timings after the inspection	-	0	1	-	R/W	CS381	BV381

Tab. 10.j

10.1.11 U. Compressor

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
COMPRESSOR								
Ua01	Compressor minumum On time	120	0	65535	s	R/W	HR1519	PIV3020
	Compressor minumum Off time	180	0	65535	s	R/W	HR1520	PIV3021
	Compressor minumum time between two start	180	0	65535	s	R/W	HR1521	PIV3022
Ua03	Low suction pressure alarm delay time at start up	10	0	99	s	R/W	HR1522	PIV3023
	Low suction pressure alarm delay time at running time	3	0	99	s	R/W	HR1523	PIV3024
Ua06	Low suction pressure alarm: counter max	3	1	5	-	R/W	HR1524	PIV3025
	Low suction pressure alarm: time value	3600	1	21600	s	R/W	HR1525	PIV3026
Ua09	Evaporator defrost start threshold	-1.0	-10.0	5.0	°C	R/W	HR1526	AV3027
	Evaporator defrost end threshold	50.0	DfrStartThrsh	99.9	°C	R/W	HR1527	AV3028
Ua12	Defrost delta bypass damper	3.0	0.0	10.0	K	R/W	HR1528	AV3029
	Evaporator defrost start delay time	5	0	65535	min	R/W	HR1529	PIV3030
Ua15	Enable refrigerant ciruit for active heat recovery unit	-	0	1	-	R	DI705	BV1163
	Defrost time for stop compressor	5	0	65535	min	R/W	HR1530	PIV3031
Ua18	Defrost minimum time	1	0	65535	min	R/W	HR1531	PIV3032
	Defrost maximum time	5	0	65535	min	R/W	HR1532	PIV3033
	Time between two defrost	30	0	65535	min	R/W	HR1533	PIV3034
Ua21	Defrost dripping time	90	0	9999	s	R/W	HR1534	PIV3035
	Post-dripping time [s]	30	0	9999	s	R/W	HR1535	PIV3036
Ua24	BLDC minimum speed in defrost	40.0	-999.9	999.9	-	R/W	HR1536	AV3037
	Reverse valve delta P	3.0	0.0	5.0	bar	R/W	HR1537	AV3038
Ua27	Defrost: delay time before change over	20	0	900	s	R/W	HR1538	PIV3039
	Defrost: delay time after change over	10	0	900	s	R/W	HR1539	PIV3040
Ua30	Fans request during evaporator defrost	3	0	3	%	R/W	HR1540	PIV3041
	Fans request during evaporator defrost	30.0	0.0	100.0	%	R/W	HR1541	AV3042
	Fans request during evaporator defrost	0	0	100	%	R/W	HR1542	PIV3043
	Fans request during evaporator defrost: dripping	2	0	3	%	R/W	HR1543	PIV3044
	Fans request during evaporator defrost: dripping	30.0	0.0	100.0	%	R/W	HR1544	AV3045
	Fans request during evaporator defrost: dripping	100	0	100	%	R/W	HR1545	PIV3046
	Fans request during evaporator defrost: post dripping	2	0	3	%	R/W	HR1546	PIV3047
	Fans request during evaporator defrost: post dripping	30.0	0.0	100.0	%	R/W	HR1547	AV3048
	Fans request during evaporator defrost: post dripping	100	0	100	%	R/W	HR1548	PIV3049
Ua33	Disable Low supply temperature alarm	TRUE	0	1	-	R/W	CS250	BV250
Ua36	Enable compressor during night ventilation	FALSE	0	1	-	R/W	CS251	BV251
Ub01	BLDC informations - Compressor power request [%]	-	0.0	100.0	-	R	IR600	AV3914
	BLDC informations - Required speed to PowerPlus [%]	-	-999.9	999.9	-	R	IR601	AV3915
	Inverter Power Plus Info - Current rotor speed [rps]	-	-999.0	999.0	-	R	IR240	AV3628
	BLDC informations - Managing test mode	-	0	1	-	R	DI764	BV1222
	BLDC informations - Working zone 1c - max speed 90 rps (Siam only)	-	0	1	-	R	DI765	BV1223
	BLDC informations - Show pressure equalization status (blinking)	-	0	1	-	R	DI766	BV1224
Ub02	BLDC informations - Discharge pressure relative [bar]	-	-99.9	99.9	bar	R	IR602	AV3916
	BLDC informations - Suction pressure relative [bar]	-	-99.9	99.9	bar	R	IR603	AV3917
	BLDC informations - Current envelope zone	-	0	9	-	R	IR604	IV3918
	BLDC informations - Out of envelop timing countdown	-	0	32767	s	R	IR605	IV3919
Ub03	BLDC informations - Current delta pressure	-	-999.9	999.9	bar	R	IR606	AV3920
	BLDC informations - Current pressure ratio	-	0.0	999.9	-	R	IR607	AV3921
	BLDC informations - Show low pressure difference condition	-	0	1	-	R	DI767	BV1225
	BLDC informations - Low pressure difference alarm timing countdown	-	0	999	s	R	IR608	IV3922
Ub04	BLDC informations - Current discharge temperature	-	-999.9	999.9	°C	R	IR609	AV3923
	BLDC informations - High discharge temperature zone	-	0	9	-	R	IR610	IV3924
	BLDC informations - Envelope Type: Siam compressor	-	0	1	-	R	DI768	BV1226
	BLDC informations - Show active value of discharge temp. alarm limit	-	-999.9	999.9	-	R	IR611	AV3925
Ub05	BLDC informations - Current discharge superheat	-	-999.9	999.9	K	R	IR612	AV3926
	BLDC to EVD parameters - EVD regulation subtype	-	0	9	-	R	IR237	IV3625
Ub06	BLDC envelope configuration - Max. permitted Delta P to start up [bar]	9.0	0.0	999.9	bar	R/W	HR1856	AV3338
Ub07	BLDC envelope configuration - By-pass equalization solenoid valve enable	FALSE	0	1	-	R/W	CS456	BV455
	BLDC envelope configuration - Maximum time of EVD propening to equalize pressure	10	0	999	s	R/W	HR1857	IV3339
	BLDC envelope configuration - Preopening of EVD in case of prestart to equalize pressure	50	0	100	-	R/W	HR1858	IV3340
Ub08	BLDC envelope configuration - Min. variation of Delta P to considered compressor started [bar]	0.2	0.0	2.0	bar	R/W	HR1859	AV3341
	BLDC envelope configuration - Delay to check increasing DeltaP to validate compressor started	15	10	99	s	R/W	HR1860	IV3342
Ub09	BLDC envelope configuration - Restart delay after a start failure	30	1	360	s	R/W	HR1861	IV3343
	BLDC envelope configuration - Max Number of starting attempts	5	0	9	-	R/W	HR1862	IV3344
Ub10	BLDC envelope configuration - Start up speed	50.0	20.0	120.0	-	R/W	HR1863	AV3345
	BLDC envelope configuration - Max speed custom (rps)	120.0	0.0	999.9	-	R/W	HR1864	AV3346
	BLDC envelope configuration - Min speed custom (rps)	20.0	0.0	99.9	-	R/W	HR1865	AV3347

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
COMPRESSOR								
Ub11	BLDC envelope configuration - Max. decrease speed rate (in regulation) [rps/s]	1.6	0.1	9.9	-	R/W	HR1866	AV3348
	BLDC envelope configuration - Max. increase speed rate (in regulation) [rps/s]	1.0	0.1	9.9	-	R/W	HR1867	AV3349
	BLDC envelope configuration - Decrease max speed rate (= max admitted value, to stop compressor) [rps/s]	2.0	0.0	9.9	-	R/W	HR1868	AV3350
Ub12	BLDC envelope configuration - Decrease speed rate (to come back inside envelope) [rps/s]	0.8	0.1	9.9	-	R/W	HR1869	AV3351
	BLDC envelope configuration - Min speed permitted to control compressor working conditions inside envelop	20.0	0.0	99.9	-	R/W	HR1870	AV3352
Ub13	BLDC envelope configuration - Out of envelop alarm delay time	60	0	32000	s	R/W	HR1871	IV3353
	BLDC envelope configuration - Low Delta P alarm delay	60	0	32000	s	R/W	HR1872	IV3354
Ub14	BLDC envelope configuration - Suction sat.temp. threshold from zone 1b (Max120rps) to zone 1c (Max90rps SIAM only)	12.0	0.0	999.9	°C	R/W	HR1873	AV3355
	BLDC envelope configuration - Max Speed in rps for Zone 1c (SIAM Scroll) N.B.: integer rps!	90	20	120	-	R/W	HR1874	IV3356
Ub15	BLDC envelope configuration - Enable MOP control in low compression ratio condition	TRUE	0	1	-	R/W	CS457	BV456
	BLDC envelope configuration - Speed up mode enable to control zones 5, 6, 7, 8 (to come back into zone 1)	FALSE	0	1	-	R/W	CS458	BV457
Ub16	BLDC envelope configuration - Discharge gas temperature control threshold for Zone 1a (SIAM scroll only)	105.0	70.0	350.0	°C	R/W	HR1875	AV3357
	BLDC envelope configuration - Discharge gas limit temperature for Zone 1a (SIAM Scroll only)	110.0	80.0	350.0	°C	R/W	HR1876	AV3358
Ub17	BLDC informations - Envelope Type: Siam compressor	-	0	1	-	R	DI768	BV1226
	BLDC envelope configuration - Discharge gas temperature control threshold (SIAM scroll only: for zone 1b)	115.0	70.0	350.0	°C	R/W	HR1877	AV3359
	BLDC envelope configuration - Discharge gas limit temperature (SIAM Scroll only: for Zone 1b)	120.0	80.0	350.0	°C	R/W	HR1878	AV3360
Ub18	BLDC envelope configuration - Action distance from High Temperature limit (to reduce speed rate)	20.0	10.0	999.9	°C	R/W	HR1879	AV3361
	BLDC envelope configuration - Pause between speed reductions when discharge temp. is over control limit	90	1	300	s	R/W	HR1880	IV3362
	BLDC envelope configuration - Speed Reduction percentage when discharge temp is over control limit	3.0	0.5	60.0	-	R/W	HR1881	AV3363
Ub19	Custom minimum evaporating temperature	-25.0	-999.9	999.9	°C	R/W	HR1882	AV3364
	Custom maximum temperature condensing	70.0	-999.9	999.9	°C	R/W	HR1883	AV3365
Ub20	BLDC envelope configuration - Regol. Evd SubType: 0=null; 1=SSH; 2=DSH; 3= DLT	1	1	3	-	R/W	HR1884	IV3366
	BLDC envelope configuration - Time constant of discharge temp sensor	50.0	1.0	800.0	-	R/W	HR1885	AV3367
Ub21	BLDC envelope configuration - SetPoint of Discharge SH (sent to EVD)	35.0	10.0	45.0	K	R/W	HR1886	AV3368
	BLDC envelope configuration - Setpoint offset for Discharge Super Heat regulation activation	2.0	0.0	99.9	K	R/W	HR1887	AV3369
	BLDC envelope configuration - Hysteresys for Discharge Super Heat regulation deactivation	2.0	0.0	99.9	K	R/W	HR1888	AV3370
Ub22	BLDC envelope configuration - SetPoint of Discharge Temp (sent to EVD)	105.0	75.0	110.0	°C	R/W	HR1889	AV3371
	BLDC envelope configuration - Setpoint offset for Discharge Limit Temp. regulation activation	8.0	0.0	99.9	°C	R/W	HR1890	AV3372
	BLDC envelope configuration - Hysteresys for Discharge Limit Temp. regulation deactivation	5.0	0.0	99.9	°C	R/W	HR1891	AV3373
Ub23	Automatically generated - Maximum semiautomatic alarm reset retry number	3	0	5	-	R/W	HR1892	IV3374
	Automatically generated - Time threshold for semiautomatic reset	60	1	1440	min	R/W	HR1894	PIV3375
Ub24	Automatically generated - Reset type: 0= Manual - 1= Semiautomatic	FALSE	0	1	-	R/W	CS459	BV458
Ub25	BLDC informations - Debug: FB version x	-	0	9	-	R	IR613	PIV3927
	BLDC informations - Debug: FB version y	-	0	9	-	R	IR614	PIV3928
	BLDC informations - Debug: FB version z	-	0	999	-	R	IR615	PIV3929
	BLDC informations - Debug: FB version beta	-	0	9	-	R	IR616	PIV3930
Uc01	Automatically generated - 0: Stop; 1: Run; 2: Alarm; 3: Crankcase heating; 4:DCbus ready)	-	0	9	-	R	IR571	PIV3885
	Inverter Power Plus Info - Drive temperature	-	-999.9	999.9	°C	R	IR572	AV3886
	Automatically generated - see doc	-	0	99	-	R	IR573	PIV3887
Uc02	Inverter Power Plus Info - Speed reference [Hz/rps]	-	-999.9	999.9	-	R	IR574	AV3888
	Inverter Power Plus Info - Current rotor speed [Hz]	-	-9999.9	9999.9	-	R	IR575	AV3889
	Inverter Power Plus Info - Current rotorspeed [rpm]	-	0	65535	-	R	IR576	PIV3890
Uc03	Inverter Power Plus Info - Current motor current [A]	-	0.0	9999.9	-	R	IR577	AV3891
	Inverter Power Plus Info - Current motor voltage [V]	-	0	65535	-	R	IR578	PIV3892
	Inverter Power Plus Info - Current motor consumption [W]	-	-9999.99	9999.99	-	R	IR579	AV3893
Uc04	Automatically generated - DC bus voltage	-	0	999	-	R	IR580	PIV3894
	Automatically generated - DC bus ripple	-	0	999	-	R	IR581	PIV3895
Uc05	Automatically generated - PWM switching frequency (0: 4kHz, 1: 6kHz, 2: 8kHz)	-	0	4	-	R	IR582	PIV3896
	Automatically generated - Pre-ramp output frequency reference	-	-999.9	999.9	-	R	IR583	AV3897
Uc06	Inverter Power Plus Info - Status register bit 15	-	0	1	-	R	DI726	BV1184
	Inverter Power Plus Info - Status register bit 14	-	0	1	-	R	DI727	BV1185
	Inverter Power Plus Info - Status register bit 13	-	0	1	-	R	DI728	BV1186
	Inverter Power Plus Info - Status register bit 12	-	0	1	-	R	DI729	BV1187
	Inverter Power Plus Info - Drive in alarm	-	0	1	-	R	DI730	BV1188
	Inverter Power Plus Info - Status register bit 10	-	0	1	-	R	DI731	BV1189
	Inverter Power Plus Info - Power supply status: 0=OK; 1=loss of a power supply phase (L1)	-	0	1	-	R	DI732	BV1190
	Inverter Power Plus Info - Motor overload	-	0	1	-	R	DI733	BV1191
	Inverter Power Plus Info - Autotune running	-	0	1	-	R	DI734	BV1192
	Inverter Power Plus Info - Status register bit 06	-	0	1	-	R	DI735	BV1193
	Inverter Power Plus Info - Switching frequency derating ON	-	0	1	-	R	DI736	BV1194
	Inverter Power Plus Info - Fan ON	-	0	1	-	R	DI737	BV1195
	Inverter Power Plus Info - Under voltage	-	0	1	-	R	DI738	BV1196
	Inverter Power Plus Info - Motor PTC overheating	-	0	1	-	R	DI739	BV1197
	Inverter Power Plus Info - Relay config. ON	-	0	1	-	R	DI740	BV1198
	Inverter Power Plus Info - Safety input status (STO); 0=drive enable; 1= drive disable	-	0	1	-	R	DI741	BV1199
	Inverter Power Plus Info - Speed register bit 15	-	0	1	-	R	DI742	BV1200

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
COMPRESSOR								
Uc06	Inverter Power Plus Info - Speed register bit 14	-	0	1	-	R	DI743	BV1201
	Inverter Power Plus Info - Speed register bit 13	-	0	1	-	R	DI744	BV1202
	Inverter Power Plus Info - Speed register bit 12	-	0	1	-	R	DI745	BV1203
	Inverter Power Plus Info - Speed register bit 11	-	0	1	-	R	DI746	BV1204
	Inverter Power Plus Info - Speed register bit 10	-	0	1	-	R	DI747	BV1205
	Inverter Power Plus Info - Speed register bit 09	-	0	1	-	R	DI748	BV1206
	Inverter Power Plus Info - Speed register bit 08	-	0	1	-	R	DI749	BV1207
	Inverter Power Plus Info - Speed register bit 07	-	0	1	-	R	DI750	BV1208
	Inverter Power Plus Info - Speed register bit 06	-	0	1	-	R	DI751	BV1209
	Inverter Power Plus Info - Speed register bit 05	-	0	1	-	R	DI752	BV1210
	Inverter Power Plus Info - Speed register bit 04	-	0	1	-	R	DI753	BV1211
	Inverter Power Plus Info - Speed register bit 03	-	0	1	-	R	DI754	BV1212
	Inverter Power Plus Info - Speed register bit 02	-	0	1	-	R	DI755	BV1213
	Inverter Power Plus Info - Speed register bit 01	-	0	1	-	R	DI756	BV1214
	Inverter Power Plus Info - Speed register bit 00	-	0	1	-	R	DI757	BV1215
Uc07	Automatically generated - Motor Overload Accumulator	-	-999.9	999.9	-	R	IR584	AV3898
	Automatically generated - Drive Overload Accumulator	-	-999.9	999.9	-	R	IR585	AV3899
Uc08	Compressor model (PowerPlus)	1	0	120	-	R/W	HR1790	PIV3276
	Compressor model	1	1	120	-	R/W	HR1791	PIV3277
	Drive type	0	0	12	-	R/W	HR1792	PIV3278
	Drive type	0	0	12	-	R	HR1792	PIV3278
	Write default request	0	0	1	-	R/W	HR1793	IV3279
	Inverter Power Plus Info - Reserved	-	0	1	-	R	DI758	BV1216
	Inverter Power Plus Info - Reserved	-	0	1	-	R	DI759	BV1217
Uc09	Inverter Power Plus Info - Main supply as three phases	-	0	1	-	R	DI760	BV1218
	Inverter Power Plus Info - Device rated current [AA.a]	-	-99.0	99.0	-	R	IR586	AV3900
	Inverter Power Plus Info - Three-phase inverter required for compressor	-	0	1	-	R	DI761	BV1219
	Inverter Power Plus Info - Rated current of compressor	-	0	99	-	R	IR587	PIV3901
Uc10	Curr compressor config. (Powerplus) - Data communication fault timeout	-	0	600	-	R/W	HR1794	PIV3280
	Serial number control enable	FALSE	0	1	-	R/W	CS389	BV388
Uc11	Curr compressor configuration (Powerplus) - Min output frequency	-	UI_FreqLimitMin	UI_ FreqLimit500Hz	-	R/W	HR1795	AV3281
	Curr compressor configuration (Powerplus) - Max output frequency	-	UI_FreqLimitMin	UI_ FreqLimit500Hz	-	R/W	HR1796	AV3282
Uc12	Curr compressor configuration (Powerplus) - Skip frequency: set 1	-	UI_FreqLimitMin	UI_ FreqLimit500Hz	-	R/W	HR1797	AV3283
	Curr compressor configuration (Powerplus) - Skip frequency: band 1	-	UI_FreqLimitMin	UI_ FreqLimit500Hz	-	R/W	HR1798	AV3284
Uc13	Curr compressor configuration (Powerplus) - Skip frequency setpoint 2	-	UI_FreqLimitMin	UI_ FreqLimit500Hz	-	R/W	HR1799	AV3285
	Curr compressor configuration (Powerplus) - Skip frequency band 2	-	UI_FreqLimitMin	UI_ FreqLimit500Hz	-	R/W	HR1800	AV3286
Uc14	Curr compressor configuration (Powerplus) - Skip frequency setpoint 3	-	UI_FreqLimitMin	UI_ FreqLimit500Hz	-	R/W	HR1801	AV3287
	Curr compressor configuration (Powerplus) - Skip frequency band 3	-	UI_FreqLimitMin	UI_ FreqLimit500Hz	-	R/W	HR1802	AV3288
Uc15	Curr compressor configuration (Powerplus) - Switching frequency	-	0	2	-	R/W	HR1803	PIV3289
	Curr compressor configuration (Powerplus) - Switching frequency derating	-	0	1	-	R/W	HR1804	PIV3290
Uc16	Curr compressor configuration (Powerplus) - Motor overtemperature alarm (PTC) enable	-	0	1	-	R/W	HR1805	PIV3291
	Curr compressor configuration (Powerplus) - Motor overtemperature alarm delay	-	0	999	-	R/W	HR1806	PIV3292
Uc17	Curr compressor configuration (Powerplus) - Reverse speed enable	-	0	1	-	R/W	HR1807	PIV3293
	Curr compressor configuration (Powerplus) - Speed derating mode	-	0	10	-	R/W	HR1808	PIV3294
Uc18	Curr compressor configuration (Powerplus) - Stop mode	-	0	1	-	R/W	HR1809	PIV3295
	Curr compressor configuration (Powerplus) - Flying restart	-	0	1	-	R/W	HR1810	PIV3296
Uc19	Curr compressor configuration (Powerplus) - Relay configuration	-	0	8	-	R/W	HR1811	PIV3297
Uc20	Motor pole pairs	0	0	9	-	R	HR1812	PIV3298
	Motor pole pairs	0	0	9	-	R/W	HR1812	PIV3298
	Curr compressor configuration (Powerplus) - Motor control mode	-	0	2	-	R/W	HR1813	PIV3299
Uc21	Curr compressor configuration (Powerplus) - Motor base frequency	-	UI_FreqLimitMin	UI_ FreqLimit500Hz	-	R/W	HR1814	AV3300
	Curr compressor configuration (Powerplus) - Motor base voltage	-	UI_MotBaseV_ MinLim	.UI_MotBaseV_ MaxLim	-	R/W	HR1815	PIV3301
Uc22	Curr compressor configuration (Powerplus) - Motor rated current	-	UI_MotBaseA_ MinLim	UI_MotBaseA_ MaxLim	-	R/W	HR1816	AV3302
	Curr compressor configuration (Powerplus) - Motor power factor	-	0	100	-	R/W	HR1817	PIV3303
	Curr compressor configuration (Powerplus) - Max output current	-	0.0	200.0	-	R/W	HR1818	AV3304
Uc23	Curr compressor configuration (Powerplus) - Speed profile: frequency 1	-	UI_FreqLimitMin	UI_ FreqLimit500Hz	-	R/W	HR1819	AV3305
	Curr compressor configuration (Powerplus) - Speed profile: frequency 2	-	UI_FreqLimitMin	UI_ FreqLimit500Hz	-	R/W	HR1820	AV3306
	Curr compressor configuration (Powerplus) - Speed profile: frequency 3	-	UI_FreqLimitMin	UI_ FreqLimit500Hz	-	R/W	HR1821	AV3307
Uc24	Curr compressor configuration (Powerplus) - Speed profile: acceleration 1 [Hz/s]	-	UI_FreqLimitMin	UI_ FreqLimit500Hz	-	R/W	HR1822	AV3308
	Curr compressor configuration (Powerplus) - Speed profile: acceleration 2 [Hz/s]	-	UI_FreqLimitMin	UI_FreqLimit50Hz	-	R/W	HR1823	AV3309
	Curr compressor configuration (Powerplus) - Speed profile: acceleration 3 [Hz/s]	-	UI_FreqLimitMin	UI_FreqLimit50Hz	-	R/W	HR1824	AV3310
	Curr compressor configuration (Powerplus) - Speed profile: acceleration 4 [Hz/s]	-	UI_FreqLimitMin	UI_FreqLimit50Hz	-	R/W	HR1825	AV3311
Uc25	Curr compressor configuration (Powerplus) - Speed profile: delay 1	-	0	600	-	R/W	HR1826	PIV3312
	Curr compressor configuration (Powerplus) - Speed profile: delay 2	-	0	600	-	R/W	HR1827	PIV3313
	Curr compressor configuration (Powerplus) - Speed profile: delay 3	-	0	600	-	R/W	HR1828	PIV3314
Uc26	Curr compressor configuration (Powerplus) - Speed profile start mode (0= always; 1=once at run)	-	0	1	-	R/W	CS390	BV389
	Curr compressor configuration (Powerplus) - Speed profile start mode (0=-; 1=force freq. 2)	-	0	1	-	R/W	CS391	BV390
Uc27	Curr compressor configuration (Powerplus) - Speed profile: deceleration [Hz/s]	-	UI_FreqLimitMin	UI_FreqLimit50Hz	-	R/W	HR1829	AV3315
Uc28	Curr compressor configuration (Powerplus) - V/f boost voltage	-	0.0	25.0	-	R/W	HR1830	AV3316
	Curr compressor configuration (Powerplus) - V/f frequency adjustment	-	0.0	100.0	-	R/W	HR1831	AV3317
	Curr compressor configuration (Powerplus) - V/f voltage adjustment	-	0.0	100.0	-	R/W	HR1832	AV3318

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
COMPRESSOR								
Uc29	Curr compressor configuration (Powerplus) - Motor magnetizing current	-	UI_ MotMagnetizingA_MinLim	UI_ MotMagnetizingA_MaxLim	-	R/W	HR1833	AV3319
	Curr compressor configuration (Powerplus) - Stator resistance [mohm]	-	0	30000	-	R/W	HR1834	PIV3320
	Curr compressor configuration (Powerplus) - Rotor resistance [mohm]	-	0	30000	-	R/W	HR1835	PIV3321
Uc30	Curr compressor configuration (Powerplus) - Stator inductance Ld [mH]	-	0.0	600.0	-	R/W	HR1836	AV3322
	Curr compressor configuration (Powerplus) - Leakage factor	-	0	250	-	R/W	HR1837	PIV3323
	Curr compressor configuration (Powerplus) - Stator inductance Lq [mH]	-	0.0	600.0	-	R/W	HR1838	AV3324
Uc31	Curr compressor configuration (Powerplus) - Speed loop Kp	-	0.1	200.0	-	R/W	HR1839	AV3325
	Curr compressor configuration (Powerplus) - Speed loop Ti	-	1	1000	-	R/W	HR1840	PIV3326
Uc32	Curr compressor configuration (Powerplus) - Magnetizing time	-	0	30000	-	R/W	HR1841	PIV3327
	Curr compressor configuration (Powerplus) - Starting current	-	0.0	100.0	-	R/W	HR1842	AV3328
	Inverter Power Plus Info - Rated starting current	-	0.0	99.9	-	R	IR588	AV3902
	Curr compressor configuration (Powerplus) - Frequency for starting current	-	0.0	100.0	-	R/W	HR1843	AV3329
Uc33	Curr compressor configuration (Powerplus) - Crank-case heater mode (0=Strategy mng; 1=forcedON; 2=forcedOFF)	-	0	2	-	R/W	HR1844	PIV3330
	Curr compressor configuration (Powerplus) - Crank-case heater current	-	0.0	100.0	-	R/W	HR1845	AV3331
	Inverter Power Plus Info - Rated crankcase heating current	-	0.0	99.9	-	R	IR589	AV3903
	Curr compressor configuration (Powerplus) - Safety torque off alarm autoreset on drive stand-by	-	0	2	-	R/W	HR1846	PIV3332
Uc34	Curr compressor configuration (Powerplus) - Disable phase loss algorithm (0=enabled; 1=disabled)	-	0	1	-	R/W	CS392	BV391
Uc35	Curr compressor config. (Powerplus) - Thermal Overload Retention Enable	-	0	1	-	R/W	CS393	BV392
Uc36	Curr compressor configuration (Powerplus) - Inductance saturation factor	-	0.0	100.0	-	R/W	HR1847	AV3333
	Inverter Power Plus Info - Inductance saturation reduction (perc. at rated current)	-	-99.9	99.9	-	R	IR590	AV3904
Uc37	Save custom config. command	FALSE	0	1	-	R/W	CS394	BV393
	Custom cofiguration data saving in progress	FALSE	0	1	-	R	DI762	BV1220
	Inverter is online	-	0	1	-	R	DI763	BV1221
Uc38	Maximum semiautomatic alarm reset retry number	5	0	5	-	R/W	HR1848	IV3334
	Time threshold for semiautomatic reset	60	1	1440	-	R/W	HR1850	PIV3335
Uc39	Reset type: 0=Manual - 1=Semiautomatic	TRUE	0	1	-	R/W	CS395	BV394
	Reset type: 0=Manual - 1=Semiautomatic	TRUE	0	1	-	R/W	CS396	BV395
	Reset type: 0=Manual - 1=Semiautomatic	TRUE	0	1	-	R/W	CS397	BV396
	Reset type: 0=Manual - 1=Semiautomatic	TRUE	0	1	-	R/W	CS398	BV397
	Reset type: 0=Manual - 1=Semiautomatic	TRUE	0	1	-	R/W	CS399	BV398
	Reset type: 0=Manual - 1=Semiautomatic	TRUE	0	1	-	R/W	CS400	BV399
	Reset type: 0=Manual - 1=Semiautomatic	TRUE	0	1	-	R/W	CS401	BV400
	Reset type: 0=Manual - 1=Semiautomatic	TRUE	0	1	-	R/W	CS402	BV401
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS403	BV402
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS404	BV403
	Reset type: 0=Manual - 1=Semiautomatic	TRUE	0	1	-	R/W	CS405	BV404
	Reset type: 0=Manual - 1=Semiautomatic	TRUE	0	1	-	R/W	CS406	BV405
	Reset type: 0=Manual - 1=Semiautomatic	TRUE	0	1	-	R/W	CS407	BV406
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS408	BV407
	Reset type: 0=Manual - 1=Semiautomatic	TRUE	0	1	-	R/W	CS409	BV408
	Reset type: 0=Manual - 1=Semiautomatic	TRUE	0	1	-	R/W	CS410	BV409
Uc40	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS411	BV410
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS412	BV411
	Reset type: 0=Manual - 1=Semiautomatic	TRUE	0	1	-	R/W	CS413	BV412
	Reset type: 0=Manual - 1=Semiautomatic	TRUE	0	1	-	R/W	CS414	BV413
	Reset type: 0=Manual - 1=Semiautomatic	TRUE	0	1	-	R/W	CS415	BV414
	Reset type: 0=Manual - 1=Semiautomatic	TRUE	0	1	-	R/W	CS416	BV415
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS417	BV416
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS418	BV417
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS419	BV418
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS420	BV419
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS421	BV420
	Reset type: 0=Manual - 1=Semiautomatic	TRUE	0	1	-	R/W	CS422	BV421
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS423	BV422
Uc41	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS424	BV423
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS425	BV424
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS426	BV425
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS427	BV426
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS428	BV427
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS429	BV428
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS430	BV429
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS431	BV430
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS432	BV431
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS433	BV432
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS434	BV433
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS435	BV434
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS436	BV435
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS437	BV436
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS438	BV437
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS439	BV438
Uc42	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS440	BV439
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS441	BV440
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS442	BV441
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS443	BV442
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS444	BV443
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS445	BV444
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS446	BV445
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS447	BV446
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS448	BV447
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS449	BV448
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS450	BV449
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS451	BV450
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS452	BV451
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS453	BV452
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS454	BV453
	Reset type: 0=Manual - 1=Semiautomatic	FALSE	0	1	-	R/W	CS455	BV454
	PowerPlus address	1	1	247	-	R/W	HR1735	PIV3229
	Modbus communication timeout [ms]	500	0	999999	-	R/W	HR1852	PIV3336
	Modbus command delay [ms]	30	0	999999	-	R/W	HR1854	PIV3337

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
COMPRESSOR								
Uc44	Inverter Power Plus Info - FB version x	-	0	9	-	R	IR591	PIV3905
	Inverter Power Plus Info - FB version y	-	0	9	-	R	IR592	PIV3906
	Inverter Power Plus Info - FB version zzz	-	0	999	-	R	IR593	PIV3907
	Inverter Power Plus Info - FB version beta	-	0	9	-	R	IR594	PIV3908
	Automatically generated - Bootloader version	-	0	65535	-	R	IR595	PIV3909
	Automatically generated - Firmware version	-	0	65535	-	R	IR596	PIV3910
	Automatically generated - Firmware checksum	-	0	65535	-	R	IR597	PIV3911
	Automatically generated - Motor control version	-	0	65535	-	R	IR598	PIV3912
	Automatically generated - Hardware identification	-	0	65535	-	R	IR599	PIV3913

Tab. 10.k

10.1.12 V. EEV

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
EEV								
V001	Superparameters - Valve	0	MskLimMin	MskLimMax	-	R/W	HR1752	IV3238
	Superparameters - Main regulation	19	MskLimMin	MskLimMax	-	R	IR566	IV3880
	Superparameters - Main regulation	19	MskLimMin	MskLimMax	-	R	IR566	IV3880
V002	EVD parameters - Regulation parameters configuration - Refrigerant	0	MskLimMin	MskLimMax	-	R/W	HR1753	IV3239
V003	Probes data - Probe S1 - Value	-	-999.9	999.9	bar	R	IR567	AV3881
	Probes data - Probe S2 - Value	-	-999.9	999.9	°C	R	IR568	AV3882
	Probes data - Probe S3 - Value	-	-999.9	999.9	bar	R	IR569	AV3883
	Probes data - Probe S4 - Value	-	-999.9	999.9	°C	R	IR570	AV3884
V004	Superheat setpoint: cooling mode	6.0	MskLimMin	MskLimMax	K	R/W	HR1754	AV3240
	Superheat setpoint: heating mode	6.0	MskLimMin	MskLimMax	K	R/W	HR1755	AV3241
V005	EEV start opening ratio: cooling mode	80	MskLimMin	MskLimMax	-	R/W	HR1756	IV3242
	EEV start opening ratio: heating mode	75	MskLimMin	MskLimMax	-	R/W	HR1757	IV3243
	EVD parameters - Regulation parameters configuration - Regulation starting delay	0	MskLimMin	MskLimMax	s	R/W	HR1758	IV3244
V006	Enable liquid solenoid valve	-	0	1	-	R/W	CS384	BV383
	EVD parameters - Regulation parameters configuration - Standby valve opening position %	0	MskLimMin	MskLimMax	%	R/W	HR1759	IV3245
V007	EEV Proportional gain: cooling mode	15.0	MskLimMin	MskLimMax	-	R/W	HR1760	AV3246
	EEV Integral time: cooling mode	150.0	MskLimMin	MskLimMax	s	R/W	HR1761	AV3247
	EEV Integral time: cooling mode	1.0	MskLimMin	MskLimMax	s	R/W	HR1762	AV3248
V008	EEV Proportional gain: heating mode	15.0	MskLimMin	MskLimMax	-	R/W	HR1763	AV3249
	EEV Integral time: heating mode	150.0	MskLimMin	MskLimMax	s	R/W	HR1764	AV3250
	EEV Integral time: cooling mode	1.0	MskLimMin	MskLimMax	s	R/W	HR1765	AV3251
V009	EVD parameters - Regulation parameters configuration - LowSH (low superheat) alarm timeout	0	MskLimMin	MskLimMax	s	R/W	HR1766	IV3252
	EEV Low superheat threshold: cooling mode	1.0	MskLimMin	MskLimMax	K	R/W	HR1767	AV3253
	EEV Low superheat integral time: cooling mode	10.0	MskLimMin	MskLimMax	s	R/W	HR1768	AV3254
V010	EEV Low superheat threshold: heating mode	1.0	MskLimMin	MskLimMax	K	R/W	HR1769	AV3255
	EEV Low superheat integral time: heating mode	10.0	.MskLimMin	MskLimMax	s	R/W	HR1770	AV3256
V011	EVD parameters - Regulation parameters configuration - LOP (low evaporating temperature) alarm timeout	0	MskLimMin	MskLimMax	s	R/W	HR1771	IV3257
	EEV LOP threshold: cooling mode	-5.0	MskLimMin	MskLimMax	°C	R/W	HR1772	AV3258
	EEV LOP integral time: cooling mode	5.0	MskLimMin	MskLimMax	s	R/W	HR1773	AV3259
V012	EEV LOP threshold: heating mode	-50.0	MskLimMin	MskLimMax	°C	R/W	HR1774	AV3260
	EEV LOP integral time: heating mode	5.0	MskLimMin	MskLimMax	s	R/W	HR1775	AV3261
V013	EVD parameters - Regulation parameters configuration - MOP (high evaporating temperature) alarm timeout	0	MskLimMin	MskLimMax	s	R/W	HR1776	IV3262
	EEV MOP threshold: cooling mode	30.0	MskLimMin	MskLimMax	°C	R/W	HR1777	AV3263
	EEV MOP integral time: cooling mode	15.0	MskLimMin	MskLimMax	s	R/W	HR1778	AV3264
V014	EEV MOP threshold: heating mode	20.0	MskLimMin	MskLimMax	°C	R/W	HR1779	AV3265
	EEV MOP integral time: heating mode	15.0	MskLimMin	MskLimMax	s	R/W	HR1780	AV3266
V015	EEV enable manual position	FALSE	0	1	-	R/W	CS385	BV384
	EEV manual poition steps	0	MskLimMin	RegMaxPos.Val	-	R/W	HR1781	IV3267
V016	EVD parameters - System configuration - DC power supply enabling	FALSE	0	1	-	R/W	CS386	BV385
V017	EVD parameters - Regulation parameters configuration - Low suction temperature alarm threshold	0.0	MskLimMin	.MskLimMax	°C	R/W	HR1782	AV3268
	EVD parameters - Regulation parameters configuration - Low suction temperature alarm timeout	0	MskLimMin	MskLimMax	s	R/W	HR1783	IV3269
V018	EVD parameters - Valve configuration - EEV minimum steps	0	MskLimMin	MskLimMax	-	R/W	HR1784	IV3270
	EVD parameters - Valve configuration - EEV maximum steps	0	MskLimMin	MskLimMax	-	R/W	HR1785	IV3271
	EVD parameters - Valve configuration - EEV closing steps	0	MskLimMin	MskLimMax	-	R/W	HR1786	IV3272
V019	EVD parameters - Valve configuration - EEV step rate	0	MskLimMin	MskLimMax	-	R/W	HR1787	IV3273
	EVD parameters - Valve configuration - EEV: emergency EEV closing speed	0	MskLimMin	MskLimMax	-	R/W	HR1788	IV3274
	EVD parameters - Valve configuration - EEV duty cycle	0	MskLimMin	MskLimMax	%	R/W	HR1789	IV3275
V020	EVD parameters - Valve configuration - EEV opening position synchronization	FALSE	0	1	-	R/W	CS387	BV386
	EVD parameters - Valve configuration - EEV closing position synchronization	FALSE	0	1	-	R/W	CS388	BV387

Tab. 10.l

10.1.13 X. Settings

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
PARAMETERS								
Xa01	Date format (0: DD/MM/YY; 1: MM/DD/YY; 2: YY/MM/DD)	0	0	2	-	R/W	HR1720	IV3215
	BMS real time clock	-	0	24	-	R/W	HR1721	PIV3216
	BMS real time clock	-	0	59	-	R/W	HR1722	PIV3217
	BMS real time clock	-	0	59	-	R	IR547	PIV3861
	Day of week	-	0	9	d	R	IR383	PIV3760
Xa02	Index of the zone read	-	1	94	-	R	IR548	PIV3862

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
PARAMETERS								
Xd01	User password	0	0	9999	-	R/W	HR1723	PIV3218
	Service password	1234	0	9999	-	R/W	HR1724	PIV3219
	Manufacturer password	5678	0	9999	-	R/W	HR1725	PIV3220
Xe01	Clear alarm log list		0	1			-	-
	Clear alarms counter of retrying		0	1			-	-
	Enable of Buzzer	FALSE	0	1	-	R/W	CS382	BV382
Xe03	Wipe memory	-	0	1	-	R/W	HR1394	PIV2902
Xc01	Unit of measure for user interface	0	0	6	-	R/W	HR978	IV2501
Y001	BMS Line (0=None; 1=Modbus; 2=BACnet)	0	0	2	-	R/W	HR1904	PIV3384
	BMS2 Line (0=None; 1=Modbus; 2=BACnet)	0	0	2	-	R/W	HR1905	PIV3385
	Ethernet Line (0=None; 1=Modbus)	1	0	1	-	R/W	HR1906	PIV3386
	Ethernet 2 Line (0=None; 1=BACnet)	0	0	1	-	R/W	HR1907	PIV3387
	Warning: SPV Configuration error	-	0	1	-	R	DI769	BV1227
Y002	BMS address	1	1	247	-	R/W	HR1727	PIV3221
	BMS timeout	60	0	255	-	R/W	HR1728	PIV3222
Y003	BACnet Device Instance (and Station address in MSTP)	1	1	BACnet_ ID_ Max	-	R/W	HR1908	PIV3388
	BACnet timeout	60	0	255	s	R/W	HR1910	PIV3389
	Warning: SPV License not compatible	-	0	1	-	R	DI770	BV1228
Y004	BMS baudrate (0=9600; 1=19200; 2=38400)	1	0	2	-	R/W	HR1729	PIV3223
	BMS parity	0	0	2	-	R/W	HR1730	PIV3224
	BMS stopbit	2	1	2	-	R/W	HR1731	PIV3225
Y005	BMS baudrate (0=9600; 1=19200; 2=38400)	1	0	2	-	R/W	HR1911	PIV3390
	BMS 2 parity	0	0	2	-	R/W	HR1912	PIV3391
	BMS 2 stopbit	2	1	2	-	R/W	HR1913	PIV3392
Y010	BMS baudrate (0=9600; 1=19200; 2=38400)	1	0	2	-	R/W	HR1732	PIV3226
	Fieldbus parity	0	0	2	-	R/W	HR1733	PIV3227
	Fieldbus stopbit	2	1	2	-	R/W	HR1734	PIV3228
Y015	EBM1 Supply - –erial interface settings - –etwork address for Ebmpapst fan	30	0	999999	-	R/W	HR1570	PIV3069
	EBM2 Supply - –erial interface settings - –etwork address for Ebmpapst fan	31	0	999999		R/W	HR1988	PIV4059
	EBM3 Supply - –erial interface settings - –etwork address for Ebmpapst fan	32	0	999999		R/W	HR1990	PIV4060
	EBM4 Supply - –erial interface settings - –etwork address for Ebmpapst fan	33	0	999999		R/W	HR1992	PIV4061
Y020	EBM1 Return - –erial interface settings - –etwork address for Ebmpapst fan	34	0	999999	-	R/W	HR1477	PIV2982
	EBM2 Return - –erial interface settings - –etwork address for Ebmpapst fan	35	0	999999		R/W	HR1994	PIV4062
	EBM3 Return - –erial interface settings - –etwork address for Ebmpapst fan	36	0	999999		R/W	HR1996	PIV4063
	EBM4 Return - –erial interface settings - –etwork address for Ebmpapst fan	37	0	999999		R/W	HR1998	PIV4064
Y025	ZA1 Supply - –erial interface parameters - –an Network address	30	1	247	-	R/W	HR1580	PIV3076
	ZA2 Supply - –erial interface parameters - –an Network address	31	1	247		R/W	HR2000	PIV4065
	ZA3 Supply - –erial interface parameters - –an Network address	32	1	247		R/W	HR2002	PIV4066
	ZA4 Supply - –erial interface parameters - –an Network address	33	1	247		R/W	HR2004	PIV4067
Y030	ZA1 Return - –erial interface parameters - –an Network address	34	1	247	-	R/W	HR1487	PIV2989
	ZA2 Return - –erial interface parameters - –an Network address	35	1	247	-	R/W	HR2006	PIV4068
	ZA3 Return - –erial interface parameters - –an Network address	36	1	247	-	R/W	HR2008	PIV4069
	ZA4 Return - –erial interface parameters - –an Network address	37	1	247	-	R/W	HR2010	PIV4070
Y035	PowerPlus address	1	1	247	-	R/W	HR1735	PIV3229
Y040	uChiller address	10	0	255	-	R/W	HR1737	PIV3230
Y045	IEC Humifog address	7	0	999999	-	R/W	HR1738	PIV3231
Y050	Humisonic address	5	1	247	-	R/W	HR1740	PIV3232
	Modbus timeout for Humisonic (delete after Humisonic library update)	500	0	9999	ms	R/W	HR1742	PIV3233
	Modbus command delay for Humisonic (delete after Humisonic library update)	4	0	9999	ms	R/W	HR1744	PIV3234
Y055	Humifog address	6	0	999999	-	R/W	HR1746	PIV3235
Y057	HumiSteam - Device address	1	0	999	-	R/W	HR2072	PIV4339
	HumiSteam - Modbus timeout for UEY	200	0	9999	ms	R/W	HR2074	PIV4340
	HumiSteam - Modbus command delay for UEY	10	0	9999	ms	R/W	HR2076	PIV4341
Y060	Serial device configuration - Device address	9	1	247	-	R/W	HR1748	PIV3236
Y065	PGDx Browser - MAC Address Last Four Digit - Part 1 -	48	48	101	-	R/W	HR1900	PIV3380
	PGDx Browser - MAC Address Last Four Digit - Part 2 -	48	48	101	-	R/W	HR1901	PIV3381
	PGDx Browser - MAC Address Last Four Digit - Part 3 -	48	48	101	-	R/W	HR1902	PIV3382
	PGDx Browser - MAC Address Last Four Digit - Part 4 -	48	48	101	-	R/W	HR1903	PIV3383
	pGDx - Room temperature	-	- 99.9	99.9	°C	R	-	-
	pGDx - Room humidity	-	0.0	99.9	%rh	R	-	-
Y070	Custom serial probe 1 - –evice address	0	0	254	-	R/W	HR2025	PIV4296
	Custom serial probe 2 - –evice address	0	0	254	-	R/W	HR2027	PIV4297
	Custom serial probe 3 - –evice address	0	0	254	-	R/W	HR2029	PIV4298
	Custom serial probe 4 - –evice address	0	0	254	-	R/W	HR2031	PIV4299
Y071	Custom serial probe - –odbus - –imeout	200	0	9999	ms	R/W	HR2067	PIV4325
	Custom serial probe - –odbus - –md delay	10	0	9999	ms	R/W	HR2068	PIV4326
Y072	Custom serial probe - –erial address - –emp1	65535	0	65535	-	R/W	HR2035	PIV4301
	Custom serial probe - –actor Operator - –emp1	0	0	1	-	R/W	CS466	BV4288
	Custom serial probe - –actor - –emp1	1	0	999	-	R/W	HR2043	IV4309
	Custom serial probe - –erial address – Temp2	65535	0	65535	-	R/W	HR2036	PIV4302
	Custom serial probe - –actor Operator – Temp2	0	0	1	-	R/W	CS467	BV4289
	Custom serial probe - –actor – Temp2	1	0	999	-	R/W	HR2044	IV4310
	Custom serial probe - –erial address – Hum1	65535	0	65535	-	R/W	HR2037	PIV4303
	Custom serial probe - –actor Operator - –um1	0	0	1	-	R/W	CS468	BV4290
	Custom serial probe - –actor - –um1	1	0	999	-	R/W	HR2045	IV4311
	Custom serial probe - –erial address – Hum2	65535	0	65535	-	R/W	HR2038	PIV4304
	Custom serial probe - –actor Operator – Hum2	0	0	1	-	R/W	CS469	BV4291
	Custom serial probe - –actor – Hum2	1	0	999	-	R/W	HR2046	IV4312
Y073	Custom serial probe - –erial address – Press1	65535	0	65535	-	R/W	HR2039	PIV4305
	Custom serial probe - –actor Operator - –ress1	0	0	1	-	R/W	CS470	BV4292
	Custom serial probe - –actor - –ress1	1	0	999	-	R/W	HR2047	IV4313
	Custom serial probe - –erial address – Press2	65535	0	65535	-	R/W	HR2040	PIV4306
	Custom serial probe - –actor Operator – Press2	0	0	1	-	R/W	CS471	BV4293
	Custom serial probe - –actor – Press2	1	0	999	-	R/W	HR2048	IV4314
	Custom serial probe - –erial address – Flow1	65535	0	65535	-	R/W	HR2041	PIV4307
	Custom serial probe - –actor Operator - –low1	0	0	1	-	R/W	CS472	BV4294
	Custom serial probe - –actor - –low1	1	0	999	-	R/W	HR2049	IV4315
	Custom serial probe - –erial address – Flow2	65535	0	65535	-	R/W	HR2042	PIV4308
	Custom serial probe - –actor Operator – Flow2	0	0	1	-	R/W	CS473	BV4295
	Custom serial probe - –actor – Flow2	1	0	999	-	R/W	HR2050	IV4316

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
PARAMETERS								
Y074	Custom serial probe - –emp. minimum value limit for trigger alarm	-999	-999	999		R/W	HR2051	AV4317
	Custom serial probe - –emp. maximum value limit for trigger alarm	999	-999	999		R/W	HR2053	AV4318
	Custom serial probe - –um. minimum value limit for trigger alarm	-999	-999	999		R/W	HR2055	AV4319
	Custom serial probe - –um. maximum value limit for trigger alarm	999	-999	999		R/W	HR2057	AV4320
	Custom serial probe - –ress. minimum value limit for trigger alarm	-999	-999	999		R/W	HR2059	AV4321
	Custom serial probe - –ress. maximum value limit for trigger alarm	99999	-999	99999		R/W	HR2061	AV4322
	Custom serial probe - –low minimum value limit for trigger alarm	-999	-999	999		R/W	HR2063	AV4323
	Custom serial probe - –low maximum value limit for trigger alarm	999999	-999	999999		R/W	HR2065	AV4324
Y075	IAQ configuration - Modbus - Timeout	0	9999	200	ms	R/W	HR2070	PIV4325
	IAQ configuration - Modbus - Cmd delay	0	9999	10	ms	R/W	HR2071	PIV4326
Y099	7seg number	0	1	10	-	R/W	HR1750	PIV3237
	DHCP enabled	-	0	1	-	R	DI725	BV1183
	IP Address (XXX.xxx.xxx.xxx)	-	0	255	-	R	IR550	PIV3864
	IP Address (xxx.XXX..xxx.xxx)	-	0	255	-	R	IR551	PIV3865
	IP Address (xxx.xxx.XXX.xxx)	-	0	255	-	R	IR552	PIV3866
	IP Address (xxx.xxx.xxx.XXX)	-	0	255	-	R	IR553	PIV3867
	Gateway (XXX.xxx.xxx.xxx)	-	0	255	-	R	IR554	PIV3868
	Gateway (xxx.XXX..xxx.xxx)	-	0	255	-	R	IR555	PIV3869
	Gateway (xxx.xxx.XXX.xxx)	-	0	255	-	R	IR556	PIV3870
	Gateway (xxx.xxx.xxx.XXX)	-	0	255	-	R	IR557	PIV3871
	Netmask (XXX.xxx.xxx.xxx)	-	0	255	-	R	IR558	PIV3872
	Netmask (xxx.XXX..xxx.xxx)	-	0	255	-	R	IR559	PIV3873
	Netmask (xxx.xxx.XXX.xxx)	-	0	255	-	R	IR560	PIV3874
	Netmask (xxx.xxx.xxx.XXX)	-	0	255	-	R	IR561	PIV3875
	DNS (XXX.xxx.xxx.xxx)	-	0	255	-	R	IR562	PIV3876
	DNS (xxx.XXX..xxx.xxx)	-	0	255	-	R	IR563	PIV3877
	DNS (xxx.xxx.XXX.xxx)	-	0	255	-	R	IR564	PIV3878
	DNS (xxx.xxx.xxx.XXX)	-	0	255	-	R	IR565	PIV3879

Tab. 10.m

10.1.14 Q. Commands

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
MAIN								
Xb01	-	-	-	-	-	-	-	-
Qb01	On/off request by pGD1 or PLD Pro	-	0	1	-	R	CS003	BV3
	Seconds left before switching on/ff by keyboard	-	0	9	s	R	IR199	IV3590
Qc01	Current temperature setpoint	-	MinVal	MaxVal	°C	R/W	HR970	AV2493
	Current air quality CO2 setpoint	-	MinVal	MaxVal	ppm	R/W	HR974	AV2497
	Current air quality VOC setpoint	-	MinVal	MaxVal	%	R/W	HR1957	AV4014
	Current supply air flow setpoint	-	MinVal	MaxVal	m^3/h	R/W	HR971	PIV2496
	Current supply static pressure setpoint	-	MinVal	MaxVal	Pa	R/W	HR974	AV2498
	Current return air flow setpoint	-	MinVal	MaxVal	m^3/h	R/W	HR975	PIV2499
	Current return static pressure setpoint	-	MinVal	MaxVal	Pa	R/W	HR977	AV2500
	Current humidity setpoint	-	MinVal	MaxVal	%rH	R/W	HR981	AV2503
Qc02	Auxiliary Regulation 1 - Regulation setpoint	20.0	-9999.9	9999.9	-	R/W	HR980	AV2502
	Auxiliary Regulation 2 - Regulation setpoint	20.0	-9999.9	9999.9	-	R/W	HR1602	AV3097
	Auxiliary Regulation 3 - Regulation setpoint	20.0	-9999.9	9999.9	-	R/W	HR1616	AV3111
	Auxiliary Regulation 4 - Regulation setpoint	20.0	-9999.9	9999.9	-	R/W	HR1630	AV3125
Qc04	Summer/Winter mode by Keyboard (FALSE: Summer; TRUE: Winter)	20.0	-9999.9	9999.9	-	R/W	HR1602	AV3097
	Summer/Winter mode (FALSE:Summer, TRUE:Winter	-	0	1	-	R	DI1351	BV4362
	Unit Cool/Heat mode (FALSE: cooling; TRUE: heating)	-	0	1	-	R	DI648	BV1106
	Cooling/Heating change delay time	1	0	9999	min	R/W	HR982	PIV2504
Qc08	Party mode: start command	-	0	1	-	R/W	CS182	BV182
	Party mode countdown	-	0	999999	s	R	IR200	PIV3591
Qc10	Purge command (0: NO, 1: START)	-	0	1	-	R/W	CS462	BV4035
	Purge is on	-	0	1	-	R	DI1328	BV4038

Tab. 10.n

10.1.15 Q. Info

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
INFORMATIONS								
Qa 01	0: Off; 1: Startup; 2: On; 3: Shutdown;	-	0	9	-	R	IR20 2	PIV3 592
	Fresh air damper	-	0	1	-	R	DI38 4	BV84 2
	Fresh air damper	-	-999.0	999.0	-	R	IR15 5	AV35 47
	Mixing damper - Hardware value writes from board	-	0	1	-	R	DI39 1	BV84 9
	Mixing damper	-	-999.0	999.0	-	R	IR15 3	AV35 45
	Exhaust air damper - Hardware value writes from board	-	0	1	-	R	DI38 7	BV84 5
	Exhaust air damper	-	-999.0	999.0	-	R	IR16 9	AV35 61
Qa 03	Heating exchanger type	0	0	4	-	R	HR1 293	PIV2 801
	Bypass damper	-	-999.0	999.0	-	R	IR15 1	AV35 43
	Thermal wheel	-	-999.0	999.0	-	R	IR16 5	AV35 57
	Bypass damper - Hardware value writes from board	-	0	1	-	R	DI37	BV82
	Enable post heating coil	-	0	1	-	R	DI65 4	BV11 12
	Fresh air temperature	-	-999.9	999.9	°C	R	IR062	AV3454
	Heat exchanger status (0: recovery; 1: freecooling; 2: freeheating; 3: defrost; 4: bypass)	-	0	9	-	R	IR204	PIV3594
	Heat exchanger efficiency (see comment on the algorithm for the formula)	-	-999.9	999.9	-	R	IR205	AV3595

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
INFORMATIONS								
Qa06	Fan regulation type (0: Static pressure; 1: Air flow; 2: Fixed speed)	2	0	2	-	R	HR1491	PIV21
	Return fan: regulation type static pressure or air flow	-	0	1	-	R	DI650	BV1108
	Current return air flow setpoint	-	MinVal	MaxVal	m^3/h	R	HR975	PIV2499
	Current return static pressure setpoint	-	MinVal	MaxVal	Pa	R	HR977	AV2500
	Supply fan: regulation type static pressure or air flow	-	0	1	-	R	DI651	BV1109
	Current supply air flow setpoint	-	MinVal	MaxVal	m^3/h	R	HR971	PIV2496
	Current supply static pressure setpoint	-	MinVal	MaxVal	Pa	R	HR974	AV2498
	Three speed fan request in fixed speed regulation (0 = SPEED1; 1= SPEED2; 2= SPEED 3)	2	0	2	-	R	HR1508	PIV3009
	Fan fixed speed request	30.0	0.0	100.0	%	R	HR1507	AV3008
	Return fan: regulation type static pressure or air flow	-	0	1	-	R	DI650	BV1108
	Return air pressure	-	-9999.9	9999.9	Pa	R	IR089	AV3481
	Return air flow value	-	-99999.0	99999.0	-	R	IR206	AV3596
	Supply fan: regulation type static pressure or air flow	-	0	1	-	R	DI651	BV1109
	Input probe air flow	-	-99999.0	99999.0	m3h	R	IR207	AV3597
	Supply air pressure	-	-9999.9	9999.9	Pa	R	IR086	AV3478
	Supply fan request	-	0.0	100.0	%	R	IR208	AV3598
	Communication status of supply ebm fan (0:Online; 1:Offline; 2:Invalid packet; 3:Exception; 4:Connecting;)	-	0	9	-	R	IR209	PIV3599
Qa06	Supply fan	-	0.0	100.0	%	R	IR147	AV3539
	Percentage of activation of ebmpapst supply fan	-	0	999	%	R	IR210	PIV3600
	Supply fan - Hardware value writes from board	-	0	1	-	R	DI141	BV869
	Enable return fan	FALSE	0	1	-	R	CS225	BV225
	Return fan request	-	-999.0	999.0	%	R	IR211	AV3601
	Communication status of return ebm fan (0:Online; 1:Offline; 2:Invalid packet; 3:Exception; 4:Connecting;)	-	0	9	-	R	IR212	PIV3602
	Return fan	-	-999.0	999.0	-	R	IR149	AV3541
Qa08	CO2 sensor	-	0.0	99999.0	ppm	R	IR092	AV3484
	Current air quality set point – Setpoint	-	-99999.9	99999.0	ppm	R	HR974	AV2497
	Return fan - Air quality setpoint offset	-	-999.9	999.9	-	R	IR214	AV3604
	Supply fan - Air quality setpoint offset	-	-999.9	999.9	-	R	IR215	AV3605
	Air Quality - Dampers regulation request	-	0.0	100.0	%	R	IR216	AV3606
	Air Quality - Fans regulation request	-	0.0	100.0	%	R	IR217	AV3607
Qa09	Supply temperature	-	-999.9	999.9	°C	R	IR044	AV3436
	Supply temperature regulation setpoint	-	-999.9	999.9	°C	R	IR218	AV3608
	PID regulation temperature	-	-999.9	999.9	°C	R	IR623	AV4034
	PID regulation temperature setpoint	-	-999.9	999.9	°C	R	IR622	AV4033
	Cooling/Heating heat working mode	-	0	1	-	R	DI002	BV460
	Enable pre heating coil	-	0	1	-	R	DI652	BV1110
	Pre-heating request from PID Seq	-	-999.0	999.0	%	R	IR219	AV3609
	Pre-heating request	-	-999.0	999.0	%	R	IR220	AV3610
	Enable main coil regulation	-	0	1	-	R	DI653	BV1111
	Cooling/Heating coil request	-	-999.0	999.0	%	R	IR221	AV3611
	Enable post heating coil	-	0	1	-	R	DI654	BV1112
	Post-heating request from PID Seq	-	-999.0	999.0	%	R	IR222	AV3612
Qa 12	Percentage of activation of ebmpapst return fan	-	0	999	%	R	IR213	AV3613
	Return fan - Hardware value writes from board	-	0	1	-	R	DI415	BV873
	Discharge temperature	-	-999.9	999.9	°C	R	IR10 1 IR22 5	AV34 93 IV36 15
	OnOff compressor countdown	-	0	999	s	R	IR22 6	IV36 16
	Compressor request	-	0.0	100.0	%	R	IR22 8	AV36 17
	Suction temperature	-	-999.9	999.9	°C	R	IR10 7	AV34 99
	Compressor - Hardware value writes from board	-	0	1	-	R	DI42 7	BV88 5
	Suction pressure	-	-999.9	999.9	bar	R	IR10 4	AV34 96
	EVD parameters - Status variables - Evaporation temperature	-	-999.9	999.9	°C	R	IR22 9	AV36 18
Qa 15	Discharge pressure	-	-999.9	999.9	bar	R	IR09 8	AV34 90
	EVD parameters - Status variables - Condensing temperature	-	-999.9	999.9	°C	R	IR23 0	AV36 19
	Discharge temperature	-	-999.9	999.9	°C	R	IR10 1	AV34 93
	For mask usage	-	0	99	-	R	IR23 1	IV36 20
	For mask usage	-	0	999	-	R	IR23 2	IV36 21
	BLDC power request	-	0.0	100.0	%	R	IR23 4	AV36 22
	Suction temperature	-	-999.9	999.9	°C	R	IR10 7	AV34 99
	BLDC Compressore run request scaled with the custom max. limit	-	-999.0	999.0	-	R	IR23 5	AV36 23
	Suction pressure	-	-999.9	999.9	bar	R	IR10 4	AV34 96
	EVD parameters - Status variables - Evaporation temperature	-	-999.9	999.9	°C	R	IR22 9	AV36 18
Qa 18	0=Null;1=OK;2=Max.comp.rat;3=Max.dsc.P.;4=Curr.limit;5=Max.suct.P.; 6=Min.comp.rat;7=Min.Del taP;8=Min.dsc.P.;9=Min.suct.P.	-	0	9	-	R	IR23 6	IV36 24
	BLDC to EVD parameters - EVD regulation subtype	-	0	9	-	R	IR23 7	IV36 25
	For mask usage	-	0	99	-	R	IR23 8	IV36 26
	BLDC Compressore run request scaled with the custom max. limit	-	-999.0	999.0	-	R	IR23 5	AV36 23
	EVD parameters - Status variables - Superheat	-	-999.0	999.0	K	R	IR23 9	AV36 27
	EVD parameters - Status variables - Superheat	-	-9.9	9.9	K	R	IR23 9	AV36 27
	Inverter Power Plus Info - Current rotor speed [rps]	-	-999.0	999.0	-	R	IR24 0	AV36 28
	EVD parameters - Status variables - Valve opening	-	-999.0	999.0	%	R	IR24 1	AV36 29
	Out of envelop countdown						IR24 2	IV36 30
	Suction pressure	-	-999.9	999.9	bar	R	IR10 4	AV34 96
	Discharge pressure	-	-999.9	999.9	bar	R	IR09 8	AV34 90
Qa 21	EVD parameters - Status variables - Valve position	-	0	999	-	R	IR24 3	IV36 31
	EVD parameters - Status variables - Valve opening	-	-999.0	999.0	%	R	IR24 1	AV36 29
	For mask usage	-	-999.9	999.9	-	R	IR24 4	AV36 32
	BLDC to EVD parameters - EVD regulation subtype	-	0	9	-	R	IR23 7	IV36 25
	EVD parameters - Status variables - Superheat	-	-99.9	99.9	K	R	IR23 9	AV36 27
	EVD parameters - Status variables - Discharge superheat	-	-99.9	99.9	K	R	IR24 5	AV36 33
	Discharge temperature	-	-999.9	999.9	°C	R	IR10 1	AV34 93
Qa 24	Humidification/Dehumidification: Control probe (See Defined_Word: HUM-DEHUM_CTRLPRB_ XX)	0	0	2	-	R	HR1 318	PIV2 826
	Humidification/Dehumidification: Relative humidity variable	-	-999.9	999.9	-	R	IR24 6	AV36 34
	Humidification/Dehumidification: Absolute humidity variable	-	-999.9	999.9	-	R	IR24 7	AV36 35
	Humidification/Dehumidification: Absolute humidity control	-	0	1	-	R	DI65 5	BV11 13
	Current humidity set point - Setpoint	-	LowLi mVal	HiLi mVal	%rh	R	HR9 81	AV25 03
	Humidification/Dehumidification: Absolute setpoint	-	-999.9	999.9	-	R	IR24 8	AV36 36
	Humidification/Dehumidification: Absolute humidity control	-	0	1	-	R	DI65 5	BV11 13
	Humidification request from PID Seq	-	-999.9	999.9	%	R	IR24 9	AV36 37
	Dehumidification request	-	-999.9	999.9	%	R	IR25 0	AV36 38

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
INFORMATIONS								
Qa 27	Fresh air temperature - Analog input configured	-	0	1	-	R	DI02 8	BV48 6
	Fresh air temperature	-	-999.9	999.9	°C	R	IR06 2	AV34 54
	Saturation temperature - Analog input configured	-	0	1	-	R	DI04 8	BV50 6
	Saturation temperature	-	-999.9	999.9	°C	R	IR07 7	AV34 69
	Dew point set point for dehumidification	-	-999.9	999.9	°C	R	IR25 1	AV36 39
	Dehumidification request	-	-999.9	999.9	%	R	IR25 0	AV36 38
Qa 30	Auxiliary Regulation 1 - Input selection	0	0	13	-	R	HR1 584	PIV3 079
	Auxiliary regulation 1: Informations - Regulation value	-	-999.9	999.9	-	R	IR25 2	AV36 40
	Auxiliary Regulation 1 - Regulation setpoint	20.0	- 9999.9	9999.9	-	R	HR9 80	AV25 02
	Auxiliary output 1	-	-999.0	999.0	-	R	IR17 1	AV35 63
	Auxiliary output 1	-	0	1	-	R	DI46 0	BV91 8
Qa 33	Auxiliary Regulation 1 - Input selection	0	0	13	-	R	HR1 584	PIV3 079
	Auxiliary regulation 2: Informations - Regulation value	-	-999.9	999.9	-	R	IR25 3	AV36 41
	Auxiliary Regulation 2 - Regulation setpoint	20.0	- 9999.9	9999.9	-	R	HR1 602	AV30 97
	Auxiliary output 2	-	-999.0	999.0	-	R	IR17 3	AV35 65
	Auxiliary output 2	-	0	1	-	R	DI46 4	BV92 2
Qa 36	Auxiliary Regulation 1 - Input selection	0	0	13	-	R	HR1 584	PIV3 079
	Auxiliary regulation 3: Informations - Regulation value	-	-999.9	999.9	-	R	IR25 4	AV36 42
	Auxiliary Regulation 3 - Regulation setpoint	20.0	- 9999.9	9999.9	-	R	HR1 616	AV31 11
	Auxiliary output 3	-	-999.0	999.0	-	R	IR17 5	AV35 67
	Auxiliary output 3	-	0	1	-	R	DI46 8	BV92 6
Qa 39	Auxiliary Regulation 1 - Input selection	0	0	13	-	R	HR1 584	PIV3 079
	Auxiliary regulation 4: Informations - Regulation value	-	-999.9	999.9	-	R	IR25 5	AV36 43
	Auxiliary Regulation 4 - Regulation setpoint	20.0	- 9999.9	9999.9	-	R	HR1 630	AV31 25
	Auxiliary output 4	-	-999.0	999.0	-	R	IR17 7	AV35 69
	Auxiliary output 4	-	0	1	-	R	DI47 2	BV93 0
Qa 42	Scheduler is active	-	0	1	-	R	DI65 6	BV11 14
	Scheduler source (DIN, Party mode, SPV, cpCO, thTune)	-	0	9	-	R	IR25 6	PIV3 644
	Scheduler is active	-	0	1	-	R	DI65 6	BV11 14
	Unit status currently active: 0=Off; 1=Economy; 2=Pre-comfort; 3=Comfort	-	0	9	-	R	IR25 7	PIV3 645
Qa 45	KWater modbus variables - Cooling/Heating mode	-	0	1	-	R	DI66 0	BV11 18
	KWater modbus variables - External temperature	-	-999.9	999.9	-	R	IR25 8	AV36 46
	KWater modbus variables - KAir circuit temperature	-	-999.9	999.9	-	R	IR25 9	AV36 47
	Unit status kwater	-	0	99	-	R	IR26 0	PIV3 648
Qa 48	Power request	-	0.0	100.0	%	R	IR26 1	AV36 49
	Actual production of rack (kg/h-lb/h)	-	0.0	100.0	-	R	IR26 2	AV36 50
	Pump running hour humifog	-	0	999999	h	R	IR26 3	PIV3 651
	Machine status	-	0	99	-	R	IR26 5	IV36 52
Qa 51	IEC: request	-	0.0	100.0	%	R	IR26 6	AV36 53
	Actual production of rack (kg/h-lb/h)	-	0.0	100.0	-	R	IR26 7	AV36 54
	Pump running hour humifog	-	0	999999	-	R	IR26 8	PIV3 655
	Machine status	-	0	99	-	R	IR27 0	IV36 56
Qa 54	Split an int value into digits - Compressor 1 circuit 1 active	-	0	1	-	R	DI66 1	BV11 19
	Split an int value into digits - Compressor 2 circuit 1 active	-	0	1	-	R	DI66 2	BV11 20
	Split an int value into digits - rps bldc circ1 rotor speed coming from inverter	-	-999.9	999.9	-	R	IR27 1	AV36 57
	Split an int value into digits - Opn1 - EEV position of circ.1	-	0	999	-	R	IR27 2	IV36 58
	Split an int value into digits - dSP1-Discharge press. probe of circ.1	-	-99.9	99.9	-	R	IR27 3	AV36 59
	Split an int value into digits - Show the Compressor info circ.1 on user interface	-	0	1	-	R	DI66 3	BV11 21
	Split an int value into digits - ScP1-Suction press. of circ.1	-	-99.9	99.9	-	R	IR27 4	AV36 60
	Split an int value into digits - Show the Compressor info circ. 1 on user interface	-	0	1	-	R	DI66 3	BV11 21
	Unitstatus (0=OffByDI;1=OffByKeyb;2=OffBySched;3=OffByBMS;4=OffByChgOvr;5=OffByAl;6=Dfr;7=StdBy;14 =FCOn;15=CoolOn;16=HeatOn;20=Offline)	-	0	99	-	R	IR27 5	IV36 61
	Compressor request	-	0.0	100.0	%	R	IR22 8	AV36 17
Qa 57	Split an int value into digits - Compressor 1 circuit 2 active	-	0	1	-	R	DI66 4	BV11 22
	Split an int value into digits - Compressor 2 circuit 2 active	-	0	1	-	R	DI66 5	BV11 23
	Split an int value into digits - rps bldc circ2 rotor speed coming from inverter	-	-999.9	999.9	-	R	IR27 6	AV36 62
	Split an int value into digits - Opn1 - EEV position of circ.1	-	0	999	-	R	IR27 2	IV36 58
	Split an int value into digits - dSP1-Discharge press. probe of circ.1	-	-99.9	99.9	-	R	IR27 3	AV36 59
	Split an int value into digits - Show the Compressor info circuit 2 on user interface	-	0	1	-	R	DI66 6	BV11 24
	Split an int value into digits - ScP1-Suction press. of circ.1	-	-99.9	99.9	-	R	IR27 4	AV36 60
	Split an int value into digits - Show the Compressor info circuit 2 on user interface	-	0	1	-	R	DI66 6	BV11 24
Qa 57	Unitstatus (0=OffByDI;1=OffByKeyb;2=OffBySched;3=OffByBMS;4=OffByChgOvr;5=OffByAl;6=Dfr;7=StdBy;14 =FCOn;15=CoolOn;16=HeatOn;20=Offline)	-	0	99	-	R	IR27 5	IV36 61
	Compressor request	-	0.0	100.0	%	R	IR22 8	AV36 17
Qa60	HumiSteam - Humidifier status	-	0	99	-	R	IR843	IV4347
	HumiSteam - Immersed electrode current	-	-99.9	99.9	A	R	IR844	IV4348
	HumiSteam - Conductivity of the water in the cylinder	-	0	9999	µS	R	IR846	IV4349
	HumiSteam - Steam istant flow rate value returned by the CPY	-	-999.9	999.9	Kg/h	R	IR847	IV4350
Qa81	SFP - Value to calculate the average	-	0.0	99999.9	kW/(m3/s)	R	IR836	AV4279
	SFP - Calculated average time data – Daily average	-	0.0	99999.9	kW/(m3/s)	R	IR837	AV4280
	SFP - Calculated average time data – Monthly average	-	0.0	99999.9	kW/(m3/s)	R	IR838	AV4281
Qa82	Heat Rec. Eff. - Value to calculate the average	-	0.0	100.0	%)	R	IR839	AV4282
	Heat Rec. Eff. - Calculated average time data – Daily average	-	0.0	100.0	%	R	IR840	AV4283
	Heat Rec. Eff. - Calculated average time data – Monthly average	-	0.0	100.0	%	R	IR841	AV4284

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
INFORMATIONS								
Qa 99	Current version of the application according to standard - X version of the application	-	0	9	-	R	IR27 7	PIV3 663
	Current version of the application according to standard - Y version of the application	-	0	9	-	R	IR27 8	PIV3 664
	Current version of the application according to standard - Z version of the application	-	0	999	-	R	IR27 9	PIV3 665
	Current version of the application according to standard - Beta version enable	-	0	1	-	R	DI66 7	BV11 25
	Current version of the application according to standard - D version of the application	-	0	99	-	R	IR28 0	PIV3 666
	Application version	-	0	9	-	R	IR28 1	PIV3 667
	Application version	-	0	9	-	R	IR28 3	PIV3 668
	Application version	-	0	999	-	R	IR28 5	PIV3 669
	Type of board (12 = c.pCO, 13 = uPC, 14 = c.pCO mini) and size (10 = Large, 11 = Medium, 12 = Small, 13 = XL, 20 = Basic, 21 = Enhanced, 22 = High End)	-	0	99	-	R	IR28 7	PIV3 670
	Type of board (12 = c.pCO, 13 = uPC, 14 = c.pCO mini) and size (10 = Large, 11 = Medium, 12 = Small, 13 = XL, 20 = Basic, 21 = Enhanced, 22 = High End)	-	0	99	-	R	IR28 9	PIV3 671
Qz 03	EBM1 Supply - Speed info of the Ebmpapst fan - Current speed in [rpm] of the fan for Ebmpapst fan	-	0	9999	rpm	R	IR30 9	PIV3 690
	EBM1 Supply - Electrical info - DC link voltage for Ebmpapst fan	-	0	9999	-	R	IR31 0	PIV3 691
	EBM1 Supply - Electrical info - DC link current for Ebmpapst fan	-	0	9999	-	R	IR31 1	PIV3 692
	EBM1 Supply - Electrical info - Current power in [W] for Ebmpapst fan	-	0	65535	W	R	IR31 2	PIV3 693
	EBM1 Supply - Electrical info - Internal circuit temperature for Ebmpapst fan	-	0	999	°C	R	IR31 3	PIV3 694
Qz 04	EBM1 Supply - Ebmpapst sensors values - Anemometer speed (only RadiCal)		0	65535	rpm	R	IR635	PIV4078
	EBM1 Supply - Ebmpapst sensors values - Air flow (only RadiCal)		0	65535	m3/h	R	IR636	PIV4079
	EBM1 Supply - Ebmpapst sensors values - Mass flow (only RadiCal)		0	65535	Kg/h	R	IR637	PIV4080
Qz 06	EBM1 Supply - Motor status defines errors currently detected for Ebmpapst fan - Motor status input register	-	0	65535	-	R	IR31 4	PIV3 695
	EBM1 Supply - Warning bitfield variable for Ebmpast fan - Warining input register (Bitfield)	-	0	65535	-	R	IR31 5	PIV3 696
	EBM1 Supply - Speed info of the Ebmpapst fan - Maximum admissible speed: all read or speed in [rpm] settings are limited to this value for Ebmpapst fan	-	0	9999	rpm	R	IR31 6	PIV3 697
	EBM1 Supply - Working hour counter for Ebmpapst fan	-	0	65535	h	R	IR31 7	PIV3 698
Qz 08	EBM2 Supply - Speed info of the Ebmpapst fan - Current speed in [rpm] of the fan for Ebmpapst fan	-	0	9999	rpm	R	IR642	PIV4085
	EBM2 Supply - Electrical info - DC link voltage for Ebmpapst fan	-	0	9999	-	R	IR643	PIV4086
	EBM2 Supply - Electrical info - DC link current for Ebmpapst fan	-	0	9999	-	R	IR644	PIV4087
	EBM2 Supply - Electrical info - Current power in [W] for Ebmpapst fan	-	0	65535	W	R	IR645	PIV4088
	EBM2 Supply - Electrical info - Internal circuit temperature for Ebmpapst fan	-	0	999	°C	R	IR646	PIV4089
Qz 09	EBM2 Supply - Ebmpapst sensors values - Anemometer speed (only RadiCal)		0	65535	rpm	R	IR651	PIV4094
	EBM2 Supply - Ebmpapst sensors values - Air flow (only RadiCal)		0	65535	m3/h	R	IR652	PIV4095
	EBM2 Supply - Ebmpapst sensors values - Mass flow (only RadiCal)		0	65535	Kg/h	R	IR653	PIV4096
Qz 11	EBM2 Supply - Motor status defines errors currently detected for Ebmpapst fan - Motor status input register	-	0	65535	-	R	IR647	PIV4090
	EBM2 Supply - Warning bitfield variable for Ebmpast fan - Warining input register (Bitfield)	-	0	65535	-	R	IR648	PIV4091
	EBM2 Supply - Speed info of the Ebmpapst fan - Maximum admissible speed: all read or speed in [rpm] settings are limited to this value for Ebmpapst fan	-	0	9999	rpm	R	IR649	PIV4092
	EBM2 Supply -Working hour counter for Ebmpapst fan	-	0	65535	h	R	IR650	PIV4093
Qz 12	Automatically generated - Motor status input register	-	0	65535	-	R	IR32 3	PIV3 704
	Automatically generated - Warining input register (Bitfield)	-	0	65535	-	R	IR32 4	PIV3 705
	Automatically generated - Maximum admissible speed: all read or speed in [rpm] settings are limited to this value for Ebmpapst fan	-	0	9999	rpm	R	IR32 5	PIV3 706
	Working hour counter for Ebmpapst fan	-	0	65535	h	R	IR32 6	PIV3 707
Qz 13	EBM3 Supply - Speed info of the Ebmpapst fan - Current speed in [rpm] of the fan for Ebmpapst fan	-	0	9999	rpm	R	IR656	PIV4099
	EBM3 Supply - Electrical info - DC link voltage for Ebmpapst fan	-	0	9999	-	R	IR657	PIV4100
	EBM3 Supply - Electrical info - DC link current for Ebmpapst fan	-	0	9999	-	R	IR658	PIV4101
	EBM3 Supply - Electrical info - Current power in [W] for Ebmpapst fan	-	0	65535	W	R	IR659	PIV4102
	EBM3 Supply - Electrical info - Internal circuit temperature for Ebmpapst fan	-	0	999	°C	R	IR660	PIV4103
Qz 14	EBM3 Supply - Ebmpapst sensors values - Anemometer speed (only RadiCal)		0	65535	rpm	R	IR665	PIV4108
	EBM3 Supply - Ebmpapst sensors values - Air flow (only RadiCal)		0	65535	m3/h	R	IR666	PIV4109
	EBM3 Supply - Ebmpapst sensors values - Mass flow (only RadiCal)		0	65535	Kg/h	R	IR667	PIV4110
Qz 16	EBM3 Supply - Motor status defines errors currently detected for Ebmpapst fan - Motor status input register	-	0	65535	-	R	IR661	PIV4104
	EBM3 Supply - Warning bitfield variable for Ebmpast fan - Warining input register (Bitfield)	-	0	65535	-	R	IR662	PIV4105
	EBM3 Supply - Speed info of the Ebmpapst fan - Maximum admissible speed: all read or speed in [rpm] settings are limited to this value for Ebmpapst fan	-	0	9999	rpm	R	IR663	PIV4106
	EBM3 Supply - Working hour counter for Ebmpapst fan	-	0	65535	h	R	IR664	PIV4107
Qz 18	EBM4 Supply - Speed info of the Ebmpapst fan - Current speed in [rpm] of the fan for Ebmpapst fan	-	0	9999	rpm	R	IR670	PIV4113
	EBM4 Supply - Electrical info - DC link voltage for Ebmpapst fan	-	0	9999	-	R	IR671	PIV4114
	EBM4 Supply - Electrical info - DC link current for Ebmpapst fan	-	0	9999	-	R	IR672	PIV4115
	EBM4 Supply - Electrical info - Current power in [W] for Ebmpapst fan	-	0	65535	W	R	IR673	PIV4116
	EBM4 Supply - Electrical info - Internal circuit temperature for Ebmpapst fan	-	0	999	°C	R	IR674	PIV4117
Qz 19	EBM4 Supply - Ebmpapst sensors values - Anemometer speed (only RadiCal)		0	65535	rpm	R	IR679	PIV4122
	EBM4 Supply - Ebmpapst sensors values - Air flow (only RadiCal)		0	65535	m3/h	R	IR680	PIV4123
	EBM4 Supply - Ebmpapst sensors values - Mass flow (only RadiCal)		0	65535	Kg/h	R	IR681	PIV4124
Qz 21	EBM4 Supply - Motor status defines errors currently detected for Ebmpapst fan - Motor status input register	-	0	65535	-	R	IR675	PIV4118
	EBM4 Supply - Warning bitfield variable for Ebmpast fan - Warining input register (Bitfield)	-	0	65535	-	R	IR676	PIV4119
	EBM4 Supply - Speed info of the Ebmpapst fan - Maximum admissible speed: all read or speed in [rpm] settings are limited to this value for Ebmpapst fan	-	0	9999	rpm	R	IR677	PIV4120
	EBM4 Supply - Working hour counter for Ebmpapst fan	-	0	65535	h	R	IR678	PIV4121
	EBM1 Return - Speed info of the Ebmpapst fan - Current speed in [rpm] of the fan for Ebmpapst fan	-	0	9999	rpm	R	IR31 8	PIV3 699
Qz 23	EBM1 Return - Ebmpapst sensors values - Anemometer speed (only RadiCal)		0	65535	rpm	R	IR639	PIV4082
	EBM1 Return - Ebmpapst sensors values - Air flow (only RadiCal)		0	65535	m3/h	R	IR640	PIV4083
	EBM1 Return - Ebmpapst sensors values - Mass flow (only RadiCal)		0	65535	Kg/h	R	IR641	PIV4084
	EBM1 Return - Motor status defines errors currently detected for Ebmpapst fan - Motor status input register	-	0	65535	-	R	IR32 3	PIV3 704

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
INFORMATIONS								
Qz 26	EBM1 Return - Warning bitfield variable for Ebmpast fan - Warining input register (Bitfield)	-	0	65535	-	R	IR32 4	PIV3 705
	EBM1 Return - Speed info of the Ebmpapst fan - Maximum admissible speed: all read or speed in [rpm] settings are limited to this value for Ebmpapst fan	-	0	9999	rpm	R	IR32 5	PIV3 706
	EBM1 Return - Working hour counter for Ebmpapst fan	-	0	65535	h	R	IR32 6	PIV3 707
Qz 28	EBM2 Return - Speed info of the Ebmpapst fan - Current speed in [rpm] of the fan for Ebmpapst fan	-	0	9999	rpm	R	IR684	PIV4127
	EBM2 Return - Electrical info - DC link voltage for Ebmpapst fan	-	0	9999	-	R	IR685	PIV4128
	EBM2 Return - Electrical info - DC link current for Ebmpapst fan	-	0	9999	-	R	IR686	PIV4129
	EBM2 Return - Electrical info - Current power in [W] for Ebmpapst fan	-	0	65535	W	R	IR687	PIV4130
	EBM2 Return - Electrical info - Internal circuit temperature for Ebmpapst fan	-	0	999	°C	R	IR688	PIV4131
Qz 29	EBM2 Return - Ebmpapst sensors values - Anemometer speed (only RadiCal)		0	65535	rpm	R	IR693	PIV4136
	EBM2 Return - Ebmpapst sensors values - Air flow (only RadiCal)		0	65535	m3/h	R	IR694	PIV4137
	EBM2 Return - Ebmpapst sensors values - Mass flow (only RadiCal)		0	65535	Kg/h	R	IR695	PIV4138
Qz 31	EBM2 Return - Motor status defines errors currently detected for Ebmpapst fan - Motor status input register	-	0	65535	-	R	IR689	PIV4132
	EBM2 Return - Warning bitfield variable for Ebmpast fan - Warining input register (Bitfield)	-	0	65535	-	R	IR690	PIV4133
	EBM2 Return - Speed info of the Ebmpapst fan - Maximum admissible speed: all read or speed in [rpm] settings are limited to this value for Ebmpapst fan	-	0	9999	rpm	R	IR691	PIV4134
	EBM2 Return - Working hour counter for Ebmpapst fan	-	0	65535	h	R	IR692	PIV4135
Qz 33	EBM3 Return - Speed info of the Ebmpapst fan - Current speed in [rpm] of the fan for Ebmpapst fan	-	0	9999	rpm	R	IR698	PIV4141
	EBM3 Return - Electrical info - DC link voltage for Ebmpapst fan	-	0	9999	-	R	IR699	PIV4142
	EBM3 Return - Electrical info - DC link current for Ebmpapst fan	-	0	9999	-	R	IR700	PIV4143
	EBM3 Return - Electrical info - Current power in [W] for Ebmpapst fan	-	0	65535	W	R	IR701	PIV4144
	EBM3 Return - Electrical info - Internal circuit temperature for Ebmpapst fan for Ebmpapst fan	-	0	999	°C	R	IR702	PIV4145
Qz 34	EBM3 Return - Ebmpapst sensors values - Anemometer speed (only RadiCal)		0	65535	rpm	R	IR707	PIV4150
	EBM3 Return - Ebmpapst sensors values - Air flow (only RadiCal)		0	65535	m3/h	R	IR708	PIV4151
	EBM3 Return - Ebmpapst sensors values - Mass flow (only RadiCal)		0	65535	Kg/h	R	IR709	PIV4152
Qz 36	EBM3 Return - Motor status defines errors currently detected for Ebmpapst fan - Motor status input register	-	0	65535	-	R	IR703	PIV4146
	EBM3 Return - Warning bitfield variable for Ebmpast fan - Warining input register (Bitfield)	-	0	65535	-	R	IR704	PIV4147
	EBM3 Return - Speed info of the Ebmpapst fan - Maximum admissible speed: all read or speed in [rpm] settings are limited to this value for Ebmpapst fan	-	0	9999	rpm	R	IR705	PIV4148
	EBM3 Return - Working hour counter for Ebmpapst fan	-	0	65535	h	R	IR706	PIV4149
Qz 38	EBM4 Return - Speed info of the Ebmpapst fan - Current speed in [rpm] of the fan for Ebmpapst fan	-	0	9999	rpm	R	IR712	PIV4155
	EBM4 Return - Electrical info - DC link voltage for Ebmpapst fan	-	0	9999	-	R	IR713	PIV4156
	EBM4 Return - Electrical info - DC link current for Ebmpapst fan	-	0	9999	-	R	IR714	PIV4157
	EBM4 Return - Electrical info - Current power in [W] for Ebmpapst fan	-	0	65535	W	R	IR715	PIV4158
	EBM4 Return - Electrical info - Internal circuit temperature for Ebmpapst fan	-	0	999	°C	R	IR716	PIV4159
Qz 39	EBM4 Return - Ebmpapst sensors values - Anemometer speed (only RadiCal)		0	65535	rpm	R	IR721	PIV4160
	EBM4 Return - Ebmpapst sensors values - Air flow (only RadiCal)		0	65535	m3/h	R	IR722	PIV4161
	EBM4 Return - Ebmpapst sensors values - Mass flow (only RadiCal)		0	65535	Kg/h	R	IR723	PIV4162
Qz 41	EBM4 Return - Motor status defines errors currently detected for Ebmpapst fan - Motor status input register	-	0	65535	-	R	IR717	PIV4163
	EBM4 Return - Warning bitfield variable for Ebmpast fan - Warining input register (Bitfield)	-	0	65535	-	R	IR718	PIV4164
	EBM4 Return - Speed info of the Ebmpapst fan - Maximum admissible speed: all read or speed in [rpm] settings are limited to this value for Ebmpapst fan	-	0	9999	rpm	R	IR719	PIV4165
	EBM4 Return - Working hour counter for Ebmpapst fan	-	0	65535	h	R	IR720	PIV4166
	ZA1 Supply - Fan speed informations- Actual speed [rpm] of the Zhiel-Abegg fan	-	0	9999	-	R	IR32 7	PIV3 708
Qz 43	ZA1 Supply - Fan electrical informations - DC link voltage (V)	-	0	9999	-	R	IR32 8	PIV3 709
	ZA1 Supply - Fan electrical informations - Supply voltage (peak voltage)	-	0	65535	-	R	IR32 9	PIV3 710
	ZA1 Supply - Fan speed informations - Maximum set speed	-	0	9999	-	R	IR33 0	PIV3 711
	ZA1 Supply - Fan speed informations - Minimum set speed	-	0	65535	-	R	IR33 1	PIV3 712
	ZA1 Supply - Fan electrical informations - Motor input power (W)	-	0	65535	-	R	IR33 2	PIV3 713
	ZA1 Supply - Fan electrical informations - Electronics temp. (°C)	-	-999.9	999.9	-	R	IR33 3	AV37 14
Qz44	ZA1 Supply - Fan electrical informations - IGBT temperature (°C)	-	-999.9	999.9	-	R	IR33 4	AV37 15
	ZA1 Supply - Fan electrical informations - MCU temperature	-	-999.9	999.9	-	R	IR33 5	AV37 16
	ZA1 Supply - Fan electrical informations - Motr temperature (°C)	-	-999.9	999.9	-	R	IR33 6	AV37 17
	ZA1 supply - Fan alarms - Error status defines errors currently detected	-	0	65535	-	R	IR33 7	PIV3 718
Qz46	ZA1 supply -Fan alarms - Error status bit 10: peak current error	-	0	1	-	R	DI67 2	BV11 30
	ZA1 supply -Fan alarms - Error status bit 9: Motor blocked	-	0	1	-	R	DI67 3	BV11 31
	ZA1 supply -Fan alarms - Error status bit 8: Hall sensor error	-	0	1	-	R	DI67 4	BV11 32
	ZA1 supply -Fan alarms - Error status bit 7: Not used, reserved for PMblue etc.	-	0	1	-	R	DI67 5	BV11 33
	ZA1 supply -Fan alarms - Error status bit 6 : Line Fault	-	0	1	-	R	DI67 6	BV11 34
	ZA1 supply -Fan alarms - Error status bit 5: Uin Low (from FW 10)	-	0	1	-	R	DI67 7	BV11 35
	ZA1 supply -Fan alarms - Error status bit 4: Uin High (from FW 10)	-	0	1	-	R	DI67 8	BV11 36
	ZA1 supply -Fan alarms - Error status: bit 3: UZK LO	-	0	1	-	R	DI67 9	BV11 37
	ZA1 supply -Fan alarms - Error status: bit 2: UZK HI	-	0	1	-	R	DI68 0	BV11 38
	ZA1 supply -Fan alarms - Error status bit 1: Earth to GND fault	-	0	1	-	R	DI68 1	BV11 39
	ZA1 supply -Fan alarms - Error status bit 0: IGBT fault	-	0	1	-	R	DI68 2	BV11 40
Qz46	ZA1 supply -Fan status - Working status defines current working conditions	-	0	65535	-	R	IR33 8	PIV3 719
	ZA1 supply -Fan status - Working status code	-	0	9	-	R	IR33 9	PIV3 720
Qz48	ZA2 supply -Fan speed informations - Actual speed [rpm] of the Zhiel-Abegg fan	-	0	9999	-	R	IR728	PIV4171
	ZA2 supply -Fan electrical informations - DC link voltage (V)	-	0	9999	-	R	IR729	PIV4172
	ZA2 supply -Fan electrical informations - Supply voltage (peak voltage)	-	0	65535	-	R	IR730	PIV4173
	ZA2 supply -Fan speed informations - Maximum set speed	-	0	9999	-	R	IR731	PIV4174
	ZA2 supply -Fan speed informations - Minimum set speed	-	0	65535	-	R	IR732	PIV4175
	ZA2 supply -Fan electrical informations - Motor input power (W)	-	0	65535	-	R	IR733	PIV4176
Qz49	ZA2 supply -Fan electrical informations - Electronics temp. (°C)	-	-999.9	999.9	-	R	IR734	AV4177
	ZA2 supply -Fan electrical informations - IGBT temperature (°C)	-	-999.9	999.9	-	R	IR735	AV4178
	ZA2 supply -Fan electrical informations - MCU temperature	-	-999.9	999.9	-	R	IR736	AV4179
	ZA2 supply -Fan electrical informations - Motr temperature (°C)	-	-999.9	999.9	-	R	IR737	AV4180

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
INFORMATIONS								
Qz51	ZA2 supply -Fan alarms - Error status defines errors currently detected	-	0	65535	-	R	IR738	PIV4181
	ZA2 supply -Fan alarms - Error status bit 10: peak current error	-	0	1	-	R		
	ZA2 supply -Fan alarms - Error status bit 9: Motor blocked	-	0	1	-	R		
	ZA2 supply -Fan alarms - Error status bit 8: Hall sensor error	-	0	1	-	R		
	ZA2 supply -Fan alarms - Error status bit 7: Not used, reserved for PMblue etc.	-	0	1	-	R		
	ZA2 supply -Fan alarms - Error status bit 6 : Line Fault	-	0	1	-	R		
	ZA2 supply -Fan alarms - Error status bit 5: Uin Low (from FW 10)	-	0	1	-	R		
	ZA2 supply -Fan alarms - Error status bit 4: Uin High (from FW 10)	-	0	1	-	R		
	ZA2 supply -Fan alarms - Error status: bit 3: UZK LO	-	0	1	-	R		
	ZA2 supply -Fan alarms - Error status: bit 2: UZK HI	-	0	1	-	R		
	ZA2 supply -Fan alarms - Error status bit 1: Earth to GND fault	-	0	1	-	R		
	ZA2 supply -Fan alarms - Error status bit 0: IGBT fault	-	0	1	-	R		
	ZA2 supply -Fan status - Working status defines current working conditions	-	0	65535	-	R	IR739	PIV4182
	ZA2 supply -Fan status - Working status code	-	0	9	-	R	IR740	PIV4183
Qz53	ZA3 supply -Fan speed informations - Actual speed [rpm] of the Zhiel-Abegg fan	-	0	9999	-	R	IR742	PIV4185
	ZA3 supply -Fan electrical informations - DC link voltage (V)	-	0	9999	-	R	IR743	PIV4186
	ZA3 supply -Fan electrical informations - Supply voltage (peak voltage)	-	0	65535	-	R	IR744	PIV4187
	ZA3 supply -Fan speed informations - Maximum set speed	-	0	9999	-	R	IR745	PIV4188
	ZA3 supply -Fan speed informations - Minimum set speed	-	0	65535	-	R	IR746	PIV4189
	ZA3 supply -Fan electrical informations - Motor input power (W)	-	0	65535	-	R	IR747	PIV4190
Qz54	ZA3 supply -Fan electrical informations - Electronics temperature (°C)	-	-999.9	999.9	-	R	IR748	AV4191
	ZA3 supply -Fan electrical informations - IGBT temperature (°C)	-	-999.9	999.9	-	R	IR749	AV4192
	ZA3 supply -Fan electrical informations - MCU temperature	-	-999.9	999.9	-	R	IR750	AV4193
	ZA3 supply -Fan electrical informations - Motr temperature (°C)	-	-999.9	999.9	-	R	IR751	AV4194
Qz56	ZA3 supply -Fan alarms - Error status defines errors currently detected	-	0	65535	-	R	IR752	PIV4195
	ZA3 supply -Fan alarms - Error status bit 10: peak current error	-	0	1	-	R		
	ZA3 supply -Fan alarms - Error status bit 9: Motor blocked	-	0	1	-	R		
	ZA3 supply -Fan alarms - Error status bit 8: Hall sensor error	-	0	1	-	R		
	ZA3 supply -Fan alarms - Error status bit 7: Not used, reserved for PMblue etc.	-	0	1	-	R		
	ZA3 supply -Fan alarms - Error status bit 6 : Line Fault	-	0	1	-	R		
	ZA3 supply -Fan alarms - Error status bit 5: Uin Low (from FW 10)	-	0	1	-	R		
	ZA3 supply -Fan alarms - Error status bit 4: Uin High (from FW 10)	-	0	1	-	R		
	ZA3 supply -Fan alarms - Error status: bit 3: UZK LO	-	0	1	-	R		
	ZA3 supply -Fan alarms - Error status: bit 2: UZK HI	-	0	1	-	R		
	ZA3 supply -Fan alarms - Error status bit 1: Earth to GND fault	-	0	1	-	R		
	ZA3 supply -Fan alarms - Error status bit 0: IGBT fault	-	0	1	-	R		
	ZA3 supply -Fan status - Working status defines current working conditions	-	0	65535	-	R	IR753	PIV4196
	ZA3 supply -Fan status - Working status code	-	0	9	-	R	IR754	PIV4197
Qz58	ZA4 supply -Fan speed informations - Actual speed [rpm] of the Zhiel-Abegg fan	-	0	9999	-	R	IR756	PIV4199
	ZA4 supply -Fan electrical informations - DC link voltage (V)	-	0	9999	-	R	IR757	PIV4200
	ZA4 supply -Fan electrical informations - Supply voltage (peak voltage)	-	0	65535	-	R	IR758	PIV4201
	ZA4 supply -Fan speed informations - Maximum set speed	-	0	9999	-	R	IR759	PIV4202
	ZA4 supply -Fan speed informations - Minimum set speed	-	0	65535	-	R	IR760	PIV4203
	ZA4 supply -Fan electrical informations - Motor input power (W)	-	0	65535	-	R	IR761	PIV4204
Qz59	ZA4 supply -Fan electrical informations - Electronics temperature (°C)	-	-999.9	999.9	-	R	IR762	AV4205
	ZA4 supply -Fan electrical informations - IGBT temperature (°C)	-	-999.9	999.9	-	R	IR763	AV4206
	ZA4 supply -Fan electrical informations - MCU temperature	-	-999.9	999.9	-	R	IR764	AV4207
	ZA4 supply -Fan electrical informations - Motr temperature (°C)	-	-999.9	999.9	-	R	IR765	AV4208
Qz61	ZA4 supply -Fan alarms - Error status defines errors currently detected	-	0	65535	-	R	IR766	PIV4209
	ZA4 supply -Fan alarms - Error status bit 10: peak current error	-	0	1	-	R		
	ZA4 supply -Fan alarms - Error status bit 9: Motor blocked	-	0	1	-	R		
	ZA4 supply -Fan alarms - Error status bit 8: Hall sensor error	-	0	1	-	R		
	ZA4 supply -Fan alarms - Error status bit 7: Not used, reserved for PMblue etc.	-	0	1	-	R		
	ZA4 supply -Fan alarms - Error status bit 6 : Line Fault	-	0	1	-	R		
	ZA4 supply -Fan alarms - Error status bit 5: Uin Low (from FW 10)	-	0	1	-	R		
	ZA4 supply -Fan alarms - Error status bit 4: Uin High (from FW 10)	-	0	1	-	R		
	ZA4 supply -Fan alarms - Error status: bit 3: UZK LO	-	0	1	-	R		
	ZA4 supply -Fan alarms - Error status: bit 2: UZK HI	-	0	1	-	R		
	ZA4 supply -Fan alarms - Error status bit 1: Earth to GND fault	-	0	1	-	R		
	ZA4 supply -Fan alarms - Error status bit 0: IGBT fault	-	0	1	-	R		
	ZA4 supply -Fan status - Working status defines current working conditions	-	0	65535	-	R	IR767	PIV4210
	ZA4 supply -Fan status - Working status code	-	0	9	-	R	IR768	PIV4211
	ZA1 Return -Fan speed informations - Actual speed [rpm] of the Zhiel-Abegg fan	-	0	9999	-	R	IR34 0	PIV3 721
Qz63	ZA1 Return -Fan electrical informations - DC link voltage (V)	-	0	9999	-	R	IR34 1	PIV3 722
	ZA1 Return -Fan electrical informations - Supply voltage (peak voltage)	-	0	65535	-	R	IR34 2	PIV3 723
	ZA1 Return -Fan speed informations - Maximum set speed	-	0	9999	-	R	IR34 3	PIV3 724
	ZA1 Return -Fan speed informations - Minimum set speed	-	0	65535	-	R	IR34 4	PIV3 725
	ZA1 Return -Fan electrical informations - Motor input power (W)	-	0	65535	-	R	IR34 5	PIV3 726
Qz64	ZA1 Return -Fan electrical informations - IGBT temperature (°C)	-	-999.9	999.9	-	R	IR34 7	AV37 28
	ZA1 Return -Fan electrical informations - MCU temperature	-	-999.9	999.9	-	R	IR34 8	AV37 29
	ZA1 Return -Fan electrical informations - Motr temperature (°C)	-	-999.9	999.9	-	R	IR34 9	AV37 30
Qz66	ZA1 Return -Fan alarms - Error status bit 10: peak current error	-	0	1	-	R		
	ZA1 Return -Fan alarms - Error status bit 9: Motor blocked	-	0	1	-	R		
	ZA1 Return -Fan alarms - Error status bit 8: Hall sensor error	-	0	1	-	R		
	ZA1 Return -Fan alarms - Error status bit 7: Not used, reserved for PMblue etc.	-	0	1	-	R		
	ZA1 Return -Fan alarms - Error status bit 6 : Line Fault	-	0	1	-	R		
	ZA1 Return -Fan alarms - Error status bit 5: Uin Low (from FW 10)	-	0	1	-	R		
	ZA1 Return -Fan alarms - Error status bit 4: Uin High (from FW 10)	-	0	1	-	R		
	ZA1 Return -Fan alarms - Error status: bit 3: UZK LO	-	0	1	-	R		
	ZA1 Return -Fan alarms - Error status: bit 2: UZK HI	-	0	1	-	R		
	ZA1 Return -Fan alarms - Error status bit 1: Earth to GND fault	-	0	1	-	R		
	ZA1 Return -Fan alarms - Error status bit 0: IGBT fault	-	0	1	-	R		
Qz66	ZA1 Return -Fan status - Working status defines current working conditions	-	0	65535	-	R	IR35 1	PIV3 732
	ZA1 Return -Fan status - Working status code	-	0	9	-	R	IR352	PIV3733
Qz68	ZA2 Return -Fan speed informations - Actual speed [rpm] of the Zhiel-Abegg fan	-	0	9999	-	R	IR770	PIV4213
	ZA2 Return -Fan electrical informations - DC link voltage (V)	-	0	9999	-	R	IR771	PIV4214
	ZA2 Return -Fan electrical informations - Supply voltage (peak voltage)	-	0	65535	-	R	IR772	PIV4215
	ZA2 Return -Fan speed informations - Maximum set speed	-	0	9999	-	R	IR773	PIV4216
	ZA2 Return -Fan speed informations - Minimum set speed	-	0	65535	-	R	IR774	PIV4217
	ZA2 Return -Fan electrical informations - Motor input power (W)	-	0	65535	-	R	IR775	PIV4218
Qz69	ZA2 Return -Fan electrical informations - Electronics temperature (°C)	-	-999.9	999.9	-	R	IR776	AV4219
	ZA2 Return -Fan electrical informations - IGBT temperature (°C)	-	-999.9	999.9	-	R	IR777	AV4220
	ZA2 Return -Fan electrical informations - MCU temperature	-	-999.9	999.9	-	R	IR778	AV4221
	ZA2 Return -Fan electrical informations - Motr temperature (°C)	-	-999.9	999.9	-	R	IR779	AV4222

Rif	Description	Dev	Min	Max	UoM	Dir	Modbus	BACnet
INFORMATIONS								
Qz71	ZA2 Return -Fan alarms - Error status defines errors currently detected	-	0	65535	-	R	IR780	PIV4223
	ZA2 Return -Fan alarms - Error status bit 10: peak current error	-	0	1	-	R		
	ZA2 Return -Fan alarms - Error status bit 9: Motor blocked	-	0	1	-	R		
	ZA2 Return -Fan alarms - Error status bit 8: Hall sensor error	-	0	1	-	R		
	ZA2 Return -Fan alarms - Error status bit 7: Not used, reserved for PMblue etc.	-	0	1	-	R		
	ZA2 Return -Fan alarms - Error status bit 6 : Line Fault	-	0	1	-	R		
	ZA2 Return -Fan alarms - Error status bit 5: Uin Low (from FW 10)	-	0	1	-	R		
	ZA2 Return -Fan alarms - Error status bit 4: Uin High (from FW 10)	-	0	1	-	R		
	ZA2 Return -Fan alarms - Error status: bit 3: UZK LO	-	0	1	-	R		
Qz71	ZA2 Return -Fan alarms - Error status: bit 2: UZK HI	-	0	1	-	R		
	ZA2 Return -Fan alarms - Error status bit 1: Earth to GND fault	-	0	1	-	R		
	ZA2 Return -Fan alarms - Error status bit 0: IGBT fault	-	0	1	-	R		
	ZA2 Return -Fan status - Working status defines current working conditions	-	0	65535	-	R	IR781	PIV4224
	ZA2 Return -Fan status - Working status code	-	0	9	-	R	IR782	PIV4225
Qz73	ZA3 Return -Fan speed informations - Actual speed [rpm] of the Zhiel-Abegg fan	-	0	9999	-	R	IR784	PIV4227
	ZA3 Return -Fan electrical informations - DC link voltage (V)	-	0	9999	-	R	IR785	PIV4228
	ZA3 Return -Fan electrical informations - Supply voltage (peak voltage)	-	0	65535	-	R	IR786	PIV4229
	ZA3 Return -Fan speed informations - Maximum set speed	-	0	9999	-	R	IR787	PIV4230
	ZA3 Return -Fan speed informations - Minimum set speed	-	0	65535	-	R	IR788	PIV4231
	ZA3 Return -Fan electrical informations - Motor input power (W)	-	0	65535	-	R	IR789	PIV4232
Qz74	ZA3 Return -Fan electrical informations - Electronics temperature (°C)	-	-999.9	999.9	-	R	IR790	AV4233
	ZA3 Return -Fan electrical informations - IGBT temperature (°C)	-	-999.9	999.9	-	R	IR791	AV4234
	ZA3 Return -Fan electrical informations - MCU temperature	-	-999.9	999.9	-	R	IR792	AV4235
	ZA3 Return -Fan electrical informations - Motr temperature (°C)	-	-999.9	999.9	-	R	IR793	AV4236
Qz76	ZA3 Return -Fan alarms - Error status defines errors currently detected	-	0	65535	-	R	IR794	PIV4237
	ZA3 Return -Fan alarms - Error status bit 10: peak current error	-	0	1	-	R		
	ZA3 Return -Fan alarms - Error status bit 9: Motor blocked	-	0	1	-	R		
	ZA3 Return -Fan alarms - Error status bit 8: Hall sensor error	-	0	1	-	R		
	ZA3 Return -Fan alarms - Error status bit 7: Not used, reserved for PMblue etc.	-	0	1	-	R		
	ZA3 Return -Fan alarms - Error status bit 6 : Line Fault	-	0	1	-	R		
	ZA3 Return -Fan alarms - Error status bit 5: Uin Low (from FW 10)	-	0	1	-	R		
	ZA3 Return -Fan alarms - Error status bit 4: Uin High (from FW 10)	-	0	1	-	R		
	ZA3 Return -Fan alarms - Error status: bit 3: UZK LO	-	0	1	-	R		
	ZA3 Return -Fan alarms - Error status: bit 2: UZK HI	-	0	1	-	R		
	ZA3 Return -Fan alarms - Error status bit 1: Earth to GND fault	-	0	1	-	R		
	ZA3 Return -Fan alarms - Error status bit 0: IGBT fault	-	0	1	-	R		
	ZA3 Return -Fan status - Working status defines current working conditions	-	0	65535	-	R	IR795	PIV4238
	ZA3 Return -Fan status - Working status code	-	0	9	-	R	IR796	PIV4239
Qz78	ZA4 Return -Fan speed informations - Actual speed [rpm] of the Zhiel-Abegg fan	-	0	9999	-	R	IR798	PIV4241
	ZA4 Return -Fan electrical informations - DC link voltage (V)	-	0	9999	-	R	IR799	PIV4242
	ZA4 Return -Fan electrical informations - Supply voltage (peak voltage)	-	0	65535	-	R	IR800	PIV4243
	ZA4 Return -Fan speed informations - Maximum set speed	-	0	9999	-	R	IR801	PIV4244
	ZA4 Return -Fan speed informations - Minimum set speed	-	0	65535	-	R	IR802	PIV4245
	ZA4 Return -Fan electrical informations - Motor input power (W)	-	0	65535	-	R	IR803	PIV4246
Qz79	ZA4 Return -Fan electrical informations - Electronics temperature (°C)	-	-999.9	999.9	-	R	IR804	AV4247
	ZA4 Return -Fan electrical informations - IGBT temperature (°C)	-	-999.9	999.9	-	R	IR805	AV4248
	ZA4 Return -Fan electrical informations - MCU temperature	-	-999.9	999.9	-	R	IR806	AV4249
	ZA4 Return -Fan electrical informations - Motr temperature (°C)	-	-999.9	999.9	-	R	IR807	AV4250
Qz81	ZA4 Return -Fan alarms - Error status defines errors currently detected	-	0	65535	-	R	IR808	PIV4251
	ZA4 Return -Fan alarms - Error status bit 10: peak current error	-	0	1	-	R		
	ZA4 Return -Fan alarms - Error status bit 9: Motor blocked	-	0	1	-	R		
	ZA4 Return -Fan alarms - Error status bit 8: Hall sensor error	-	0	1	-	R		
	ZA4 Return -Fan alarms - Error status bit 7: Not used, reserved for PMblue etc.	-	0	1	-	R		
	ZA4 Return -Fan alarms - Error status bit 6 : Line Fault	-	0	1	-	R		
	ZA4 Return -Fan alarms - Error status bit 5: Uin Low (from FW 10)	-	0	1	-	R		
	ZA4 Return -Fan alarms - Error status bit 4: Uin High (from FW 10)	-	0	1	-	R		
	ZA4 Return -Fan alarms - Error status: bit 3: UZK LO	-	0	1	-	R		
	ZA4 Return -Fan alarms - Error status: bit 2: UZK HI	-	0	1	-	R		
	ZA4 Return -Fan alarms - Error status bit 1: Earth to GND fault	-	0	1	-	R		
	ZA4 Return -Fan alarms - Error status bit 0: IGBT fault	-	0	1	-	R		
	ZA4 Return -Fan status - Working status defines current working conditions	-	0	65535	-	R	IR809	PIV4252
	ZA4 Return -Fan status - Working status code	-	0	9	-	R	IR810	PIV4253
Qz 89	Device info - Firmware release (high part)	-	0	9	-	R	IR35 3	PIV3 734
	Device info - Firmware release (low part)	-	0	9	-	R	IR35 4	PIV3 735
	Device info - Working hours of the unit	-	-32768	32767	-	R	IR35 5	IV37 36
	Lists of variables of the device not managed by default	-	0	8	-	R	IR35 6	IV37 37
	Alarm code read from device	-	0	99	-	R	IR35 7	PIV3 738
Qz 93	Actual day	-	0	99	d	R	IR35 8	PIV3 739
	Actual month	-	0	99	mo nth	R	IR35 9	PIV3 740
	Actual year	-	0	99	y	R	IR36 0	PIV3 741
	cpCO real time clock	-	0	99	-	R	IR36 1	PIV3 742
	cpCO real time clock	-	0	99	-	R	IR36 2	PIV3 743
	cpCO real time clock	-	0	99	-	R	IR36 3	PIV3 744
	Saving of last day before blackout	-	0	99	d	R	IR36 4	PIV3 745
	Saving of last month before blackout	-	0	99	mo nth	R	IR36 5	PIV3 746
	Saving of last year before blackout	-	0	99	y	R	IR36 6	PIV3 747
	Saving of last hour before blackout	-	0	99	h	R	IR36 7	PIV3 748
	Saving of last minute before blackout	-	0	99	min	R	IR36 8	PIV3 749
	Saving of last second before blackout	-	0	99	s	R	IR36 9	PIV3 750
	Number of days since the last blackout	-	0	999	d	R	IR37 0	PIV3 751
	Number of hours since the last blackout	-	0	99	h	R	IR37 1	PIV3 752
	Numbers of minutes since the last blackout	-	0	99	min	R	IR37 2	PIV3 753
Qz 96	Last polling loop time (ms)	-	0	999999	ms	R	IR37 3	PIV3 754
	Number of Polling loops	-	0	999999	-	R	IR37 5	PIV3 755
Qz 99	Absolute number of writings in retain memory during the entire device life	-	0	999999	-	R	IR37 7	PIV3 756
	Program speed in ms	-	0	9999	ms	R	IR37 9	PIV3 757
	Program speed in CyclePerSecond	-	- 99999.9	99999.9	-	R	IR38 0	AV37 58

Tab. 10.p

Notes:

- the values indicated by "---" are not significant or have not been set;
- the values indicated by "..." may differ depending on the configuration, and the options are shown on the user terminal;
- an entire row of "..." indicates similarly parameters that are repeated;
- Modbus variables: HR (holding registers), DI (Discrete inputs), IR (input registers), CS (Coils);

11. SUPERVISOR VARIABLE TABLE

Il controllo k.Air può essere connesso a sistemi di supervisione che utilizzano il protocollo Modbus. Per la connessione si usano le porte seriali BMS (Si veda il capitolo Porte di comunicazione).
Significato delle variabili:

- Coils: lettura/scrittura, 1 bit (off /on);
- Discrete Inputs: lettura, 1 bit (off /on);
- Input Registers: lettura, 16 bits (0 to 65535), essenzialmente misure e stati;
- Holding Registers: lettura e scrittura, 16 bits (0 to 65535), essenzialmente valori di configurazione.

11.1.16 Coils

Variable	Description	Dim	Modbus	BACnet
AlarmsMng.AlrmResByBms	Alarm reset by BMS	1	CS001	BV1
Scheduler_OnOffUnit.BMS_OnOff	On/off request by BMS	1	CS002	BV2
SummerWinter_BMS	Summer/Winter mode by BMS (FALSE: Summer; TRUE: Winter)	1	CS004	BV4
Scheduler_OnOffUnit.BMS_UnitProfile_En	Enable the unit profile from BMS	1	CS005	BV5
Scheduler_Cfg.Prg[0].Event[0].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS006	BV6
Scheduler_Cfg.Prg[0].Event[1].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS007	BV7
Scheduler_Cfg.Prg[0].Event[2].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS008	BV8
Scheduler_Cfg.Prg[0].Event[3].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS009	BV9
Scheduler_Cfg.Prg[0].Event[4].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS010	BV10
Scheduler_Cfg.Prg[0].Event[5].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS011	BV11
Scheduler_Cfg.Prg[0].Event[6].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS012	BV12
Scheduler_Cfg.Prg[0].Event[7].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS013	BV13
Scheduler_Cfg.Prg[0].Event[8].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS014	BV14
Scheduler_Cfg.Prg[0].Event[9].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS015	BV15
Scheduler_Cfg.Prg[1].Event[0].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS016	BV16
Scheduler_Cfg.Prg[1].Event[1].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS017	BV17
Scheduler_Cfg.Prg[1].Event[2].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS018	BV18
Scheduler_Cfg.Prg[1].Event[3].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS019	BV19
Scheduler_Cfg.Prg[1].Event[4].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS020	BV20
Scheduler_Cfg.Prg[1].Event[5].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS021	BV21
Scheduler_Cfg.Prg[1].Event[6].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS022	BV22
Scheduler_Cfg.Prg[1].Event[7].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS023	BV23
Scheduler_Cfg.Prg[1].Event[8].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS024	BV24
Scheduler_Cfg.Prg[1].Event[9].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS025	BV25
Scheduler_Cfg.Prg[2].Event[0].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS026	BV26
Scheduler_Cfg.Prg[2].Event[1].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS027	BV27
Scheduler_Cfg.Prg[2].Event[2].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS028	BV28
Scheduler_Cfg.Prg[2].Event[3].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS029	BV29
Scheduler_Cfg.Prg[2].Event[4].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS030	BV30
Scheduler_Cfg.Prg[2].Event[5].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS031	BV31
Scheduler_Cfg.Prg[2].Event[6].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS032	BV32
Scheduler_Cfg.Prg[2].Event[7].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS033	BV33
Scheduler_Cfg.Prg[2].Event[8].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS034	BV34
Scheduler_Cfg.Prg[2].Event[9].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS035	BV35
Scheduler_Cfg.Prg[3].Event[0].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS036	BV36
Scheduler_Cfg.Prg[3].Event[1].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS037	BV37
Scheduler_Cfg.Prg[3].Event[2].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS038	BV38
Scheduler_Cfg.Prg[3].Event[3].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS039	BV39
Scheduler_Cfg.Prg[3].Event[4].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS040	BV40
Scheduler_Cfg.Prg[3].Event[5].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS041	BV41
Scheduler_Cfg.Prg[3].Event[6].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS042	BV42
Scheduler_Cfg.Prg[3].Event[7].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS043	BV43
Scheduler_Cfg.Prg[3].Event[8].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS044	BV44
Scheduler_Cfg.Prg[3].Event[9].Enabled	Scheduler: configuration - Program - Event - Enable event	1	CS045	BV45
Scheduler_Cfg.SDays[0].Enabled	Scheduler: configuration - Special day - Enabled	1	CS046	BV46
Scheduler_Cfg.SDays[1].Enabled	Scheduler: configuration - Special day - Enabled	1	CS047	BV47
Scheduler_Cfg.SDays[2].Enabled	Scheduler: configuration - Special day - Enabled	1	CS048	BV48
Scheduler_Cfg.SDays[3].Enabled	Scheduler: configuration - Special day - Enabled	1	CS049	BV49
Scheduler_Cfg.SDays[4].Enabled	Scheduler: configuration - Special day - Enabled	1	CS050	BV50
Scheduler_Cfg.SDays[5].Enabled	Scheduler: configuration - Special day - Enabled	1	CS051	BV51
Scheduler_Cfg.SDays[6].Enabled	Scheduler: configuration - Special day - Enabled	1	CS052	BV52
Scheduler_Cfg.SDays[7].Enabled	Scheduler: configuration - Special day - Enabled	1	CS053	BV53
Scheduler_Cfg.SDays[8].Enabled	Scheduler: configuration - Special day - Enabled	1	CS054	BV54
Scheduler_Cfg.SDays[9].Enabled	Scheduler: configuration - Special day - Enabled	1	CS055	BV55
Scheduler_Cfg.SDays[10].Enabled	Scheduler: configuration - Special day - Enabled	1	CS056	BV56
Scheduler_Cfg.SDays[11].Enabled	Scheduler: configuration - Special day - Enabled	1	CS057	BV57
Scheduler_Cfg.SDays[12].Enabled	Scheduler: configuration - Special day - Enabled	1	CS058	BV58
Scheduler_Cfg.SDays[13].Enabled	Scheduler: configuration - Special day - Enabled	1	CS059	BV59
Scheduler_Cfg.SDays[14].Enabled	Scheduler: configuration - Special day - Enabled	1	CS060	BV60
Scheduler_Cfg.Vac[0].Enabled	Scheduler: configuration - Vacation period - Enabled	1	CS061	BV61
Scheduler_Cfg.Vac[1].Enabled	Scheduler: configuration - Vacation period - Enabled	1	CS062	BV62
Scheduler_Cfg.Vac[2].Enabled	Scheduler: configuration - Vacation period - Enabled	1	CS063	BV63
SupplyAirFlwSw.LogicDin_RW	Supply air flow switch - Logic digital input	1	CS065	BV65
RetAirFlwSw.LogicDin_RW	Return air flow switch - Logic digital input	1	CS066	BV66
AirFlwSw.LogicDin_RW	Air flow switch - Logic digital input	1	CS067	BV67
AFreezeSw.LogicDin_RW	Antifreeze switch - Logic digital input	1	CS068	BV68
RemOnOff.LogicDin_RW	Remote On/Off - Logic digital input	1	CS069	BV69
SupplyFanOvld_1.LogicDin_RW	Supply fan overload 1 - Logic digital input	1	CS070	BV70
RetFanOvld_1.LogicDin_RW	Return fan overload 1 - Logic digital input	1	CS071	BV71
SupplyFanOvld_2.LogicDin_RW	Supply fan overload 2 - Logic digital input	1	CS072	BV72
RetFanOvld_2.LogicDin_RW	Return fan overload 2 - Logic digital input	1	CS073	BV73
SupplyFanInvAlrm.LogicDin_RW	Supply inverter alarm - Logic digital input	1	CS074	BV74
RetFanInvAlrm.LogicDin_RW	Return inverter alarm - Logic digital input	1	CS075	BV75
FansOvld.LogicDin_RW	Fans overload - Logic digital input	1	CS076	BV76
CompOvld.LogicDin_RW	Compressor overload - Logic digital input	1	CS077	BV77
HiPSw.LogicDin_RW	High discharge pressure switch - Logic digital input	1	CS078	BV78
LowPSw.LogicDin_RW	Low suction pressure switch - Logic digital input	1	CS079	BV79
RecoveryOvld.LogicDin_RW	Thermal wheel overload - Logic digital input	1	CS080	BV80
SrsAlrm.LogicDin_RW	Serious alarm - Logic digital input	1	CS081	BV81
GenAlrm.LogicDin_RW	Generic alarm - Logic digital input	1	CS082	BV82
GenWarning.LogicDin_RW	Generic warning - Logic digital input	1	CS083	BV83

Variable	Description	Dim	Modbus	BACnet
FiltAlrm.LogicDin_RW	Filters alarm - Logic digital input	1	CS084	BV84
SupplyFiltAlrm_1.LogicDin_RW	Supply filter alarm 1 - Logic digital input	1	CS085	BV85
SupplyFiltAlrm_2.LogicDin_RW	Supply filter alarm 2 - Logic digital input	1	CS086	BV86
RetFiltAlrm.LogicDin_RW	Return filter alarm - Logic digital input	1	CS087	BV87
HumAlrm.LogicDin_RW	Humidifier alarm - Logic digital input	1	CS088	BV88
MainCoilPmp1_Ovld.LogicDin_RW	Main coil pump 1 overload - Logic digital input	1	CS089	BV89
MainCoilPmp2_Ovld.LogicDin_RW	Main coil pump 2 overload - Logic digital input	1	CS090	BV90
ReHeatCoilPmp1_Ovld.LogicDin_RW	ReHeat coil pump 1 overload - Logic digital input	1	CS091	BV91
ReHeatCoilPmp2_Ovld.LogicDin_RW	ReHeat coil pump 2 overload - Logic digital input	1	CS092	BV92
PreHeatCoilPmp1_Ovld.LogicDin_RW	PreHeat coil pump 1 overload - Logic digital input	1	CS093	BV93
PreHeatCoilPmp2_Ovld.LogicDin_RW	PreHeat coil pump 2 overload - Logic digital input	1	CS094	BV94
OA_CoilPmp1_Ovld.LogicDin_RW	Outdoor air pre-treatment coil pump 1 overload - Logic digital input	1	CS095	BV95
OA_CoilPmp2_Ovld.LogicDin_RW	Outdoor air pre-treatment coil pump 2 overload - Logic digital input	1	CS096	BV96
FreshAirDampSw.LogicDin_RW	Fresh air damper switch - Logic digital input	1	CS097	BV97
SupplyDamperSw.LogicDin_RW	Supply damper switch - Logic digital input	1	CS098	BV98
RetDampSw.LogicDin_RW	Return damper switch - Logic digital input	1	CS099	BV99
MainCoilFlwSw.LogicDin_RW	Main coil flow switch - Logic digital input	1	CS100	BV100
PreHeatCoilFlwSw.LogicDin_RW	Pre-heating coil flow switch - Logic digital input	1	CS101	BV101
ReHeatCoilFlwSw.LogicDin_RW	Post-Heating coil flow switch - Logic digital input	1	CS102	BV102
OA_CoilFlwSw.LogicDin_RW	Outdoor air pre-treatment coil flow switch - Logic digital input	1	CS103	BV103
RecoveryClogged.LogicDin_RW	Recovery clogged - Logic digital input	1	CS104	BV104
ReHeatAlrm.LogicDin_RW	Re-heating alarm - Logic digital input	1	CS105	BV105
PreHeatAlrm.LogicDin_RW	Pre-heating alarm - Logic digital input	1	CS106	BV106
MainHeatCoilAlrm.LogicDin_RW	Main coil alarm - Logic digital input	1	CS107	BV107
OA_CoilAlrm.LogicDin_RW	Outdoor air pre-treatment-Heat alarm - Logic digital input	1	CS108	BV108
DoorSw.LogicDin_RW	Door Switch - Logic digital input	1	CS109	BV109
FireSmokeAlrm.LogicDin_RW	Fire/Smoke alarm - Logic digital input	1	CS110	BV110
FiremanOverrideSw.LogicDin_RW	Fireman override switch - Logic digital input	1	CS111	BV111
SummerWinterModeByDin.LogicDin_RW	Summer/Winter mode by digital input - Logic	1	CS112	BV112
Din_SetP.LogicDin_RW	Setpoint by digital input - Logic digital input	1	CS113	BV113
Eco_Mode.LogicDin_RW	Eco mode - Logic digital input	1	CS114	BV114
PreComf_Mode.LogicDin_RW	Precomfort mode - Logic digital input	1	CS115	BV115
Comf_Mode.LogicDin_RW	Comfort mode - Logic digital input	1	CS116	BV116
AuxDin_1.LogicDin_RW	Auxiliary digital input 1 - Logic digital input	1	CS117	BV117
AuxDin_2.LogicDin_RW	Auxiliary digital input 2 - Logic digital input	1	CS118	BV118
AuxDin_3.LogicDin_RW	Auxiliary digital input 3 - Logic digital input	1	CS119	BV119
AuxDin_4.LogicDin_RW	Auxiliary digital input 4 - Logic digital input	1	CS120	BV120
DfrHeatExch_Din.LogicDin_RW	Heat exchanger defrost by Din - Logic digital input	1	CS121	BV121
BypassDamp_Dout.LogicDout_RW	Bypass damper - Logic digital output	1	CS122	BV122
BypassDamp_Open.LogicDout_RW	Bypass damper floating (open) - Logic digital output	1	CS123	BV123
BypassDamp_Close.LogicDout_RW	Bypass damper floating (close) - Logic digital output	1	CS124	BV124
FreshAirDamp_Dout.LogicDout_RW	Fresh air damper - Logic digital output	1	CS125	BV125
ExhAirDamp_Dout.LogicDout_RW	Exhaust air damper - Logic digital output	1	CS126	BV126
MixingDamp_Dout.LogicDout_RW	Mixing damper - Logic digital output	1	CS127	BV127
SupplyAirDamp_Dout.LogicDout_RW	Supply air damper - Logic digital output	1	CS128	BV128
RetAirDamp_Dout.LogicDout_RW	Return air damper - Logic digital output	1	CS129	BV129
MixingDamp_Open.LogicDout_RW	Mixing damper floating (OPEN) - Logic digital output	1	CS130	BV130
MixingDamp_Close.LogicDout_RW	Mixing damper floating (CLOSE) - Logic digital output	1	CS131	BV131
SupplyFan_Dout.LogicDout_RW	Supply fan - Logic digital output	1	CS132	BV132
RetFan_Dout.LogicDout_RW	Return fan - Logic digital output	1	CS133	BV133
SupplyFan2_Dout.LogicDout_RW	Supply fan 2 - Logic digital output	1	CS134	BV134
RetFan2_Dout.LogicDout_RW	Return fan 2 - Logic digital output	1	CS135	BV135
Comp_Dout.LogicDout_RW	Compressor - Logic digital output	1	CS136	BV136
RevVlv.LogicDout_RW	Reverse valve - Logic digital output	1	CS137	BV137
UnitOnOff_Dout.LogicDout_RW	Unit status (On/Off) - Logic digital output	1	CS138	BV138
SummerWinterModeByDin.LogicDin_RW	Summer/Winter mode by digital input - Logic	1	CS112	BV112
GlobalAlrm_Dout.LogicDout_RW	Generic alarm info - Logic digital output	1	CS140	BV140
LightAlrm_Dout.LogicDout_RW	Light alarm info - Logic digital output	1	CS141	BV141
SrsAlrm_Dout.LogicDout_RW	Serious alarm info - Logic digital output	1	CS142	BV142
Humidifier.LogicDout_RW	Humidifier - Logic digital output	1	CS143	BV143
AuxOut1_Dout.LogicDout_RW	Auxiliary output 1 - Logic digital output	1	CS144	BV144
AuxOut2_Dout.LogicDout_RW	Auxiliary output 2 - Logic digital output	1	CS145	BV145
AuxOut3_Dout.LogicDout_RW	Auxiliary output 3 - Logic digital output	1	CS146	BV146
AuxOut4_Dout.LogicDout_RW	Auxiliary output 4 - Logic digital output	1	CS147	BV147
MainVlv_Open.LogicDout_RW	Main floating valve open - Logic digital output	1	CS148	BV148
PreHeatVlv_Open.LogicDout_RW	Pre-heating floating valve open - Logic digital output	1	CS149	BV149
ReHeatVlv_Open.LogicDout_RW	Re-Heating floating valve open - Logic digital output	1	CS150	BV150
MainVlv_Close.LogicDout_RW	Main floating valve close - Logic digital output	1	CS151	BV151
PreHeatVlv_Close.LogicDout_RW	Pre-heating floating valve close - Logic digital output	1	CS152	BV152
ReHeatVlv_Close.LogicDout_RW	Re-Heating floating valve close - Logic digital output	1	CS153	BV153
MainCoil_Step1.LogicDout_RW	Main step 1 - Logic digital output	1	CS154	BV154
MainCoil_Step2.LogicDout_RW	Main step 2 - Logic digital output	1	CS155	BV155
MainCoil_Step3.LogicDout_RW	Main step 3 - Logic digital output	1	CS156	BV156
MainCoil_Step4.LogicDout_RW	Main step 4 - Logic digital output	1	CS157	BV157
ReHeatCoil_Step1.LogicDout_RW	Postheat heater 1 - Logic digital output	1	CS158	BV158
ReHeatCoil_Step2.LogicDout_RW	Postheat heater 2 - Logic digital output	1	CS159	BV159
ReHeatCoil_Step3.LogicDout_RW	Postheat heater 3 - Logic digital output	1	CS160	BV160
ReHeatCoil_Step4.LogicDout_RW	Postheat heater 4 - Logic digital output	1	CS161	BV161
PreHeatCoil_Step1.LogicDout_RW	Preheat heater 1 - Logic digital output	1	CS162	BV162
PreHeatCoil_Step2.LogicDout_RW	Preheat heater 2 - Logic digital output	1	CS163	BV163
PreHeatCoil_Step3.LogicDout_RW	Preheat heater 3 - Logic digital output	1	CS164	BV164
PreHeatCoil_Step4.LogicDout_RW	Preheat heater 4 - Logic digital output	1	CS165	BV165
OA_Coil_Step1.LogicDout_RW	Outdoor air pre-treatment heater 1 - Logic digital output	1	CS166	BV166
OA_Coil_Step2.LogicDout_RW	Outdoor air pre-treatment heater 2 - Logic digital output	1	CS167	BV167
OA_Coil_Step3.LogicDout_RW	Outdoor air pre-treatment heater 3 - Logic digital output	1	CS168	BV168
OA_Coil_Step4.LogicDout_RW	Outdoor air pre-treatment heater 4 - Logic digital output	1	CS169	BV169
PreHeatPmp_1.LogicDout_RW	Pre-Heating pump 1 - Logic digital output	1	CS170	BV170
PreHeatPmp_2.LogicDout_RW	Pre-Heating pump 2 - Logic digital output	1	CS171	BV171
MainCoilPmp_1.LogicDout_RW	Main pump 1 - Logic digital output	1	CS172	BV172
MainCoilPmp_2.LogicDout_RW	Main pump 2 - Logic digital output	1	CS173	BV173
ReHeatPmp_1.LogicDout_RW	Re-Heating pump 1 - Logic digital output	1	CS174	BV174
ReHeatPmp_2.LogicDout_RW	Re-Heating pump 2 - Logic digital output	1	CS175	BV175
OA_CoilPmp_1.LogicDout_RW	Outdoor air pre-treatment -Heating pump 1 - Logic digital output	1	CS176	BV176
OA_CoilPmp_2.LogicDout_RW	Outdoor air pre-treatment -Heating pump 2 - Logic digital output	1	CS177	BV177
FiltAlrm_Dout.LogicDout_RW	Filters alarm - Logic digital output	1	CS178	BV178
Recovery_Dout.LogicDout_RW	Recovery - Logic digital output	1	CS179	BV179
IEC_Hum_Dout.LogicDout_RW	IEC humidifer - Logic digital output	1	CS180	BV180
SummerWinter_UI	Summer/Winter mode by Keyboard (FALSE: Summer; TRUE: Winter)	1	CS181	BV181
Scheduler_OnOffUnit.PartyMode_Start	Party mode: start command	1	CS182	BV182
VarToShow.Logic	-	1	CS183	BV183
FreshAirDampEnMan	Fresh air damper manual mode enable	1	CS184	BV184
MixDampEnMan	Mixing damper manual mode enable	1	CS185	BV185

Variable	Description	Dim	Modbus	BACnet
ExhAirDampEnMan	Exhaust air damper manual mode enable	1	CS186	BV186
BypassDampEnMan	Bypass damper manual mode enable	1	CS187	BV187
SupplyFanEnMan	Supply fan manual mode enable	1	CS188	BV188
RetFanEnMan	Return fan manual mode enable	1	CS189	BV189
PreHeatCoilEnMan	Pre heating coil manual mode enable	1	CS190	BV190
MainCoilEnMan	Main coil manual mode enable	1	CS191	BV191
ReHeatCoilEnMan	Post heating coil manual mode enable	1	CS192	BV192
CompEnMan	Compressor manual mode enable	1	CS193	BV193
HumEnMan	Humidifier manual mode enable	1	CS194	BV194
En_SetPComp	Enable setpoint compensation by external temperature	1	CS195	BV195
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[0].Enabled	Event - Enable event	1	CS196	BV196
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[1].Enabled	Event - Enable event	1	CS197	BV197
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[2].Enabled	Event - Enable event	1	CS198	BV198
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[3].Enabled	Event - Enable event	1	CS199	BV199
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[4].Enabled	Event - Enable event	1	CS200	BV200
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[5].Enabled	Event - Enable event	1	CS201	BV201
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[6].Enabled	Event - Enable event	1	CS202	BV202
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[7].Enabled	Event - Enable event	1	CS203	BV203
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[8].Enabled	Event - Enable event	1	CS204	BV204
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[9].Enabled	Event - Enable event	1	CS205	BV205
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Vac_T_Msk[0].Enabled	Vacation period - Enabled	1	CS206	BV206
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Vac_T_Msk[1].Enabled	Vacation period - Enabled	1	CS207	BV207
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Vac_T_Msk[2].Enabled	Vacation period - Enabled	1	CS208	BV208
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[0].Enabled	Special day - Enabled	1	CS209	BV209
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[1].Enabled	Special day - Enabled	1	CS210	BV210
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[2].Enabled	Special day - Enabled	1	CS211	BV211
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[3].Enabled	Special day - Enabled	1	CS212	BV212
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[4].Enabled	Special day - Enabled	1	CS213	BV213
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[5].Enabled	Special day - Enabled	1	CS214	BV214
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[6].Enabled	Special day - Enabled	1	CS215	BV215
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[7].Enabled	Special day - Enabled	1	CS216	BV216
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[8].Enabled	Special day - Enabled	1	CS217	BV217
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[9].Enabled	Special day - Enabled	1	CS218	BV218
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[10].Enabled	Special day - Enabled	1	CS219	BV219
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[11].Enabled	Special day - Enabled	1	CS220	BV220
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[12].Enabled	Special day - Enabled	1	CS221	BV221
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[13].Enabled	Special day - Enabled	1	CS222	BV222
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[14].Enabled	Special day - Enabled	1	CS223	BV223
Scheduler_OnOffUnit.En_PartyMode	Enable Party mode from c.pCO	1	CS224	BV224
En_RetFan	Enable return fan	1	CS225	BV225
En_DehumReg	Enable dehumidification regulation	1	CS226	BV226
Dehum_En_KWaterDWP	Dehumidification: enable kwater dew point calculation	1	CS227	BV227
En_WarmUp	Enable warm up procedure during start up state	1	CS228	BV228
En_AfreezeOffState	Enable antifreeze during off state	1	CS229	BV229
RegPrbErrMode	FALSE=forced off; TRUE=manual activation	1	CS230	BV230
StateMachine.En_RegPrbErr_UnitOff	Enabling of the regulation probe error status during the off state	1	CS231	BV231
En_THTN	Enable thTune management	1	CS232	BV232
Scheduler_OnOffUnit.BMS_OnOff_En	Enable on/off request by BMS	1	CS234	BV234
kWater_OnOff_En	OnOff by k.water enabling	1	CS235	BV235
En_VDI	Enable VDI management	1	CS236	BV236
En_VDI_HiSatHumStartUp	VDI high saturation humidity startup enabled	1	CS237	BV237
RetFanPrefRunDir	Preferred running direction (FALSE: left; TRUE: right) for fan	1	CS238	BV238
RetFan_En_EmergFunct	Enable emergency function (FALSE: Inactive; TRUE: Active;) for Ebmpapst fan	1	CS239	BV239
En_Fan_CO2_Reg	Enable air quality regulation for fans	1	CS245	BV245
En_FanTempLim	Enable fan temperature limit regulation	1	CS246	BV246
En_FC_FH_FanReg	Enable fan regulation in case of FreeCooling/FreeHeating	1	CS247	BV247
En_NightMinVent	Enable night minimum ventilation	1	CS248	BV248
NightVentPriority	Priority between minimum ventilation and night free cooling (FALSE: minimum ventilation; TRUE: free cooling)	1	CS249	BV249
Antifreeze.DisLowSupplyTempAlrm	Disable Low supply temperature alarm	1	CS250	BV250
Regulation.EnCompNightVent	Enable compressor during night ventilation	1	CS251	BV251
Humisonic.ManDrain_HUMS	Manual drain request: FALSE=no request; TRUE=request to drain	1	CS252	BV252
Humisonic.DevSettings_HUMS.HrsCountRes	Parameters for device configuration - Hours counter reset request	1	CS253	BV253
SupplyFanPrefRunDir	Preferred running direction (FALSE: left; TRUE: right) for fan	1	CS254	BV254
SupplyFan_En_EmergFunct	Settings of the emergency function - Enable emergency function (FALSE: Inactive; TRUE: Active;) for Ebmpapst fan	1	CS255	BV255
AuxReg1_Cfg.DOut_ErrorValue	Auxiliary Regulation 1 - Dout: Error value	1	CS261	BV261
AuxReg1_Cfg.EnableSel_ManualEn	Auxiliary Regulation 1 - Enable selection: Manual enabling	1	CS262	BV262
AuxReg1_Cfg.En_ComfortReg	Auxiliary Regulation 1 - Enable comfort auxiliary regulation	1	CS263	BV263
AuxReg1_Cfg.ReverseMode	Auxiliary Regulation 1 - Reverse mode	1	CS264	BV264

Variable	Description	Dim	Modbus	BACnet
AuxReg1_Cfg.ManModeEn	Auxiliary Regulation 1 - Manual mode enabled	1	CS266	BV266
AuxReg1_Cfg.DOut_ManModeVal	Auxiliary Regulation 1 - Dout: Manual mode value	1	CS267	BV267
AuxReg2_Cfg.DOut_ErrorValue	Auxiliary Regulation 2 - Dout: Error value	1	CS268	BV268
AuxReg2_Cfg.EnableSel_ManualEn	Auxiliary Regulation 2 - Enable selection: Manual enabling	1	CS269	BV269
AuxReg2_Cfg.En_ComfortReg	Auxiliary Regulation 2 - Enable comfort auxiliary regulation	1	CS270	BV270
AuxReg2_Cfg.ReverseMode	Auxiliary Regulation 2 - Reverse mode	1	CS271	BV271
AuxReg2_Cfg.ManModeEn	Auxiliary Regulation 2 - Manual mode enabled	1	CS273	BV273
AuxReg2_Cfg.DOut_ManModeVal	Auxiliary Regulation 2 - Dout: Manual mode value	1	CS274	BV274
AuxReg3_Cfg.DOut_ErrorValue	Auxiliary Regulation 3 - Dout: Error value	1	CS275	BV275
AuxReg3_Cfg.EnableSel_ManualEn	Auxiliary Regulation 3 - Enable selection: Manual enabling	1	CS276	BV276
AuxReg3_Cfg.En_ComfortReg	Auxiliary Regulation 3 - Enable comfort auxiliary regulation	1	CS277	BV277
AuxReg3_Cfg.ReverseMode	Auxiliary Regulation 3 - Reverse mode	1	CS278	BV278
AuxReg3_Cfg.ManModeEn	Auxiliary Regulation 3 - Manual mode enabled	1	CS280	BV280
AuxReg3_Cfg.DOut_ManModeVal	Auxiliary Regulation 3 - Dout: Manual mode value	1	CS281	BV281
AuxReg4_Cfg.DOut_ErrorValue	Auxiliary Regulation 4 - Dout: Error value	1	CS282	BV282
AuxReg4_Cfg.EnableSel_ManualEn	Auxiliary Regulation 4 - Enable selection: Manual enabling	1	CS283	BV283
AuxReg4_Cfg.En_ComfortReg	Auxiliary Regulation 4 - Enable comfort auxiliary regulation	1	CS284	BV284
AuxReg4_Cfg.ReverseMode	Auxiliary Regulation 4 - Reverse mode	1	CS285	BV285
AuxReg4_Cfg.ManModeEn	Auxiliary Regulation 4 - Manual mode enabled	1	CS287	BV287
AuxReg4_Cfg.DOut_ManModeVal	Auxiliary Regulation 4 - Dout: Manual mode value	1	CS288	BV288
En_Damp_CO2_Reg	Enable air quality regulation for fresh air OR mixing damper	1	CS289	BV289
En_FC_FH_DampReg	Enable dampers regulation in case of FreeCooling/FreeHeating	1	CS290	BV290
CompTyp	Compressor type (FALSE: ON/OFF; TRUE: BLDC)	1	CS291	BV291
En_EVD_Emb_1	Enable EVD emb management	1	CS292	BV292
Coils.MainCoil_PmpFlwChk_EnAntiLock	Cooling/Heating coil pumps enable antilock function	1	CS293	BV293
Coils.PreHeatCoil_PmpFlwChk_EnAntiLock	PreHeating coil pumps enable antilock function	1	CS294	BV294
Coils.ReHeatCoil_PmpFlwChk_EnAntiLock	Re Heating coil pumps enable antilock function	1	CS295	BV295
VDI_Conf[0].Enabled	Enable of the VDI function	1	CS296	BV296
VDI_Conf[0].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS297	BV297
VDI_Conf[1].Enabled	Enable of the VDI function	1	CS298	BV298
VDI_Conf[1].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS299	BV299
VDI_Conf[2].Enabled	Enable of the VDI function	1	CS300	BV300
VDI_Conf[2].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS301	BV301
VDI_Conf[3].Enabled	Enable of the VDI function	1	CS302	BV302
VDI_Conf[3].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS303	BV303
VDI_Conf[4].Enabled	Enable of the VDI function	1	CS304	BV304
VDI_Conf[4].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS305	BV305
VDI_Conf[5].Enabled	Enable of the VDI function	1	CS306	BV306
VDI_Conf[5].ResCmd	Reset timings after the inspection	1	CS307	BV307
VDI_Conf[6].Enabled	Enable of the VDI function	1	CS308	BV308
VDI_Conf[6].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS309	BV309
VDI_Conf[7].Enabled	Enable of the VDI function	1	CS310	BV310
VDI_Conf[7].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS311	BV311
VDI_Conf[8].Enabled	Enable of the VDI function	1	CS312	BV312
VDI_Conf[8].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS313	BV313
VDI_Conf[9].Enabled	Enable of the VDI function	1	CS314	BV314
VDI_Conf[9].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS315	BV315
VDI_Conf[10].Enabled	Enable of the VDI function	1	CS316	BV316
VDI_Conf[10].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS317	BV317
VDI_Conf[11].Enabled	Enable of the VDI function	1	CS318	BV318
VDI_Conf[11].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS319	BV319
VDI_Conf[12].Enabled	Enable of the VDI function	1	CS320	BV320
VDI_Conf[12].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS321	BV321
VDI_Conf[13].Enabled	Enable of the VDI function	1	CS322	BV322
VDI_Conf[13].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS323	BV323
VDI_Conf[14].Enabled	Enable of the VDI function	1	CS324	BV324
VDI_Conf[14].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS325	BV325
VDI_Conf[15].Enabled	Enable of the VDI function	1	CS326	BV326
VDI_Conf[15].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS327	BV327
VDI_Conf[16].Enabled	Enable of the VDI function	1	CS328	BV328
VDI_Conf[16].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS329	BV329
VDI_Conf[17].Enabled	Enable of the VDI function	1	CS330	BV330
VDI_Conf[17].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS331	BV331
VDI_Conf[18].Enabled	Enable of the VDI function	1	CS332	BV332
VDI_Conf[18].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS333	BV333
VDI_Conf[19].Enabled	Enable of the VDI function	1	CS334	BV334
VDI_Conf[19].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS335	BV335
VDI_Conf[20].Enabled	Enable of the VDI function	1	CS336	BV336
VDI_Conf[20].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS337	BV337
VDI_Conf[21].Enabled	Enable of the VDI function	1	CS338	BV338
VDI_Conf[21].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS339	BV339
VDI_Conf[22].Enabled	Enable of the VDI function	1	CS340	BV340
VDI_Conf[22].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS341	BV341
VDI_Conf[23].Enabled	Enable of the VDI function	1	CS342	BV342
VDI_Conf[23].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS343	BV343
VDI_Conf[24].Enabled	Enable of the VDI function	1	CS344	BV344
VDI_Conf[24].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS345	BV345
VDI_Conf[25].Enabled	Enable of the VDI function	1	CS346	BV346
VDI_Conf[25].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS347	BV347
VDI_Conf[26].Enabled	Enable of the VDI function	1	CS348	BV348
VDI_Conf[26].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS349	BV349
VDI_Conf[27].Enabled	Enable of the VDI function	1	CS350	BV350
VDI_Conf[27].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS351	BV351
VDI_Conf[28].Enabled	Enable of the VDI function	1	CS352	BV352
VDI_Conf[28].AlrmTyp	Reset type (FALSE: Blocker Alarm; TRUE: Warning)	1	CS353	BV353
VDI_Conf[0].ResCmd	Reset timings after the inspection	1	CS354	BV354
VDI_Conf[1].ResCmd	Reset timings after the inspection	1	CS355	BV355
VDI_Conf[2].ResCmd	Reset timings after the inspection	1	CS356	BV356
VDI_Conf[3].ResCmd	Reset timings after the inspection	1	CS357	BV357
VDI_Conf[4].ResCmd	Reset timings after the inspection	1	CS358	BV358
VDI_Conf[6].ResCmd	Reset timings after the inspection	1	CS359	BV359
VDI_Conf[7].ResCmd	Reset timings after the inspection	1	CS360	BV360
VDI_Conf[8].ResCmd	Reset timings after the inspection	1	CS361	BV361
VDI_Conf[9].ResCmd	Reset timings after the inspection	1	CS362	BV362
VDI_Conf[10].ResCmd	Reset timings after the inspection	1	CS363	BV363
VDI_Conf[11].ResCmd	Reset timings after the inspection	1	CS364	BV364
VDI_Conf[12].ResCmd	Reset timings after the inspection	1	CS365	BV365
VDI_Conf[13].ResCmd	Reset timings after the inspection	1	CS366	BV366
VDI_Conf[14].ResCmd	Reset timings after the inspection	1	CS367	BV367
VDI_Conf[15].ResCmd	Reset timings after the inspection	1	CS368	BV368
VDI_Conf[16].ResCmd	Reset timings after the inspection	1	CS369	BV369
VDI_Conf[17].ResCmd	Reset timings after the inspection	1	CS370	BV370

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VDI_Conf[18].ResCmd	Reset timings after the inspection	1	CS371	BV371
VDI_Conf[19].ResCmd	Reset timings after the inspection	1	CS372	BV372
VDI_Conf[20].ResCmd	Reset timings after the inspection	1	CS373	BV373
VDI_Conf[21].ResCmd	Reset timings after the inspection	1	CS374	BV374
VDI_Conf[22].ResCmd	Reset timings after the inspection	1	CS375	BV375
VDI_Conf[23].ResCmd	Reset timings after the inspection	1	CS376	BV376
VDI_Conf[24].ResCmd	Reset timings after the inspection	1	CS377	BV377
VDI_Conf[25].ResCmd	Reset timings after the inspection	1	CS378	BV378
VDI_Conf[26].ResCmd	Reset timings after the inspection	1	CS379	BV379
VDI_Conf[27].ResCmd	Reset timings after the inspection	1	CS380	BV380
VDI_Conf[28].ResCmd	Reset timings after the inspection	1	CS381	BV381
GeneralMng.En_Buzz	Enable of Buzzer	1	CS382	BV382
En_LiqSolVlv	Enable liquid solenoid valve	1	CS384	BV383
EVD_Emb_Circ.EEV_ManPositEn	EEV enable manual position	1	CS385	BV384
Data_EVD_Emb_1.EVD.System.DC_SupplyEn.Val	EVD parameters - System configuration - DC power supply enabling	1	CS386	BV385
Data_EVD_Emb_1.EVD.EEV_Config.ExtraOpEn.Val	EVD parameters - Valve configuration - EEV opening position synchronization	1	CS387	BV386
Data_EVD_Emb_1.EVD.EEV_Config.ExtraClosEn.Val	EVD parameters - Valve configuration - EEV closing position synchronization	1	CS388	BV387
BLDC_compressor.MiscMng_PWRP1.Mng_SerNoCtrl_En	Serial number control enable	1	CS389	BV388
BLDC_compressor.CurrCompCfg_PWRP1.HR22_0_SpeedProfStartMode	Curr compressor configuration (Powerplus) - Speed profile start mode (0= always; 1=once at run)	1	CS390	BV389
BLDC_compressor.CurrCompCfg_PWRP1.HR22_1_SpeedProfStartMode	Curr compressor configuration (Powerplus) - Speed profile start mode (0=-; 1=force freq. 2)	1	CS391	BV390
BLDC_compressor.CurrCompCfg_PWRP1.HR76_0_DisPhLossDetect	Curr compressor configuration (Powerplus) - Disable phase loss algorithm (0=enabled; 1=disabled)	1	CS392	BV391
BLDC_compressor.CurrCompCfg_PWRP1.HR76_3_EnOvldThProtRetention	Curr compressor configuration (Powerplus) - Thermal Overload Retention Enable	1	CS393	BV392
BLDC_compressor.MiscMng_PWRP1.MngCstm_SaveCustomCfg	Save custom config. command	1	CS394	BV393
BLDC_compressor.AlrmResetMng_PWRP1.Al01_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS395	BV394
BLDC_compressor.AlrmResetMng_PWRP1.Al02_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS396	BV395
BLDC_compressor.AlrmResetMng_PWRP1.Al03_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS397	BV396
BLDC_compressor.AlrmResetMng_PWRP1.Al04_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS398	BV397
BLDC_compressor.AlrmResetMng_PWRP1.Al05_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS399	BV398
BLDC_compressor.AlrmResetMng_PWRP1.Al06_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS400	BV399
BLDC_compressor.AlrmResetMng_PWRP1.Al07_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS401	BV400
BLDC_compressor.AlrmResetMng_PWRP1.Al08_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS402	BV401
BLDC_compressor.AlrmResetMng_PWRP1.Al09_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS403	BV402
BLDC_compressor.AlrmResetMng_PWRP1.Al10_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS404	BV403
BLDC_compressor.AlrmResetMng_PWRP1.Al11_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS405	BV404
BLDC_compressor.AlrmResetMng_PWRP1.Al12_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS406	BV405
BLDC_compressor.AlrmResetMng_PWRP1.Al13_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS407	BV406
BLDC_compressor.AlrmResetMng_PWRP1.Al14_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS408	BV407
BLDC_compressor.AlrmResetMng_PWRP1.Al15_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS409	BV408
BLDC_compressor.AlrmResetMng_PWRP1.Al16_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS410	BV409
BLDC_compressor.AlrmResetMng_PWRP1.Al17_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS411	BV410
BLDC_compressor.AlrmResetMng_PWRP1.Al18_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS412	BV411
BLDC_compressor.AlrmResetMng_PWRP1.Al19_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS413	BV412
BLDC_compressor.AlrmResetMng_PWRP1.Al20_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS414	BV413
BLDC_compressor.AlrmResetMng_PWRP1.Al21_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS415	BV414
BLDC_compressor.AlrmResetMng_PWRP1.Al22_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS416	BV415
BLDC_compressor.AlrmResetMng_PWRP1.Al23_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS417	BV416
BLDC_compressor.AlrmResetMng_PWRP1.Al24_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS418	BV417
BLDC_compressor.AlrmResetMng_PWRP1.Al25_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS419	BV418
BLDC_compressor.AlrmResetMng_PWRP1.Al26_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS420	BV419
BLDC_compressor.AlrmResetMng_PWRP1.Al27_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS421	BV420
BLDC_compressor.AlrmResetMng_PWRP1.Al28_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS422	BV421
BLDC_compressor.AlrmResetMng_PWRP1.Al99_uMotorResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS423	BV422
BLDC_compressor.AlrmResetMng_PWRP1.Al101_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS424	BV423
BLDC_compressor.AlrmResetMng_PWRP1.Al102_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS425	BV424
BLDC_compressor.AlrmResetMng_PWRP1.Al103_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS426	BV425
BLDC_compressor.AlrmResetMng_PWRP1.Al104_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS427	BV426
BLDC_compressor.AlrmResetMng_PWRP1.Al105_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS428	BV427

Variable	Description	Dim	Modbus	BACnet
BLDC_compressor.AlrmResetMng_PWRP1.Al106_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS429	BV428
BLDC_compressor.AlrmResetMng_PWRP1.Al107_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS430	BV429
BLDC_compressor.AlrmResetMng_PWRP1.Al108_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS431	BV430
BLDC_compressor.AlrmResetMng_PWRP1.Al109_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS432	BV431
BLDC_compressor.AlrmResetMng_PWRP1.Al110_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS433	BV432
BLDC_compressor.AlrmResetMng_PWRP1.Al111_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS434	BV433
BLDC_compressor.AlrmResetMng_PWRP1.Al112_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS435	BV434
BLDC_compressor.AlrmResetMng_PWRP1.Al113_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS436	BV435
BLDC_compressor.AlrmResetMng_PWRP1.Al114_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS437	BV436
BLDC_compressor.AlrmResetMng_PWRP1.Al115_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS438	BV437
BLDC_compressor.AlrmResetMng_PWRP1.Al116_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS439	BV438
BLDC_compressor.AlrmResetMng_PWRP1.Al201_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS440	BV439
BLDC_compressor.AlrmResetMng_PWRP1.Al202_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS441	BV440
BLDC_compressor.AlrmResetMng_PWRP1.Al203_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS442	BV441
BLDC_compressor.AlrmResetMng_PWRP1.Al204_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS443	BV442
BLDC_compressor.AlrmResetMng_PWRP1.Al205_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS444	BV443
BLDC_compressor.AlrmResetMng_PWRP1.Al206_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS445	BV444
BLDC_compressor.AlrmResetMng_PWRP1.Al207_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS446	BV445
BLDC_compressor.AlrmResetMng_PWRP1.Al208_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS447	BV446
BLDC_compressor.AlrmResetMng_PWRP1.Al209_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS448	BV447
BLDC_compressor.AlrmResetMng_PWRP1.Al210_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS449	BV448
BLDC_compressor.AlrmResetMng_PWRP1.Al211_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS450	BV449
BLDC_compressor.AlrmResetMng_PWRP1.Al212_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS451	BV450
BLDC_compressor.AlrmResetMng_PWRP1.Al213_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS452	BV451
BLDC_compressor.AlrmResetMng_PWRP1.Al214_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS453	BV452
BLDC_compressor.AlrmResetMng_PWRP1.Al215_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS454	BV453
BLDC_compressor.AlrmResetMng_PWRP1.Al216_uSafeResetTyp	Reset type: 0=Manual - 1=Semiautomatic	1	CS455	BV454
BLDC_compressor.CfgEnvCtrl_BLDC1.StartUp_EnEqualBPVlv	BLDC envelope configuration - By-pass equalization solenoid valve enable	1	CS456	BV455
BLDC_compressor.CfgEnvCtrl_BLDC1.CstmEnv_EnMopLowCompRatio	BLDC envelope configuration - Enable MOP control in low compression ratio condition	1	CS457	BV456
BLDC_compressor.CfgEnvCtrl_BLDC1.CstmEnv_EnSpeedUpMode	BLDC envelope configuration - Speed up mode enable to control zones 5, 6, 7, 8 (to come back into zone 1)	1	CS458	BV457
BLDC_compressor.AlrmResetMng_BLDC_1.ResetTyp_BLDC_Alrm	Automatically generated - Reset type: 0= Manual - 1= Semiautomatic	1	CS459	BV458
SanificationDevice.LogicDout_RW	Sanification device - Logic	1	CS460	BV4011
En_SanificationDevice	Enable sanification device	1	CS461	BV3957
PurgeCmd	Purge command (0: NO, 1: START)	1	CS462	BV4035
SanificationDeviceOvld.LogicDin_RW	Sanification deivce overload switch - Logic	1	CS463	BV4036
SanificationDeviceOvld.Enable_W	Sanification deivce overload switch - Enable input	1	CS464	BV4037
En_OilRecov	Enable BLDC oil recovery function	1	CS465	BV4025
CstPrbCfg.Temp1FactOp	Custom serial probe - Factor Operator - Temp1	1	CS466	BV4288
CstPrbCfg.Temp2FactOp	Custom serial probe - Factor Operator – Temp2	1	CS467	BV4289
CstPrbCfg.Hum1FactOp	Custom serial probe - Factor Operator - Hum1	1	CS468	BV4290
CstPrbCfg.Hum2FactOp	Custom serial probe - Factor Operator – Hum2	1	CS469	BV4291
CstPrbCfg.Press1FactOp	Custom serial probe - Factor Operator - Press1	1	CS470	BV4292
CstPrbCfg.Press2FactOp	Custom serial probe - Factor Operator – Press2	1	CS471	BV4293
CstPrbCfg.Flow1FactOp	Custom serial probe - Factor Operator - Flow1	1	CS472	BV4294
CstPrbCfg.Flow2FactOp	Custom serial probe - Factor Operator – Flow2	1	CS473	BV4295
HumiSteamMng.Man_UEY.EnMan	HumiSteam - Manual management - Enable manual management	1	CS474	BV4342
HumiSteamMng.Man_UEY.PreCleaning	HumiSteam - Manual management - Manual pre cleaning	1	CS475	BV4343
HumiSteamMng.Man_UEY.Drn	HumiSteam - Manual management - Manual drain	1	CS476	BV4344
HumiSteamMng.ResWorkHrs_UEY	HumiSteam - Reset working hours	1	CS477	BV4345
MainCoilCoolHeat_Din.LogicDin_RW	Main coil cool/heat - digital input - Logic	1	CS478	BV4367
En_FanTempReg	Enable fan temperature regulation	1	CS479	BV4369
GenericDin1.LogicDin_RW	Generic Din1 - digital input - Logic	1	CS480	BV4447
GenericDin2.LogicDin_RW	Generic Din2 - digital input - Logic	1	CS481	BV4454
GenericDin3.LogicDin_RW	Generic Din3 - digital input - Logic	1	CS482	BV4461
GenericDin4.LogicDin_RW	Generic Din4 - digital input - Logic	1	CS483	BV4468
GenericDin5.LogicDin_RW	Generic Din5 - digital input - Logic	1	CS484	BV4475
IEC_EnMan	IEC: manual mode enable	1	CS485	BV4499
BMS_Reg_DigitalPrbMap[1]	BMS registers - Digital map – 1	1	CS486	BV4504
BMS_Reg_DigitalPrbMap[2]	BMS registers - Digital map – 2	1	CS487	BV4505
BMS_Reg_DigitalPrbMap[3]	BMS registers - Digital map – 3	1	CS488	BV4506
BMS_Reg_DigitalPrbMap[4]	BMS registers - Digital map – 4	1	CS489	BV4507
BMS_Reg_DigitalPrbMap[5]	BMS registers - Digital map – 5	1	CS490	BV4508
OA_Vlv_Open.LogicDout_RW	Outdoor air pre-treatment floating valve open - Logic	1	CS491	BV4514
OA_Vlv_Close.LogicDout_RW	Outdoor air pre-treatment floating valve close - Logic	1	CS492	BV4515
OA_CoilEnMan	Outdoor air pre-treatment coil manual mode enable	1	CS493	BV4516

Tab. 11.o

11.1.17 Discrete inputs

Variable	Description	Dim	Modbus	BACnet
MainCoil_CoolHeatMode	Cooling/Heating coil working mode	1	DI001	BV459
SupplyTemp.Enable_W	Supply temperature - Enable input	1	DI003	BV461
SupplyTemp.Configured_R	Supply temperature - Analog input configured	1	DI004	BV462
SupplyTemp.PrbOk_R	Supply temperature - Probe working correctly	1	DI005	BV463
SupplyTemp.Alrm_R	Supply temperature - Alarm probe broken or disconnected	1	DI006	BV464
SupplyHum.Enable_W	Supply humidity - Enable input	1	DI007	BV465
SupplyHum.Configured_R	Supply humidity - Analog input configured	1	DI008	BV466
SupplyHum.PrbOk_R	Supply humidity - Probe working correctly	1	DI009	BV467
SupplyHum.Alrm_R	Supply humidity - Alarm probe broken or disconnected	1	DI010	BV468
RetTemp.Enable_W	Return temperature - Enable input	1	DI011	BV469
RetTemp.Configured_R	Return temperature - Analog input configured	1	DI012	BV470
RetTemp.PrbOk_R	Return temperature - Probe working correctly	1	DI013	BV471
RetTemp.Alrm_R	Return temperature - Alarm probe broken or disconnected	1	DI014	BV472
RetHum.Enable_W	Return humidity - Enable input	1	DI015	BV473
RetHum.Configured_R	Return humidity - Analog input configured	1	DI016	BV474
RetHum.PrbOk_R	Return humidity - Probe working correctly	1	DI017	BV475
RetHum.Alrm_R	Return humidity - Alarm probe broken or disconnected	1	DI018	BV476
RoomTemp.Enable_W	Room temperature - Enable input	1	DI019	BV477
RoomTemp.Configured_R	Room temperature - Analog input configured	1	DI020	BV478
RoomTemp.PrbOk_R	Room temperature - Probe working correctly	1	DI021	BV479
RoomTemp.Alrm_R	Room temperature - Alarm probe broken or disconnected	1	DI022	BV480
RoomHum.Enable_W	Room humidity - Enable input	1	DI023	BV481
RoomHum.Configured_R	Room humidity - Analog input configured	1	DI024	BV482
RoomHum.PrbOk_R	Room humidity - Probe working correctly	1	DI025	BV483
RoomHum.Alrm_R	Room humidity - Alarm probe broken or disconnected	1	DI026	BV484
ExtTemp.Enable_W	Fresh air temperature - Enable input	1	DI027	BV485
ExtTemp.PrbOk_R	Fresh air temperature - Probe working correctly	1	DI029	BV487
ExtTemp.Alrm_R	Fresh air temperature - Alarm probe broken or disconnected	1	DI030	BV488
ExtHum.Enable_W	Fresh air humidity - Enable input	1	DI031	BV489
ExtHum.Configured_R	Fresh air humidity - Analog input configured	1	DI032	BV490
ExtHum.PrbOk_R	Fresh air humidity - Probe working correctly	1	DI033	BV491
ExtHum.Alrm_R	Fresh air humidity - Alarm probe broken or disconnected	1	DI034	BV492
ExhTemp.Enable_W	Exhaust temperature - Enable input	1	DI035	BV493
ExhTemp.Configured_R	Exhaust temperature - Analog input configured	1	DI036	BV494
ExhTemp.PrbOk_R	Exhaust temperature - Probe working correctly	1	DI037	BV495
ExhTemp.Alrm_R	Exhaust temperature - Alarm probe broken or disconnected	1	DI038	BV496
ExhHum.Enable_W	Exhaust humidity - Enable input	1	DI039	BV497
ExhHum.Configured_R	Exhaust humidity - Analog input configured	1	DI040	BV498
ExhHum.PrbOk_R	Exhaust humidity - Probe working correctly	1	DI041	BV499
ExhHum.Alrm_R	Exhaust humidity - Alarm probe broken or disconnected	1	DI042	BV500
AFreezeTemp.Enable_W	Antifreeze temperature - Enable input	1	DI043	BV501
AFreezeTemp.Configured_R	Antifreeze temperature - Analog input configured	1	DI044	BV502
AFreezeTemp.PrbOk_R	Antifreeze temperature - Probe working correctly	1	DI045	BV503
AFreezeTemp.Alrm_R	Antifreeze temperature - Alarm probe broken or disconnected	1	DI046	BV504
SatTemp.Enable_W	Saturation temperature - Enable input	1	DI047	BV505
SatTemp.PrbOk_R	Saturation temperature - Probe working correctly	1	DI049	BV507
SatTemp.Alrm_R	Saturation temperature - Alarm probe broken or disconnected	1	DI050	BV508
SatHum.Enable_W	Saturation humidity - Enable input	1	DI051	BV509
SatHum.Configured_R	Saturation humidity - Analog input configured	1	DI052	BV510
SatHum.PrbOk_R	Saturation humidity - Probe working correctly	1	DI053	BV511
SatHum.Alrm_R	Saturation humidity - Alarm probe broken or disconnected	1	DI054	BV512
OA_Temp.Enable_W	Outdoor air pre-treatment temperature - Enable input	1	DI055	BV513
OA_Temp.Configured_R	Outdoor air pre-treatment temperature - Analog input configured	1	DI056	BV514
OA_Temp.PrbOk_R	Outdoor air pre-treatment temperature - Probe working correctly	1	DI057	BV515
OA_Temp.Alrm_R	Outdoor air pre-treatment temperature - Alarm probe broken or disconnected	1	DI058	BV516
SupplyAirP.Enable_W	Supply air pressure - Enable input	1	DI059	BV517
SupplyAirP.Configured_R	Supply air pressure - Analog input configured	1	DI060	BV518
SupplyAirP.PrbOk_R	Supply air pressure - Probe working correctly	1	DI061	BV519
SupplyAirP.Alrm_R	Supply air pressure - Alarm probe broken or disconnected	1	DI062	BV520
RetAirP.Enable_W	Return air pressure - Enable input	1	DI063	BV521
RetAirP.Configured_R	Return air pressure - Analog input configured	1	DI064	BV522
RetAirP.PrbOk_R	Return air pressure - Probe working correctly	1	DI065	BV523
RetAirP.Alrm_R	Return air pressure - Alarm probe broken or disconnected	1	DI066	BV524
AirQuality_CO2.Enable_W	CO2 sensor - Enable input	1	DI067	BV525
AirQuality_CO2.Configured_R	CO2 sensor - Analog input configured	1	DI068	BV526
AirQuality_CO2.PrbOk_R	CO2 sensor - Probe working correctly	1	DI069	BV527
AirQuality_CO2.Alrm_R	CO2 sensor - Alarm probe broken or disconnected	1	DI070	BV528
AirQuality_VOC.Enable_W	VOC sensor - Enable input	1	DI071	BV529
AirQuality_VOC.Configured_R	VOC sensor - Analog input configured	1	DI072	BV530
AirQuality_VOC.PrbOk_R	VOC sensor - Probe working correctly	1	DI073	BV531
AirQuality_VOC.Alrm_R	VOC sensor - Alarm probe broken or disconnected	1	DI074	BV532
DscgP.Enable_W	Discharge pressure - Enable input	1	DI075	BV533
DscgP.Configured_R	Discharge pressure - Analog input configured	1	DI076	BV534
DscgP.PrbOk_R	Discharge pressure - Probe working correctly	1	DI077	BV535
DscgP.Alrm_R	Discharge pressure - Alarm probe broken or disconnected	1	DI078	BV536
DscgT.Enable_W	Discharge temperature - Enable input	1	DI079	BV537
DscgT.Configured_R	Discharge temperature - Analog input configured	1	DI080	BV538
DscgT.PrbOk_R	Discharge temperature - Probe working correctly	1	DI081	BV539
DscgT.Alrm_R	Discharge temperature - Alarm probe broken or disconnected	1	DI082	BV540
SuctP.Enable_W	Suction pressure - Enable input	1	DI083	BV541
SuctP.Configured_R	Suction pressure - Analog input configured	1	DI084	BV542
SuctP.PrbOk_R	Suction pressure - Probe working correctly	1	DI085	BV543
SuctP.Alrm_R	Suction pressure - Alarm probe broken or disconnected	1	DI086	BV544
SuctT.Enable_W	Suction temperature - Enable input	1	DI087	BV545
SuctT.Configured_R	Suction temperature - Analog input configured	1	DI088	BV546
SuctT.PrbOk_R	Suction temperature - Probe working correctly	1	DI089	BV547
SuctT.Alrm_R	Suction temperature - Alarm probe broken or disconnected	1	DI090	BV548
OA_CoilWaterTemp.Enable_W	Outdoor air pre-treatment coil water temperature - Enable input	1	DI091	BV549
OA_CoilWaterTemp.Configured_R	Outdoor air pre-treatment coil water temperature - Analog input configured	1	DI092	BV550
OA_CoilWaterTemp.PrbOk_R	Outdoor air pre-treatment coil water temperature - Probe working correctly	1	DI093	BV551
OA_CoilWaterTemp.Alrm_R	Outdoor air pre-treatment coil water temperature - Alarm probe broken or disconnected	1	DI094	BV552
PreHeatCoilWaterTemp.Enable_W	Preheat coil water temperature - Enable input	1	DI095	BV553
PreHeatCoilWaterTemp.Configured_R	Preheat coil water temperature - Analog input configured	1	DI096	BV554
PreHeatCoilWaterTemp.PrbOk_R	Preheat coil water temperature - Probe working correctly	1	DI097	BV555
PreHeatCoilWaterTemp.Alrm_R	Preheat coil water temperature - Alarm probe broken or disconnected	1	DI098	BV556
MainCoilWaterTemp.Enable_W	Main coil water temperature - Enable input	1	DI099	BV557
MainCoilWaterTemp.Configured_R	Main coil water temperature - Analog input configured	1	DI100	BV558
MainCoilWaterTemp.Alrm_R	Main coil water temperature - Alarm probe broken or disconnected	1	DI102	BV560

Variable	Description	Dim	Modbus	BACnet
ReHeatCoilWaterTemp.Enable_W	Postheat coil water temperature - Enable input	1	DI103	BV561
ReHeatCoilWaterTemp.Configured_R	Postheat coil water temperature - Analog input configured	1	DI104	BV562
ReHeatCoilWaterTemp.PrbOk_R	Postheat coil water temperature - Probe working correctly	1	DI105	BV563
ReHeatCoilWaterTemp.Alrm_R	Postheat coil water temperature - Alarm probe broken or disconnected	1	DI106	BV564
AuxPrb_1.Enable_W	Auxiliary probe 1 - Enable input	1	DI107	BV565
AuxPrb_1.Configured_R	Auxiliary probe 1 - Analog input configured	1	DI108	BV566
AuxPrb_1.PrbOk_R	Auxiliary probe 1 - Probe working correctly	1	DI109	BV567
AuxPrb_1.Alrm_R	Auxiliary probe 1 - Alarm probe broken or disconnected	1	DI110	BV568
AuxPrb_2.Enable_W	Auxiliary probe 2 - Enable input	1	DI111	BV569
AuxPrb_2.Configured_R	Auxiliary probe 2 - Analog input configured	1	DI112	BV570
AuxPrb_2.PrbOk_R	Auxiliary probe 2 - Probe working correctly	1	DI113	BV571
AuxPrb_2.Alrm_R	Auxiliary probe 2 - Alarm probe broken or disconnected	1	DI114	BV572
AuxPrb_3.Enable_W	Auxiliary probe 3 - Enable input	1	DI115	BV573
AuxPrb_3.Configured_R	Auxiliary probe 3 - Analog input configured	1	DI116	BV574
AuxPrb_3.PrbOk_R	Auxiliary probe 3 - Probe working correctly	1	DI117	BV575
AuxPrb_3.Alrm_R	Auxiliary probe 3 - Alarm probe broken or disconnected	1	DI118	BV576
AuxPrb_4.Enable_W	Auxiliary probe 4 - Enable input	1	DI119	BV577
AuxPrb_4.Configured_R	Auxiliary probe 4 - Analog input configured	1	DI120	BV578
AuxPrb_4.PrbOk_R	Auxiliary probe 4 - Probe working correctly	1	DI121	BV579
AuxPrb_4.Alrm_R	Auxiliary probe 4 - Alarm probe broken or disconnected	1	DI122	BV580
Ain_SetP.Enable_W	Setpoint by AIN - Enable input	1	DI123	BV581
Ain_SetP.Configured_R	Setpoint by AIN - Analog input configured	1	DI124	BV582
Ain_SetP.PrbOk_R	Setpoint by AIN - Probe working correctly	1	DI125	BV583
Ain_SetP.Alrm_R	Setpoint by AIN - Alarm probe broken or disconnected	1	DI126	BV584
SupplyRecoveryTemp.Enable_W	Supply recovery temperature - Enable input	1	DI127	BV585
SupplyRecoveryTemp.Configured_R	Supply recovery temperature - Analog input configured	1	DI128	BV586
SupplyRecoveryTemp.PrbOk_R	Supply recovery temperature - Probe working correctly	1	DI129	BV587
SupplyRecoveryTemp.Alrm_R	Supply recovery temperature - Alarm probe broken or disconnected	1	DI130	BV588
RetRecoveryTemp.Enable_W	Return recovery temperature - Enable input	1	DI131	BV589
RetRecoveryTemp.Configured_R	Return recovery temperature - Analog input configured	1	DI132	BV590
RetRecoveryTemp.PrbOk_R	Return recovery temperature - Probe working correctly	1	DI133	BV591
RetRecoveryTemp.Alrm_R	Return recovery temperature - Alarm probe broken or discon- nected	1	DI134	BV592
HepaFilt_1.Enable_W	Hepa filter 1 - Enable input	1	DI135	BV593
HepaFilt_1.Configured_R	Hepa filter 1 - Analog input configured	1	DI136	BV594
HepaFilt_1.PrbOk_R	Hepa filter 1 - Probe working correctly	1	DI137	BV595
HepaFilt_1.Alrm_R	Hepa filter 1 - Alarm probe broken or disconnected	1	DI138	BV596
HepaFilt_2.Enable_W	Hepa filter 2 - Enable input	1	DI139	BV597
HepaFilt_2.Configured_R	Hepa filter 2 - Analog input configured	1	DI140	BV598
HepaFilt_2.PrbOk_R	Hepa filter 2 - Probe working correctly	1	DI141	BV599
HepaFilt_2.Alrm_R	Hepa filter 2 - Alarm probe broken or disconnected	1	DI142	BV600
SupplyAirFlwSw.Val_Hw_R	Supply air flow switch - Value reads from board	1	DI143	BV601
SupplyAirFlwSw.Enable_W	Supply air flow switch - Enable input	1	DI144	BV602
SupplyAirFlwSw.Configured_R	Supply air flow switch - Digital input configured	1	DI145	BV603
SupplyAirFlwSw.Val_R	Supply air flow switch	1	DI146	BV604
RetAirFlwSw.Val_Hw_R	Return air flow switch - Value reads from board	1	DI147	BV605
RetAirFlwSw.Enable_W	Return air flow switch - Enable input	1	DI148	BV606
RetAirFlwSw.Configured_R	Return air flow switch - Digital input configured	1	DI149	BV607
RetAirFlwSw.Val_R	Return air flow switch	1	DI150	BV608
AirFlwSw.Val_Hw_R	Air flow switch - Value reads from board	1	DI151	BV609
AirFlwSw.Enable_W	Air flow switch - Enable input	1	DI152	BV610
AirFlwSw.Configured_R	Air flow switch - Digital input configured	1	DI153	BV611
AirFlwSw.Val_R	Air flow switch	1	DI154	BV612
AFreezeSw.Val_Hw_R	Antifreeze switch - Value reads from board	1	DI155	BV613
AFreezeSw.Enable_W	Antifreeze switch - Enable input	1	DI156	BV614
AFreezeSw.Configured_R	Antifreeze switch - Digital input configured	1	DI157	BV615
AFreezeSw.Val_R	Antifreeze switch	1	DI158	BV616
RemOnOff.Val_Hw_R	Remote On/Off - Value reads from board	1	DI159	BV617
RemOnOff.Enable_W	Remote On/Off - Enable input	1	DI160	BV618
RemOnOff.Configured_R	Remote On/Off - Digital input configured	1	DI161	BV619
RemOnOff.Val_R	Remote On/Off	1	DI162	BV620
SupplyFanOvld_1.Val_Hw_R	Supply fan overload 1 - Value reads from board	1	DI163	BV621
SupplyFanOvld_1.Enable_W	Supply fan overload 1 - Enable input	1	DI164	BV622
SupplyFanOvld_1.Configured_R	Supply fan overload 1 - Digital input configured	1	DI165	BV623
SupplyFanOvld_1.Val_R	Supply fan overload 1	1	DI166	BV624
RetFanOvld_1.Val_Hw_R	Return fan overload 1 - Value reads from board	1	DI167	BV625
RetFanOvld_1.Enable_W	Return fan overload 1 - Enable input	1	DI168	BV626
RetFanOvld_1.Configured_R	Return fan overload 1 - Digital input configured	1	DI169	BV627
RetFanOvld_1.Val_R	Return fan overload 1	1	DI170	BV628
SupplyFanOvld_2.Val_Hw_R	Supply fan overload 2 - Value reads from board	1	DI171	BV629
SupplyFanOvld_2.Enable_W	Supply fan overload 2 - Enable input	1	DI172	BV630
SupplyFanOvld_2.Configured_R	Supply fan overload 2 - Digital input configured	1	DI173	BV631
SupplyFanOvld_2.Val_R	Supply fan overload 2	1	DI174	BV632
RetFanOvld_2.Val_Hw_R	Return fan overload 2 - Value reads from board	1	DI175	BV633
RetFanOvld_2.Enable_W	Return fan overload 2 - Enable input	1	DI176	BV634
RetFanOvld_2.Configured_R	Return fan overload 2 - Digital input configured	1	DI177	BV635
RetFanOvld_2.Val_R	Return fan overload 2	1	DI178	BV636
SupplyFanInvAlrm.Val_Hw_R	Supply inverter alarm - Value reads from board	1	DI179	BV637
SupplyFanInvAlrm.Enable_W	Supply inverter alarm - Enable input	1	DI180	BV638
SupplyFanInvAlrm.Configured_R	Supply inverter alarm - Digital input configured	1	DI181	BV639
SupplyFanInvAlrm.Val_R	Supply inverter alarm	1	DI182	BV640
RetFanInvAlrm.Val_Hw_R	Return inverter alarm - Value reads from board	1	DI183	BV641
RetFanInvAlrm.Enable_W	Return inverter alarm - Enable input	1	DI184	BV642
RetFanInvAlrm.Configured_R	Return inverter alarm - Digital input configured	1	DI185	BV643
RetFanInvAlrm.Val_R	Return inverter alarm	1	DI186	BV644
FansOvld.Val_Hw_R	Fans overload - Value reads from board	1	DI187	BV645
FansOvld.Enable_W	Fans overload - Enable input	1	DI188	BV646
FansOvld.Configured_R	Fans overload - Digital input configured	1	DI189	BV647
FansOvld.Val_R	Fans overload	1	DI190	BV648
CompOvld.Val_Hw_R	Compressor overload - Value reads from board	1	DI191	BV649
CompOvld.Enable_W	Compressor overload - Enable input	1	DI192	BV650
CompOvld.Configured_R	Compressor overload - Digital input configured	1	DI193	BV651
CompOvld.Val_R	Compressor overload	1	DI194	BV652
HiPSw.Val_Hw_R	High discharge pressure switch - Value reads from board	1	DI195	BV653
HiPSw.Enable_W	High discharge pressure switch - Enable input	1	DI196	BV654
HiPSw.Configured_R	High discharge pressure switch - Digital input configured	1	DI197	BV655
HiPSw.Val_R	High discharge pressure switch	1	DI198	BV656
LowPSw.Val_Hw_R	Low suction pressure switch - Value reads from board	1	DI199	BV657
LowPSw.Enable_W	Low suction pressure switch - Enable input	1	DI200	BV658
LowPSw.Configured_R	Low suction pressure switch - Digital input configured	1	DI201	BV659
LowPSw.Val_R	Low suction pressure switch	1	DI202	BV660
RecoveryOvld.Val_Hw_R	Thermal wheel overload - Value reads from board	1	DI203	BV661
RecoveryOvld.Enable_W	Thermal wheel overload - Enable input	1	DI204	BV662

Variable	Description	Dim	Modbus	BACnet
RecoveryOvld.Configured_R	Thermal wheel overload - Digital input configured	1	DI205	BV663
RecoveryOvld.Val_R	Thermal wheel overload	1	DI206	BV664
SrsAlrm.Val_Hw_R	Serious alarm - Value reads from board	1	DI207	BV665
SrsAlrm.Enable_W	Serious alarm - Enable input	1	DI208	BV666
SrsAlrm.Configured_R	Serious alarm - Digital input configured	1	DI209	BV667
SrsAlrm.Val_R	Serious alarm	1	DI210	BV668
GenAlrm.Val_Hw_R	Generic alarm - Value reads from board	1	DI211	BV669
GenAlrm.Enable_W	Generic alarm - Enable input	1	DI212	BV670
GenAlrm.Configured_R	Generic alarm - Digital input configured	1	DI213	BV671
GenAlrm.Val_R	Generic alarm	1	DI214	BV672
GenWarning.Val_Hw_R	Generic warning - Value reads from board	1	DI215	BV673
GenWarning.Enable_W	Generic warning - Enable input	1	DI216	BV674
GenWarning.Configured_R	Generic warning - Digital input configured	1	DI217	BV675
GenWarning.Val_R	Generic warning	1	DI218	BV676
FiltAlrm.Val_Hw_R	Filters alarm - Value reads from board	1	DI219	BV677
FiltAlrm.Enable_W	Filters alarm - Enable input	1	DI220	BV678
FiltAlrm.Configured_R	Filters alarm - Digital input configured	1	DI221	BV679
FiltAlrm.Val_R	Filters alarm	1	DI222	BV680
SupplyFiltAlrm_1.Val_Hw_R	Supply filter alarm 1 - Value reads from board	1	DI223	BV681
SupplyFiltAlrm_1.Enable_W	Supply filter alarm 1 - Enable input	1	DI224	BV682
SupplyFiltAlrm_1.Configured_R	Supply filter alarm 1 - Digital input configured	1	DI225	BV683
SupplyFiltAlrm_1.Val_R	Supply filter alarm 1	1	DI226	BV684
SupplyFiltAlrm_2.Val_Hw_R	Supply filter alarm 2 - Value reads from board	1	DI227	BV685
SupplyFiltAlrm_2.Enable_W	Supply filter alarm 2 - Enable input	1	DI228	BV686
SupplyFiltAlrm_2.Configured_R	Supply filter alarm 2 - Digital input configured	1	DI229	BV687
SupplyFiltAlrm_2.Val_R	Supply filter alarm 2	1	DI230	BV688
RetFiltAlrm.Val_Hw_R	Return filter alarm - Value reads from board	1	DI231	BV689
RetFiltAlrm.Enable_W	Return filter alarm - Enable input	1	DI232	BV690
RetFiltAlrm.Configured_R	Return filter alarm - Digital input configured	1	DI233	BV691
RetFiltAlrm.Val_R	Return filter alarm	1	DI234	BV692
HumAlrm.Val_Hw_R	Humidifier alarm - Value reads from board	1	DI235	BV693
HumAlrm.Enable_W	Humidifier alarm - Enable input	1	DI236	BV694
HumAlrm.Configured_R	Humidifier alarm - Digital input configured	1	DI237	BV695
HumAlrm.Val_R	Humidifier alarm	1	DI238	BV696
MainCoilPmp1_Ovld.Val_Hw_R	Main coil pump 1 overload - Value reads from board	1	DI239	BV697
MainCoilPmp1_Ovld.Enable_W	Main coil pump 1 overload - Enable input	1	DI240	BV698
MainCoilPmp1_Ovld.Configured_R	Main coil pump 1 overload - Digital input configured	1	DI241	BV699
MainCoilPmp1_Ovld.Val_R	Main coil pump 1 overload	1	DI242	BV700
MainCoilPmp2_Ovld.Val_Hw_R	Main coil pump 2 overload - Value reads from board	1	DI243	BV701
MainCoilPmp2_Ovld.Enable_W	Main coil pump 2 overload - Enable input	1	DI244	BV702
MainCoilPmp2_Ovld.Configured_R	Main coil pump 2 overload - Digital input configured	1	DI245	BV703
MainCoilPmp2_Ovld.Val_R	Main coil pump 2 overload	1	DI246	BV704
ReHeatCoilPmp1_Ovld.Val_Hw_R	ReHeat coil pump 1 overload - Value reads from board	1	DI247	BV705
ReHeatCoilPmp1_Ovld.Enable_W	ReHeat coil pump 1 overload - Enable input	1	DI248	BV706
ReHeatCoilPmp1_Ovld.Configured_R	ReHeat coil pump 1 overload - Digital input configured	1	DI249	BV707
ReHeatCoilPmp1_Ovld.Val_R	ReHeat coil pump 1 overload	1	DI250	BV708
ReHeatCoilPmp2_Ovld.Val_Hw_R	ReHeat coil pump 2 overload - Value reads from board	1	DI251	BV709
ReHeatCoilPmp2_Ovld.Enable_W	ReHeat coil pump 2 overload - Enable input	1	DI252	BV710
ReHeatCoilPmp2_Ovld.Configured_R	ReHeat coil pump 2 overload - Digital input configured	1	DI253	BV711
ReHeatCoilPmp2_Ovld.Val_R	ReHeat coil pump 2 overload	1	DI254	BV712
PreHeatCoilPmp1_Ovld.Val_Hw_R	PreHeat coil pump 1 overload - Value reads from board	1	DI255	BV713
PreHeatCoilPmp1_Ovld.Enable_W	PreHeat coil pump 1 overload - Enable input	1	DI256	BV714
PreHeatCoilPmp1_Ovld.Configured_R	PreHeat coil pump 1 overload - Digital input configured	1	DI257	BV715
PreHeatCoilPmp1_Ovld.Val_R	PreHeat coil pump 1 overload	1	DI258	BV716
PreHeatCoilPmp2_Ovld.Val_Hw_R	PreHeat coil pump 2 overload - Value reads from board	1	DI259	BV717
PreHeatCoilPmp2_Ovld.Enable_W	PreHeat coil pump 2 overload - Enable input	1	DI260	BV718
PreHeatCoilPmp2_Ovld.Configured_R	PreHeat coil pump 2 overload - Digital input configured	1	DI261	BV719
PreHeatCoilPmp2_Ovld.Val_R	PreHeat coil pump 2 overload	1	DI262	BV720
OA_CoilPmp1_ Ovld.Val_ Hw_R	Outdoor air pre-treatment coil pump 1 overload - Value reads from board	1	DI263	BV721
OA_CoilPmp1_ Ovld.Enable_W	Outdoor air pre-treatment coil pump 1 overload - Enable input	1	DI264	BV722
OA_CoilPmp1_Ovld.Configured_R	Outdoor air pre-treatment coil pump 1 overload - Digital input configured	1	DI265	BV723
OA_CoilPmp1_Ovld.Val_R	Outdoor air pre-treatment coil pump 2 overload - Value reads from board	1	DI266	BV724
OA_CoilPmp2_ Ovld.Val_ Hw_R	Outdoor air pre-treatment coil pump 2 overload - Value reads from board	1	DI267	BV725
OA_CoilPmp2_ Ovld.Enable_W	Outdoor air pre-treatment coil pump 2 overload - Enable input	1	DI268	BV726
OA_CoilPmp2_Ovld.Configured_R	Outdoor air pre-treatment coil pump 2 overload - Digital input configured	1	DI269	BV727
OA_CoilPmp2_Ovld.Val_R	Outdoor air pre-treatment coil pump 2 overload	1	DI270	BV728
FreshAirDampSw.Val_Hw_R	Fresh air damper switch - Value reads from board	1	DI271	BV729
FreshAirDampSw.Enable_W	Fresh air damper switch - Enable input	1	DI272	BV730
FreshAirDampSw.Configured_R	Fresh air damper switch - Digital input configured	1	DI273	BV731
FreshAirDampSw.Val_R	Fresh air damper switch	1	DI274	BV732
SupplyDamperSw.Val_Hw_R	Supply damper switch - Value reads from board	1	DI275	BV733
SupplyDamperSw.Enable_W	Supply damper switch - Enable input	1	DI276	BV734
SupplyDamperSw.Configured_R	Supply damper switch - Digital input configured	1	DI277	BV735
SupplyDamperSw.Val_R	Supply damper switch	1	DI278	BV736
RetDampSw.Val_Hw_R	Return damper switch - Value reads from board	1	DI279	BV737
RetDampSw.Enable_W	Return damper switch - Enable input	1	DI280	BV738
RetDampSw.Configured_R	Return damper switch - Digital input configured	1	DI281	BV739
RetDampSw.Val_R	Return damper switch	1	DI282	BV740
MainCoilFlwSw.Val_Hw_R	Main coil flow switch - Value reads from board	1	DI283	BV741
MainCoilFlwSw.Enable_W	Main coil flow switch - Enable input	1	DI284	BV742
MainCoilFlwSw.Configured_R	Main coil flow switch - Digital input configured	1	DI285	BV743
MainCoilFlwSw.Val_R	Main coil flow switch	1	DI286	BV744
PreHeatCoilFlwSw.Val_Hw_R	Pre-heating coil flow switch - Value reads from board	1	DI287	BV745
PreHeatCoilFlwSw.Enable_W	Pre-heating coil flow switch - Enable input	1	DI288	BV746
PreHeatCoilFlwSw.Configured_R	Pre-heating coil flow switch - Digital input configured	1	DI289	BV747
PreHeatCoilFlwSw.Val_R	Pre-heating coil flow switch	1	DI290	BV748
ReHeatCoilFlwSw.Val_Hw_R	Post-Heating coil flow switch - Value reads from board	1	DI291	BV749
ReHeatCoilFlwSw.Enable_W	Post-Heating coil flow switch - Enable input	1	DI292	BV750
ReHeatCoilFlwSw.Configured_R	Post-Heating coil flow switch - Digital input configured	1	DI293	BV751
ReHeatCoilFlwSw.Val_R	Post-Heating coil flow switch	1	DI294	BV752
OA_CoilFlwSw.Val_Hw_R	Outdoor air pre-treatment coil flow switch - Value reads from board	1	DI295	BV753
OA_CoilFlwSw.Enable_W	Outdoor air pre-treatment coil flow switch - Enable input	1	DI296	BV754
OA_CoilFlwSw.Configured_R	Outdoor air pre-treatment coil flow switch - Digital input configured	1	DI297	BV755
OA_CoilFlwSw.Val_R	Outdoor air pre-treatment coil flow switch	1	DI298	BV756
RecoveryClogged.Val_Hw_R	Recovery clogged - Value reads from board	1	DI299	BV757
RecoveryClogged.Enable_W	Recovery clogged - Enable input	1	DI300	BV758
RecoveryClogged.Configured_R	Recovery clogged - Digital input configured	1	DI301	BV759
RecoveryClogged.Val_R	Recovery clogged	1	DI302	BV760
ReHeatAlrm.Val_Hw_R	Re-heating alarm - Value reads from board	1	DI303	BV761
ReHeatAlrm.Enable_W	Re-heating alarm - Enable input	1	DI304	BV762
ReHeatAlrm.Configured_R	Re-heating alarm - Digital input configured	1	DI305	BV763

Variable	Description	Dim	Modbus	BACnet
ReHeatAlrm.Val_R	Re-heating alarm	1	DI306	BV764
PreHeatAlrm.Val_Hw_R	Pre-heating alarm - Value reads from board	1	DI307	BV765
PreHeatAlrm.Enable_W	Pre-heating alarm - Enable input	1	DI308	BV766
PreHeatAlrm.Configured_R	Pre-heating alarm - Digital input configured	1	DI309	BV767
PreHeatAlrm.Val_R	Pre-heating alarm	1	DI310	BV768
MainHeatCoilAlrm.Val_Hw_R	Main coil alarm - Value reads from board	1	DI311	BV769
MainHeatCoilAlrm.Enable_W	Main coil alarm - Enable input	1	DI312	BV770
MainHeatCoilAlrm.Configured_R	Main coil alarm - Digital input configured	1	DI313	BV771
MainHeatCoilAlrm.Val_R	Main coil alarm	1	DI314	BV772
OA_CoilAlrm.Val_Hw_R	Outdoor air pre-treatment alarm - Value reads from board	1	DI315	BV773
OA_CoilAlrm.Enable_W	Outdoor air pre-treatment alarm - Enable input	1	DI316	BV774
OA_CoilAlrm.Configured_R	Outdoor air pre-treatment alarm - Digital input configured	1	DI317	BV775
OA_CoilAlrm.Val_R	Outdoor air pre-treatment alarm	1	DI318	BV776
DoorSw.Val_Hw_R	Door Switch - Value reads from board	1	DI319	BV777
DoorSw.Enable_W	Door Switch - Enable input	1	DI320	BV778
DoorSw.Configured_R	Door Switch - Digital input configured	1	DI321	BV779
DoorSw.Val_R	Door Switch	1	DI322	BV780
FireSmokeAlrm.Val_Hw_R	Fire/Smoke alarm - Value reads from board	1	DI323	BV781
FireSmokeAlrm.Enable_W	Fire/Smoke alarm - Enable input	1	DI324	BV782
FireSmokeAlrm.Configured_R	Fire/Smoke alarm - Digital input configured	1	DI325	BV783
FireSmokeAlrm.Val_R	Fire/Smoke alarm	1	DI326	BV784
FiremanOverrideSw.Val_Hw_R	Fireman override switch - Value reads from board	1	DI327	BV785
FiremanOverrideSw.Enable_W	Fireman override switch - Enable input	1	DI328	BV786
FiremanOverrideSw.Configured_R	Fireman override switch - Digital input configured	1	DI329	BV787
FiremanOverrideSw.Val_R	Fireman override switch	1	DI330	BV788
SummerWinterModeByDin.Val_Hw_R	Summer/Winter mode by digital input - Value reads from board	1	DI331	BV789
SummerWinterModeByDin.Enable_W	Summer/Winter mode by digital input - Enable input	1	DI332	BV790
SummerWinterModeByDin.Configured_R	Summer/Winter mode by digital input - Configured	1	DI333	BV791
SummerWinterModeByDin.Val_R	Summer/Winter mode by digital input	1	DI334	BV792
Din_SetP.Val_Hw_R	Setpoint by digital input - Value reads from board	1	DI335	BV793
Din_SetP.Enable_W	Setpoint by digital input - Enable input	1	DI336	BV794
Din_SetP.Configured_R	Setpoint by digital input - Digital input configured	1	DI337	BV795
Din_SetP.Val_R	Setpoint by digital input	1	DI338	BV796
Eco_Mode.Val_Hw_R	Eco mode - Value reads from board	1	DI339	BV797
Eco_Mode.Enable_W	Eco mode - Enable input	1	DI340	BV798
Eco_Mode.Configured_R	Eco mode - Digital input configured	1	DI341	BV799
Eco_Mode.Val_R	Eco mode	1	DI342	BV800
PreComf_Mode.Val_Hw_R	Precomfort mode - Value reads from board	1	DI343	BV801
PreComf_Mode.Enable_W	Precomfort mode - Enable input	1	DI344	BV802
PreComf_Mode.Configured_R	Precomfort mode - Digital input configured	1	DI345	BV803
PreComf_Mode.Val_R	Precomfort mode	1	DI346	BV804
Comf_Mode.Val_Hw_R	Comfort mode - Value reads from board	1	DI347	BV805
Comf_Mode.Enable_W	Comfort mode - Enable input	1	DI348	BV806
Comf_Mode.Configured_R	Comfort mode - Digital input configured	1	DI349	BV807
Comf_Mode.Val_R	Comfort mode	1	DI350	BV808
AuxDin_1.Val_Hw_R	Auxiliary digital input 1 - Value reads from board	1	DI351	BV809
AuxDin_1.Enable_W	Auxiliary digital input 1 - Enable input	1	DI352	BV810
AuxDin_1.Configured_R	Auxiliary digital input 1 - Digital input configured	1	DI353	BV811
AuxDin_1.Val_R	Auxiliary digital input 1	1	DI354	BV812
AuxDin_2.Val_Hw_R	Auxiliary digital input 2 - Value reads from board	1	DI355	BV813
AuxDin_2.Enable_W	Auxiliary digital input 2 - Enable input	1	DI356	BV814
AuxDin_2.Configured_R	Auxiliary digital input 2 - Digital input configured	1	DI357	BV815
AuxDin_2.Val_R	Auxiliary digital input 2	1	DI358	BV816
AuxDin_3.Val_Hw_R	Auxiliary digital input 3 - Value reads from board	1	DI359	BV817
AuxDin_3.Enable_W	Auxiliary digital input 3 - Enable input	1	DI360	BV818
AuxDin_3.Configured_R	Auxiliary digital input 3 - Digital input configured	1	DI361	BV819
AuxDin_3.Val_R	Auxiliary digital input 3	1	DI362	BV820
AuxDin_4.Val_Hw_R	Auxiliary digital input 4 - Value reads from board	1	DI363	BV821
AuxDin_4.Enable_W	Auxiliary digital input 4 - Enable input	1	DI364	BV822
AuxDin_4.Configured_R	Auxiliary digital input 4 - Digital input configured	1	DI365	BV823
AuxDin_4.Val_R	Auxiliary digital input 4	1	DI366	BV824
DfrHeatExch_Din.Val_Hw_R	Heat exchanger defrost by Din - Value reads from board	1	DI367	BV825
DfrHeatExch_Din.Enable_W	Heat exchanger defrost by Din - Enable input	1	DI368	BV826
DfrHeatExch_Din.Configured_R	Heat exchanger defrost by Din - Digital input configured	1	DI369	BV827
DfrHeatExch_Din.Val_R	Heat exchanger defrost by Din	1	DI370	BV828
BypassDamp_Dout.Val_W	Bypass damper	1	DI372	BV830
BypassDamp_Dout.Enable_W	Bypass damper - Enable output	1	DI373	BV831
BypassDamp_Dout.Configured_R	Bypass damper - Output configurated	1	DI374	BV832
BypassDamp_Open.Val_Hw_R	Bypass damper floating (open) - Hardware value writes from board	1	DI375	BV833
BypassDamp_Open.Val_W	Bypass damper floating (open)	1	DI376	BV834
BypassDamp_Open.Enable_W	Bypass damper floating (open) - Enable output	1	DI377	BV835
BypassDamp_Open.Configured_R	Bypass damper floating (open) - Output configurated	1	DI378	BV836
BypassDamp_Close.Val_Hw_R	Bypass damper floating (close) - Hardware value writes from board	1	DI379	BV837
BypassDamp_Close.Val_W	Bypass damper floating (close)	1	DI380	BV838
BypassDamp_Close.Enable_W	Bypass damper floating (close) - Enable output	1	DI381	BV839
BypassDamp_Close.Configured_R	Bypass damper floating (close) - Output configurated	1	DI382	BV840
FreshAirDamp_Dout.Val_Hw_R	Fresh air damper - Hardware value writes from board	1	DI383	BV841
FreshAirDamp_Dout.Enable_W	Fresh air damper - Enable output	1	DI385	BV843
FreshAirDamp_Dout.Configured_R	Fresh air damper - Output configurated	1	DI386	BV844
ExhAirDamp_Dout.Val_W	Exhaust air damper	1	DI388	BV846
ExhAirDamp_Dout.Enable_W	Exhaust air damper - Enable output	1	DI389	BV847
ExhAirDamp_Dout.Configured_R	Exhaust air damper - Output configurated	1	DI390	BV848
MixingDamp_Dout.Val_W	Mixing damper	1	DI392	BV850
MixingDamp_Dout.Enable_W	Mixing damper - Enable output	1	DI393	BV851
MixingDamp_Dout.Configured_R	Mixing damper - Output configurated	1	DI394	BV852
SupplyAirDamp_Dout.Val_Hw_R	Supply air damper - Hardware value writes from board	1	DI395	BV853
SupplyAirDamp_Dout.Val_W	Supply air damper	1	DI396	BV854
SupplyAirDamp_Dout.Enable_W	Supply air damper - Enable output	1	DI397	BV855
SupplyAirDamp_Dout.Configured_R	Supply air damper - Output configurated	1	DI398	BV856
RetAirDamp_Dout.Val_Hw_R	Return air damper - Hardware value writes from board	1	DI399	BV857
RetAirDamp_Dout.Val_W	Return air damper	1	DI400	BV858
RetAirDamp_Dout.Enable_W	Return air damper - Enable output	1	DI401	BV859
RetAirDamp_Dout.Configured_R	Return air damper - Output configurated	1	DI402	BV860
MixingDamp_Open.Val_Hw_R	Mixing damper floating (OPEN) - Hardware value writes from board	1	DI403	BV861
MixingDamp_Open.Val_W	Mixing damper floating (OPEN)	1	DI404	BV862
MixingDamp_Open.Enable_W	Mixing damper floating (OPEN) - Enable output	1	DI405	BV863
MixingDamp_Open.Configured_R	Mixing damper floating (OPEN) - Output configurated	1	DI406	BV864
MixingDamp_Close.Val_Hw_R	Mixing damper floating (CLOSE) - Hardware value writes from board	1	DI407	BV865
MixingDamp_Close.Val_W	Mixing damper floating (CLOSE)	1	DI408	BV866
MixingDamp_Close.Enable_W	Mixing damper floating (CLOSE) - Enable output	1	DI409	BV867
MixingDamp_Close.Configured_R	Mixing damper floating (CLOSE) - Output configurated	1	DI410	BV868
SupplyFan_Dout.Val_W	Supply fan	1	DI412	BV870

Variable	Description	Dim	Modbus	BACnet
SupplyFan_Dout.Enable_W	Supply fan - Enable output	1	DI413	BV871
SupplyFan_Dout.Configured_R	Supply fan - Output configurated	1	DI414	BV872
RetFan_Dout.Val_W	Return fan	1	DI416	BV874
RetFan_Dout.Enable_W	Return fan - Enable output	1	DI417	BV875
RetFan_Dout.Configured_R	Return fan - Output configurated	1	DI418	BV876
SupplyFan2_Dout.Val_Hw_R	Supply fan 2 - Hardware value writes from board	1	DI419	BV877
SupplyFan2_Dout.Val_W	Supply fan 2	1	DI420	BV878
SupplyFan2_Dout.Enable_W	Supply fan 2 - Enable output	1	DI421	BV879
SupplyFan2_Dout.Configured_R	Supply fan 2 - Output configurated	1	DI422	BV880
RetFan2_Dout.Val_Hw_R	Return fan 2 - Hardware value writes from board	1	DI423	BV881
RetFan2_Dout.Val_W	Return fan 2	1	DI424	BV882
RetFan2_Dout.Enable_W	Return fan 2 - Enable output	1	DI425	BV883
RetFan2_Dout.Configured_R	Return fan 2 - Output configurated	1	DI426	BV884
Comp_Dout.Val_W	Compressor	1	DI428	BV886
Comp_Dout.Enable_W	Compressor - Enable output	1	DI429	BV887
Comp_Dout.Configured_R	Compressor - Output configurated	1	DI430	BV888
RevVlv.Val_Hw_R	Reverse valve - Hardware value writes from board	1	DI431	BV889
RevVlv.Val_W	Reverse valve	1	DI432	BV890
RevVlv.Enable_W	Reverse valve - Enable output	1	DI433	BV891
RevVlv.Configured_R	Reverse valve - Output configurated	1	DI434	BV892
UnitOnOff_Dout.Val_Hw_R	Unit status (On/Off) - Hardware value writes from board	1	DI435	BV893
UnitOnOff_Dout.Val_W	Unit status (On/Off)	1	DI436	BV894
UnitOnOff_Dout.Enable_W	Unit status (On/Off) - Enable output	1	DI437	BV895
UnitOnOff_Dout.Configured_R	Unit status (On/Off) - Output configurated	1	DI438	BV896
CoolHeat_Dout.Val_Hw_R	Cool/Heat status - Hardware value writes from board	1	DI439	BV897
CoolHeat_Dout.Val_W	Cool/Heat status	1	DI440	BV898
CoolHeat_Dout.Enable_W	Cool/Heat status - Enable output	1	DI441	BV899
CoolHeat_Dout.Configured_R	Cool/Heat status - Output configurated	1	DI442	BV900
GlobalAlrm_Dout.Val_Hw_R	Generic alarm info - Hardware value writes from board	1	DI443	BV901
GlobalAlrm_Dout.Val_W	Generic alarm info	1	DI444	BV902
GlobalAlrm_Dout.Enable_W	Generic alarm info - Enable output	1	DI445	BV903
GlobalAlrm_Dout.Configured_R	Generic alarm info - Output configurated	1	DI446	BV904
LightAlrm_Dout.Val_Hw_R	Light alarm info - Hardware value writes from board	1	DI447	BV905
LightAlrm_Dout.Val_W	Light alarm info	1	DI448	BV906
LightAlrm_Dout.Enable_W	Light alarm info - Enable output	1	DI449	BV907
LightAlrm_Dout.Configured_R	Light alarm info - Output configurated	1	DI450	BV908
SrsAlrm_Dout.Val_Hw_R	Serious alarm info - Hardware value writes from board	1	DI451	BV909
SrsAlrm_Dout.Val_W	Serious alarm info	1	DI452	BV910
SrsAlrm_Dout.Enable_W	Serious alarm info - Enable output	1	DI453	BV911
SrsAlrm_Dout.Configured_R	Serious alarm info - Output configurated	1	DI454	BV912
Humidifier.Val_Hw_R	Humidifier - Hardware value writes from board	1	DI455	BV913
Humidifier.Val_W	Humidifier	1	DI456	BV914
Humidifier.Enable_W	Humidifier - Enable output	1	DI457	BV915
Humidifier.Configured_R	Humidifier - Output configurated	1	DI458	BV916
AuxOut1_Dout.Val_Hw_R	Auxiliary output 1 - Hardware value writes from board	1	DI459	BV917
AuxOut1_Dout.Enable_W	Auxiliary output 1 - Enable output	1	DI461	BV919
AuxOut1_Dout.Configured_R	Auxiliary output 1 - Output configurated	1	DI462	BV920
AuxOut2_Dout.Val_Hw_R	Auxiliary output 2 - Hardware value writes from board	1	DI463	BV921
AuxOut2_Dout.Enable_W	Auxiliary output 2 - Enable output	1	DI465	BV923
AuxOut2_Dout.Configured_R	Auxiliary output 2 - Output configurated	1	DI466	BV924
AuxOut3_Dout.Val_Hw_R	Auxiliary output 3 - Hardware value writes from board	1	DI467	BV925
AuxOut3_Dout.Enable_W	Auxiliary output 3 - Enable output	1	DI469	BV927
AuxOut3_Dout.Configured_R	Auxiliary output 3 - Output configurated	1	DI470	BV928
AuxOut4_Dout.Val_Hw_R	Auxiliary output 4 - Hardware value writes from board	1	DI471	BV929
AuxOut4_Dout.Enable_W	Auxiliary output 4 - Enable output	1	DI473	BV931
AuxOut4_Dout.Configured_R	Auxiliary output 4 - Output configurated	1	DI474	BV932
MainVlv_Open.Val_Hw_R	Main floating valve open - Hardware value writes from board	1	DI475	BV933
MainVlv_Open.Val_W	Main floating valve open	1	DI476	BV934
MainVlv_Open.Enable_W	Main floating valve open - Enable output	1	DI477	BV935
MainVlv_Open.Configured_R	Main floating valve open - Output configurated	1	DI478	BV936
PreHeatVlv_Open.Val_Hw_R	Pre-heating floating valve open - Hardware value writes from board	1	DI479	BV937
PreHeatVlv_Open.Val_W	Pre-heating floating valve open	1	DI480	BV938
PreHeatVlv_Open.Enable_W	Pre-heating floating valve open - Enable output	1	DI481	BV939
PreHeatVlv_Open.Configured_R	Pre-heating floating valve open - Output configurated	1	DI482	BV940
ReHeatVlv_Open.Val_Hw_R	Re-Heating floating valve open - Hardware value writes from board	1	DI483	BV941
ReHeatVlv_Open.Val_W	Re-Heating floating valve open	1	DI484	BV942
ReHeatVlv_Open.Enable_W	Re-Heating floating valve open - Enable output	1	DI485	BV943
ReHeatVlv_Open.Configured_R	Re-Heating floating valve open - Output configurated	1	DI486	BV944
MainVlv_Close.Val_Hw_R	Main floating valve close - Hardware value writes from board	1	DI487	BV945
MainVlv_Close.Val_W	Main floating valve close	1	DI488	BV946
MainVlv_Close.Enable_W	Main floating valve close - Enable output	1	DI489	BV947
MainVlv_Close.Configured_R	Main floating valve close - Output configurated	1	DI490	BV948
PreHeatVlv_Close.Val_Hw_R	Pre-heating floating valve close - Hardware value writes from board	1	DI491	BV949
PreHeatVlv_Close.Val_W	Pre-heating floating valve close	1	DI492	BV950
PreHeatVlv_Close.Enable_W	Pre-heating floating valve close - Enable output	1	DI493	BV951
PreHeatVlv_Close.Configured_R	Pre-heating floating valve close - Output configurated	1	DI494	BV952
ReHeatVlv_Close.Val_Hw_R	Re-Heating floating valve close - Hardware value writes from board	1	DI495	BV953
ReHeatVlv_Close.Val_W	Re-Heating floating valve close	1	DI496	BV954
ReHeatVlv_Close.Enable_W	Re-Heating floating valve close - Enable output	1	DI497	BV955
ReHeatVlv_Close.Configured_R	Re-Heating floating valve close - Output configurated	1	DI498	BV956
MainCoil_Step1.Val_Hw_R	Main step 1 - Hardware value writes from board	1	DI499	BV957
MainCoil_Step1.Val_W	Main step 1	1	DI500	BV958
MainCoil_Step1.Enable_W	Main step 1 - Enable output	1	DI501	BV959
MainCoil_Step1.Configured_R	Main step 1 - Output configurated	1	DI502	BV960
MainCoil_Step2.Val_Hw_R	Main step 2 - Hardware value writes from board	1	DI503	BV961
MainCoil_Step2.Val_W	Main step 2	1	DI504	BV962
MainCoil_Step2.Enable_W	Main step 2 - Enable output	1	DI505	BV963
MainCoil_Step2.Configured_R	Main step 2 - Output configurated	1	DI506	BV964
MainCoil_Step3.Val_Hw_R	Main step 3 - Hardware value writes from board	1	DI507	BV965
MainCoil_Step3.Val_W	Main step 3	1	DI508	BV966
MainCoil_Step3.Enable_W	Main step 3 - Enable output	1	DI509	BV967
MainCoil_Step3.Configured_R	Main step 3 - Output configurated	1	DI510	BV968
MainCoil_Step4.Val_Hw_R	Main step 4 - Hardware value writes from board	1	DI511	BV969
MainCoil_Step4.Val_W	Main step 4	1	DI512	BV970
MainCoil_Step4.Enable_W	Main step 4 - Enable output	1	DI513	BV971
MainCoil_Step4.Configured_R	Main step 4 - Output configurated	1	DI514	BV972
ReHeatCoil_Step1.Val_Hw_R	Postheat heater 1 - Hardware value writes from board	1	DI515	BV973
ReHeatCoil_Step1.Val_W	Postheat heater 1	1	DI516	BV974
ReHeatCoil_Step1.Enable_W	Postheat heater 1 - Enable output	1	DI517	BV975
ReHeatCoil_Step1.Configured_R	Postheat heater 1 - Output configurated	1	DI518	BV976
ReHeatCoil_Step2.Val_Hw_R	Postheat heater 2 - Hardware value writes from board	1	DI519	BV977
ReHeatCoil_Step2.Val_W	Postheat heater 2	1	DI520	BV978

Variable	Description	Dim	Modbus	BACnet
ReHeatCoil_Step2.Enable_W	Postheat heater 2 - Enable output	1	DI521	BV979
ReHeatCoil_Step2.Configured_R	Postheat heater 2 - Output configurated	1	DI522	BV980
ReHeatCoil_Step3.Val_Hw_R	Postheat heater 3 - Hardware value writes from board	1	DI523	BV981
ReHeatCoil_Step3.Val_W	Postheat heater 3	1	DI524	BV982
ReHeatCoil_Step3.Enable_W	Postheat heater 3 - Enable output	1	DI525	BV983
ReHeatCoil_Step3.Configured_R	Postheat heater 3 - Output configurated	1	DI526	BV984
ReHeatCoil_Step4.Val_Hw_R	Postheat heater 4 - Hardware value writes from board	1	DI527	BV985
ReHeatCoil_Step4.Val_W	Postheat heater 4	1	DI528	BV986
ReHeatCoil_Step4.Enable_W	Postheat heater 4 - Enable output	1	DI529	BV987
ReHeatCoil_Step4.Configured_R	Postheat heater 4 - Output configurated	1	DI530	BV988
PreHeatCoil_Step1.Val_Hw_R	Preheat heater 1 - Hardware value writes from board	1	DI531	BV989
PreHeatCoil_Step1.Val_W	Preheat heater 1	1	DI532	BV990
PreHeatCoil_Step1.Enable_W	Preheat heater 1 - Enable output	1	DI533	BV991
PreHeatCoil_Step1.Configured_R	Preheat heater 1 - Output configurated	1	DI534	BV992
PreHeatCoil_Step2.Val_Hw_R	Preheat heater 2 - Hardware value writes from board	1	DI535	BV993
PreHeatCoil_Step2.Val_W	Preheat heater 2	1	DI536	BV994
PreHeatCoil_Step2.Enable_W	Preheat heater 2 - Enable output	1	DI537	BV995
PreHeatCoil_Step2.Configured_R	Preheat heater 2 - Output configurated	1	DI538	BV996
PreHeatCoil_Step3.Val_Hw_R	Preheat heater 3 - Hardware value writes from board	1	DI539	BV997
PreHeatCoil_Step3.Val_W	Preheat heater 3	1	DI540	BV998
PreHeatCoil_Step3.Enable_W	Preheat heater 3 - Enable output	1	DI541	BV999
PreHeatCoil_Step3.Configured_R	Preheat heater 3 - Output configurated	1	DI542	BV1000
PreHeatCoil_Step4.Val_Hw_R	Preheat heater 4 - Hardware value writes from board	1	DI543	BV1001
PreHeatCoil_Step4.Val_W	Preheat heater 4	1	DI544	BV1002
PreHeatCoil_Step4.Enable_W	Preheat heater 4 - Enable output	1	DI545	BV1003
PreHeatCoil_Step4.Configured_R	Preheat heater 4 - Output configurated	1	DI546	BV1004
OA_Coil_Step1.Val_Hw_R	Outdoor air pre-treatment heater 1 - Hardware value writes from board	1	DI547	BV1005
OA_Coil_Step1.Val_W	Outdoor air pre-treatment heater 1	1	DI548	BV1006
OA_Coil_Step1.Enable_W	Outdoor air pre-treatment heater 1 - Enable output	1	DI549	BV1007
OA_Coil_Step1.Configured_R	Outdoor air pre-treatment heater 1 - Output configurated	1	DI550	BV1008
OA_Coil_Step2.Val_Hw_R	Outdoor air pre-treatment heater 2 - Hardware value writes from board	1	DI551	BV1009
OA_Coil_Step2.Val_W	Outdoor air pre-treatment heater 2	1	DI552	BV1010
OA_Coil_Step2.Enable_W	Outdoor air pre-treatment heater 2 - Enable output	1	DI553	BV1011
OA_Coil_Step2.Configured_R	Outdoor air pre-treatment heater 2 - Output configurated	1	DI554	BV1012
OA_Coil_Step3.Val_Hw_R	Outdoor air pre-treatment heater 3 - Hardware value writes from board	1	DI555	BV1013
OA_Coil_Step3.Val_W	Outdoor air pre-treatment heater 3	1	DI556	BV1014
OA_Coil_Step3.Enable_W	Outdoor air pre-treatment heater 3 - Enable output	1	DI557	BV1015
OA_Coil_Step3.Configured_R	Outdoor air pre-treatment heater 3 - Output configurated	1	DI558	BV1016
OA_Coil_Step4.Val_Hw_R	Outdoor air pre-treatment heater 4 - Hardware value writes from board	1	DI559	BV1017
OA_Coil_Step4.Val_W	Outdoor air pre-treatment heater 4	1	DI560	BV1018
OA_Coil_Step4.Enable_W	Outdoor air pre-treatment heater 4 - Enable output	1	DI561	BV1019
OA_Coil_Step4.Configured_R	Outdoor air pre-treatment heater 4 - Output configurated	1	DI562	BV1020
PreHeatPmp_1.Val_Hw_R	Pre-Heating pump 1 - Hardware value writes from board	1	DI563	BV1021
PreHeatPmp_1.Val_W	Pre-Heating pump 1	1	DI564	BV1022
PreHeatPmp_1.Enable_W	Pre-Heating pump 1 - Enable output	1	DI565	BV1023
PreHeatPmp_1.Configured_R	Pre-Heating pump 1 - Output configurated	1	DI566	BV1024
PreHeatPmp_2.Val_Hw_R	Pre-Heating pump 2 - Hardware value writes from board	1	DI567	BV1025
PreHeatPmp_2.Val_W	Pre-Heating pump 2	1	DI568	BV1026
PreHeatPmp_2.Enable_W	Pre-Heating pump 2 - Enable output	1	DI569	BV1027
PreHeatPmp_2.Configured_R	Pre-Heating pump 2 - Output configurated	1	DI570	BV1028
MainCoilPmp_1.Val_Hw_R	Main pump 1 - Hardware value writes from board	1	DI571	BV1029
MainCoilPmp_1.Val_W	Main pump 1	1	DI572	BV1030
MainCoilPmp_1.Enable_W	Main pump 1 - Enable output	1	DI573	BV1031
MainCoilPmp_1.Configured_R	Main pump 1 - Output configurated	1	DI574	BV1032
MainCoilPmp_2.Val_Hw_R	Main pump 2 - Hardware value writes from board	1	DI575	BV1033
MainCoilPmp_2.Val_W	Main pump 2	1	DI576	BV1034
MainCoilPmp_2.Enable_W	Main pump 2 - Enable output	1	DI577	BV1035
MainCoilPmp_2.Configured_R	Main pump 2 - Output configurated	1	DI578	BV1036
ReHeatPmp_1.Val_Hw_R	Re-Heating pump 1 - Hardware value writes from board	1	DI579	BV1037
ReHeatPmp_1.Val_W	Re-Heating pump 1	1	DI580	BV1038
ReHeatPmp_1.Enable_W	Re-Heating pump 1 - Enable output	1	DI581	BV1039
ReHeatPmp_1.Configured_R	Re-Heating pump 1 - Output configurated	1	DI582	BV1040
ReHeatPmp_2.Val_Hw_R	Re-Heating pump 2 - Hardware value writes from board	1	DI583	BV1041
ReHeatPmp_2.Val_W	Re-Heating pump 2	1	DI584	BV1042
ReHeatPmp_2.Enable_W	Re-Heating pump 2 - Enable output	1	DI585	BV1043
ReHeatPmp_2.Configured_R	Re-Heating pump 2 - Output configurated	1	DI586	BV1044
OA_CoilPmp_1.Val_Hw_R	Outdoor air pre-treatment-Heating pump 1 - Hardware value writes from board	1	DI587	BV1045
OA_CoilPmp_1.Val_W	Outdoor air pre-treatment-Heating pump 1	1	DI588	BV1046
OA_CoilPmp_1.Enable_W	Outdoor air pre-treatment-Heating pump 1 - Enable output	1	DI589	BV1047
OA_CoilPmp_1.Configured_R	Outdoor air pre-treatment-Heating pump 1 - Output configurated	1	DI590	BV1048
OA_CoilPmp_2.Val_Hw_R	Outdoor air pre-treatment-Heating pump 2 - Hardware value writes from board	1	DI591	BV1049
OA_CoilPmp_2.Val_W	Outdoor air pre-treatment-Heating pump 2	1	DI592	BV1050
OA_CoilPmp_2.Enable_W	Outdoor air pre-treatment-Heating pump 2 - Enable output	1	DI593	BV1051
OA_CoilPmp_2.Configured_R	Outdoor air pre-treatment-Heating pump 2 - Output configurated	1	DI594	BV1052
FiltAlrm_Dout.Val_Hw_R	Filters alarm - Hardware value writes from board	1	DI595	BV1053
FiltAlrm_Dout.Val_W	Filters alarm	1	DI596	BV1054
FiltAlrm_Dout.Enable_W	Filters alarm - Enable output	1	DI597	BV1055
FiltAlrm_Dout.Configured_R	Filters alarm - Output configurated	1	DI598	BV1056
Recovery_Dout.Val_Hw_R	Recovery - Hardware value writes from board	1	DI599	BV1057
Recovery_Dout.Val_W	Recovery	1	DI600	BV1058
Recovery_Dout.Enable_W	Recovery - Enable output	1	DI601	BV1059
Recovery_Dout.Configured_R	Recovery - Output configurated	1	DI602	BV1060
IEC_Hum_Dout.Val_Hw_R	IEC humidifer - Hardware value writes from board	1	DI603	BV1061
IEC_Hum_Dout.Val_W	IEC humidifer	1	DI604	BV1062
IEC_Hum_Dout.Enable_W	IEC humidifer - Enable output	1	DI605	BV1063
IEC_Hum_Dout.Configured_R	IEC humidifer - Output configurated	1	DI606	BV1064
SupplyFan_Aout.Enable_W	Supply fan - Enable output	1	DI607	BV1065
SupplyFan_Aout.Configured_R	Supply fan - Analog output configured	1	DI608	BV1066
RetFan_Aout.Enable_W	Return fan - Enable output	1	DI609	BV1067
RetFan_Aout.Configured_R	Return fan - Analog output configured	1	DI610	BV1068
BypassDamp_Aout.Enable_W	Bypass damper - Enable output	1	DI611	BV1069
BypassDamp_Aout.Configured_R	Bypass damper - Analog output configured	1	DI612	BV1070
MixingDamp_Aout.Enable_W	Mixing damper - Enable output	1	DI613	BV1071
MixingDamp_Aout.Configured_R	Mixing damper - Analog output configured	1	DI614	BV1072
FreshAirDamp_Aout.Enable_W	Fresh air damper - Enable output	1	DI615	BV1073
FreshAirDamp_Aout.Configured_R	Fresh air damper - Analog output configured	1	DI616	BV1074
ReHeatCoil_Aout.Enable_W	Reheat heater - Enable output	1	DI617	BV1075
ReHeatCoil_Aout.Configured_R	Reheat heater - Analog output configured	1	DI618	BV1076
PreHeatCoil_Aout.Enable_W	Pre-Heating heater - Enable output	1	DI619	BV1077
PreHeatCoil_Aout.Configured_R	Pre-Heating heater - Analog output configured	1	DI620	BV1078
OA_Coil_Aout.Enable_W	Outdoor air pre-treatment heater - Enable output	1	DI621	BV1079
OA_Coil_Aout.Configured_R	Outdoor air pre-treatment heater - Analog output configured	1	DI622	BV1080

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MainCoil_Aout.Enable_W	Main coil valve - Enable output	1	DI623	BV1081
MainCoil_Aout.Configured_R	Main coil valve - Analog output configured	1	DI624	BV1082
ThrmlWheel_Aout.Enable_W	Thermal wheel - Enable output	1	DI625	BV1083
ThrmlWheel_Aout.Configured_R	Thermal wheel - Analog output configured	1	DI626	BV1084
Humidifier_Aout.Enable_W	Humidifier - Enable output	1	DI627	BV1085
Humidifier_Aout.Configured_R	Humidifier - Analog output configured	1	DI628	BV1086
ExhAirDamp_Aout.Enable_W	Exhaust air damper - Enable output	1	DI629	BV1087
ExhAirDamp_Aout.Configured_R	Exhaust air damper - Analog output configured	1	DI630	BV1088
AuxAout_1.Enable_W	Auxiliary output 1 - Enable output	1	DI631	BV1089
AuxAout_1.Configured_R	Auxiliary output 1 - Analog output configured	1	DI632	BV1090
AuxAout_2.Enable_W	Auxiliary output 2 - Enable output	1	DI633	BV1091
AuxAout_2.Configured_R	Auxiliary output 2 - Analog output configured	1	DI634	BV1092
AuxAout_3.Enable_W	Auxiliary output 3 - Enable output	1	DI635	BV1093
AuxAout_3.Configured_R	Auxiliary output 3 - Analog output configured	1	DI636	BV1094
AuxAout_4.Enable_W	Auxiliary output 4 - Enable output	1	DI637	BV1095
AuxAout_4.Configured_R	Auxiliary output 4 - Analog output configured	1	DI638	BV1096
IEC_Aout.Enable_W	IEC - Enable output	1	DI639	BV1097
IEC_Aout.Configured_R	IEC - Analog output configured	1	DI640	BV1098
Recovery_Aout.Enable_W	Recovery pump - Enable output	1	DI641	BV1099
Recovery_Aout.Configured_R	Recovery pump - Analog output configured	1	DI642	BV1100
SupplyAirDamp_Aout.Enable_W	Supply air damper - Enable output	1	DI643	BV1101
SupplyAirDamp_Aout.Configured_R	Supply air damper - Analog output configured	1	DI644	BV1102
RetAirDamp_Aout.Enable_W	Return air damper - Enable output	1	DI645	BV1103
RetAirDamp_Aout.Configured_R	Return air damper - Analog output configured	1	DI646	BV1104
Scheduler_OnOffUnit.FB_SchedulerMngK_1.StatusChk	-	1	DI657	BV1115
Scheduler_OnOffUnit.FB_SchedulerMngK_1.VacChk	-	1	DI658	BV1116
Scheduler_OnOffUnit.FB_SchedulerMngK_1.SDayChk	-	1	DI659	BV1117
GeneralMng.WizardCustom	-	1	DI694	BV1152
Scheduler_OnOffUnit.FB_ SchedulerMskMng_1.CfgErr_SCHED	-	1	DI695	BV1153
GenericHumidifier.ModulHum_IO_CfgWarn	-	1	DI699	BV1157
AuxiliaryRegulation.AuxReg1_Info.InputCheckCfgErr	Eco mode - Enable input	1	DI340	BV798
AuxiliaryRegulation.AuxReg1_Info.OutputCheckCfgErr	Auxiliary regulation 1: Informations - Input check configura- tion error	1	DI706	BV1164
AuxiliaryRegulation.AuxReg1_Info.DOut	Eco mode	1	DI342	BV800
AuxiliaryRegulation.AuxReg1_Info.EnableCheckCfgErr	Auxiliary regulation 1: Informations - Output check configu- ration error	1	DI707	BV1165
AuxiliaryRegulation.AuxReg2_Info.InputCheckCfgErr	Auxiliary regulation 1: Informations - Dout configured	1	DI708	BV1166
AuxiliaryRegulation.AuxReg2_Info.OutputCheckCfgErr	Precomfort mode - Digital input configured	1	DI345	BV803
AuxiliaryRegulation.AuxReg2_Info.DOut	Auxiliary regulation 1: Informations - Enable check configura- tion error	1	DI709	BV1167
AuxiliaryRegulation.AuxReg2_Info.EnableCheckCfgErr	Comfort mode - Value reads from board	1	DI347	BV805
AuxiliaryRegulation.AuxReg3_Info.InputCheckCfgErr	Auxiliary regulation 2: Informations - Input check configura- tion error	1	DI710	BV1168
AuxiliaryRegulation.AuxReg3_Info.OutputCheckCfgErr	Comfort mode - Digital input configured	1	DI349	BV807
AuxiliaryRegulation.AuxReg3_Info.DOut	Auxiliary regulation 2: Informations - Output check configu- ration error	1	DI711	BV1169
AuxiliaryRegulation.AuxReg3_Info.EnableCheckCfgErr	Auxiliary regulation 2: Informations - Dout configured	1	DI712	BV1170
AuxiliaryRegulation.AuxReg4_Info.InputCheckCfgErr	Auxiliary digital input 1 - Enable input	1	DI352	BV810
AuxiliaryRegulation.AuxReg4_Info.OutputCheckCfgErr	Auxiliary regulation 2: Informations - Enable check configura- tion error	1	DI713	BV1171
AuxiliaryRegulation.AuxReg4_Info.DOut	Auxiliary digital input 1	1	DI354	BV812
AuxiliaryRegulation.AuxReg4_Info.EnableCheckCfgErr	Auxiliary regulation 3: Informations - Input check configura- tion error	1	DI714	BV1172
Comp_OnOff.OnOffComp_IO_CfgWarn	Auxiliary digital input 2 - Enable input	1	DI356	BV814
BLDC_compressor.BLDC_Comp_IO_CfgWarn	Auxiliary regulation 3: Informations - Output check configu- ration error	1	DI715	BV1173
cpCOmini_HighEnd	Auxiliary regulation 3: Informations - Dout configured	1	DI716	BV1174
GeneralMng.DHCP_State_1	Auxiliary digital input 3 - Value reads from board	1	DI359	BV817
BLDC_compressor.Info_PWRP1.StatusReg_Bit_15	Auxiliary regulation 3: Informations - Enable check configura- tion error	1	DI717	BV1175
BLDC_compressor.Info_PWRP1.StatusReg_Bit_14	Auxiliary digital input 3 - Digital input configured	1	DI361	BV819
BLDC_compressor.Info_PWRP1.StatusReg_Bit_13	Auxiliary regulation 4: Informations - Input check configura- tion error	1	DI718	BV1176
BLDC_compressor.Info_PWRP1.StatusReg_Bit_12	Auxiliary digital input 4 - Value reads from board	1	DI363	BV821
BLDC_compressor.Info_PWRP1.StatusReg_DriveTripped	Auxiliary regulation 4: Informations - Output check configu- ration error	1	DI719	BV1177
BLDC_compressor.Info_PWRP1.StatusReg_Bit_10	Auxiliary regulation 4: Informations - Dout configured	1	DI720	BV1178
BLDC_compressor.Info_PWRP1.StatusReg_MainSupplyLossed	Auxiliary digital input 4	1	DI366	BV824
BLDC_compressor.Info_PWRP1.StatusReg_MotorOverload	Auxiliary regulation 4: Informations - Enable check configura- tion error	1	DI721	BV1179
BLDC_compressor.Info_PWRP1.StatusReg_DrivelnAutotune	-	1	DI722	BV1180
BLDC_compressor.Info_PWRP1.StatusReg_Bit_06	-	1	DI723	BV1181
BLDC_compressor.Info_PWRP1.StatusReg_SwitchingFreqDeratingON	c.pCOmini high end version present	1	DI724	BV1182
BLDC_compressor.Info_PWRP1.StatusReg_FanON	Automatically generated	1	DI725	BV1183
BLDC_compressor.Info_PWRP1.StatusReg_UnderVoltage	Inverter Power Plus Info - Status register bit 15	1	DI726	BV1184
BLDC_compressor.Info_PWRP1.StatusReg_MotorPTC_OverHeat	Inverter Power Plus Info - Status register bit 14	1	DI727	BV1185
BLDC_compressor.Info_PWRP1.StatusReg_RelayConfigON	Inverter Power Plus Info - Status register bit 13	1	DI728	BV1186
BLDC_compressor.Info_PWRP1.StatusReg_DriveInhibit	Inverter Power Plus Info - Status register bit 12	1	DI729	BV1187
BLDC_compressor.Info_PWRP1.SpeedReg_Bit_15	Inverter Power Plus Info - Drive in alarm	1	DI730	BV1188
BLDC_compressor.Info_PWRP1.SpeedReg_Bit_14	Inverter Power Plus Info - Status register bit 10	1	DI731	BV1189
BLDC_compressor.Info_PWRP1.SpeedReg_Bit_13	Inverter Power Plus Info - Power supply status: 0=OK; 1=loss of a power supply phase (L1)	1	DI732	BV1190
BLDC_compressor.Info_PWRP1.SpeedReg_Bit_12	Inverter Power Plus Info - Motor overload	1	DI733	BV1191
BLDC_compressor.Info_PWRP1.SpeedReg_Bit_11	Inverter Power Plus Info - Autotune running	1	DI734	BV1192
BLDC_compressor.Info_PWRP1.SpeedReg_Bit_10	Inverter Power Plus Info - Status register bit 06	1	DI735	BV1193
BLDC_compressor.Info_PWRP1.SpeedReg_Bit_09	Inverter Power Plus Info - Switching frequency derating ON	1	DI736	BV1194
BLDC_compressor.Info_PWRP1.SpeedReg_Bit_08	Inverter Power Plus Info - Fan ON	1	DI737	BV1195
BLDC_compressor.Info_PWRP1.SpeedReg_Bit_07	Inverter Power Plus Info - Under voltage	1	DI738	BV1196
	Inverter Power Plus Info - Motor PTC overheating	1	DI739	BV1197
	Inverter Power Plus Info - Relay config. ON	1	DI740	BV1198
	Inverter Power Plus Info - Safety input status (STO); 0=drive enable; 1= drive disable	1	DI741	BV1199
	Inverter Power Plus Info - Speed register bit 15	1	DI742	BV1200
	Inverter Power Plus Info - Speed register bit 14	1	DI743	BV1201
	Inverter Power Plus Info - Speed register bit 13	1	DI744	BV1202
	Inverter Power Plus Info - Speed register bit 12	1	DI745	BV1203
	Inverter Power Plus Info - Speed register bit 11	1	DI746	BV1204
	Inverter Power Plus Info - Speed register bit 10	1	DI747	BV1205
	Inverter Power Plus Info - Speed register bit 09	1	DI748	BV1206
	Inverter Power Plus Info - Speed register bit 08	1	DI749	BV1207
	Inverter Power Plus Info - Speed register bit 07	1	DI750	BV1208

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BLDC_compressor.Info_PWRP1.SpeedReg_Bit_06	Inverter Power Plus Info - Speed register bit 06	1	DI751	BV1209
BLDC_compressor.Info_PWRP1.SpeedReg_Bit_05	Inverter Power Plus Info - Speed register bit 05	1	DI752	BV1210
BLDC_compressor.Info_PWRP1.SpeedReg_Bit_04	Inverter Power Plus Info - Speed register bit 04	1	DI753	BV1211
BLDC_compressor.Info_PWRP1.SpeedReg_Bit_03	Inverter Power Plus Info - Speed register bit 03	1	DI754	BV1212
BLDC_compressor.Info_PWRP1.SpeedReg_Bit_02	Inverter Power Plus Info - Speed register bit 02	1	DI755	BV1213
BLDC_compressor.Info_PWRP1.SpeedReg_Bit_01	Inverter Power Plus Info - Speed register bit 01	1	DI756	BV1214
BLDC_compressor.Info_PWRP1.SpeedReg_Bit_00	Inverter Power Plus Info - Speed register bit 00	1	DI757	BV1215
BLDC_compressor.Info_PWRP1.Mng_CheckVI_NotOK	Inverter Power Plus Info - Reserved	1	DI758	BV1216
BLDC_compressor.Info_PWRP1.Mng_LoadDefFail	Inverter Power Plus Info - Reserved	1	DI759	BV1217
BLDC_compressor.Info_PWRP1.Info_PSD_400V	Inverter Power Plus Info - Main supply as three phases	1	DI760	BV1218
BLDC_compressor.Info_PWRP1.Mng_MotSelect_400V	Inverter Power Plus Info - Three-phase inverter required for compressor	1	DI761	BV1219
BLDC_compressor.MiscMng_PWRP1.MngCstm_SaveCustomCfgInProgress	Custom cofiguration data saving in progress	1	DI762	BV1220
BLDC_compressor.PwrpOnline_BLDC1	Inverter is online	1	DI763	BV1221
Info_BLDC1.Mng_TestMode	BLDC informations - Managing test mode	1	DI764	BV1222
Info_BLDC1.Info_SIAM_90rpsZone	BLDC informations - Working zone 1c - max speed 90 rps (Siam only)	1	DI765	BV1223
Info_BLDC1.UI_EqualizationStatus	BLDC informations - Show pressure equalization status (blinking)	1	DI766	BV1224
Info_BLDC1.UI_LowDeltaP	BLDC informations - Show low pressure difference condition	1	DI767	BV1225
Info_BLDC1.EnvTyp_SiamComp	BLDC informations - Envelope Type: Siam compressor	1	DI768	BV1226
SPV_Warning_Config	Warning: SPV Configuration error	1	DI769	BV1227
SPV_Warning_License	Warning: SPV License not compatible	1	DI770	BV1228
AI_NOT_USED.Active	Alarm to make the alarms list compatible with mask - Alarm status	1	DI1000	BV1229
AI_SupplyTemp.Active	Supply temperature probe alarm - Alarm status	1	DI1001	BV1230
AI_SupplyHum.Active	Supply humidity probe alarm - Alarm status	1	DI1002	BV1231
AI_RetTemp.Active	Return temperature probe alarm - Alarm status	1	DI1003	BV1232
AI_RetHum.Active	Return humidity probe alarm - Alarm status	1	DI1004	BV1233
AI_RoomTemp.Active	Room temperature probe alarm - Alarm status	1	DI1005	BV1234
AI_RoomHum.Active	Room humidity probe alarm - Alarm status	1	DI1006	BV1235
AI_ExtTemp.Active	Fresh air temperature probe alarm - Alarm status	1	DI1007	BV1236
AI_ExtHum.Active	Fresh air humidity probe alarm - Alarm status	1	DI1008	BV1237
AI_ExhTemp.Active	Exhaust temperature probe alarm - Alarm status	1	DI1009	BV1238
AI_ExhHum.Active	Exhaust humidity probe alarm - Alarm status	1	DI1010	BV1239
AI_AFreezeTemp.Active	Antifreeze temperature probe alarm - Alarm status	1	DI1011	BV1240
AI_SatTemp.Active	Saturation temperature probe alarm - Alarm status	1	DI1012	BV1241
AI_SatHum.Active	Saturation humidity probe alarm - Alarm status	1	DI1013	BV1242
AI_OutdoorAirTemp.Active	Outdoor air pre-treatment temperature probe alarm- Alarm status	1	DI1014	BV1243
AI_SupplyAirP.Active	Supply air pressure probe alarm - Alarm status	1	DI1015	BV1244
AI_RetAirP.Active	Return air pressure probe alarm - Alarm status	1	DI1016	BV1245
AI_AirQuality_CO2.Active	CO2 sensor probe alarm - Alarm status	1	DI1017	BV1246
AI_AirQuality_VOC.Active	VOC sensor probe alarm - Alarm status	1	DI1018	BV1247
AI_DscgP.Active	Discharge pressure probe alarm - Alarm status	1	DI1019	BV1248
AI_DscgT.Active	Discharge temperature probe alarm - Alarm status	1	DI1020	BV1249
AI_SuctP.Active	Suction pressure probe alarm - Alarm status	1	DI1021	BV1250
AI_SuctT.Active	Suction temperature probe alarm - Alarm status	1	DI1022	BV1251
AI_OA_CoilWaterTemp.Active	Outdoor air pre-treatment coil water temperature probe alarm - Alarm status	1	DI1023	BV1252
AI_PreHeatCoilWaterTemp.Active	Preheat coil water temperature probe alarm - Alarm status	1	DI1024	BV1253
AI_MainCoilWaterTemp.Active	Main coil water temperature probe alarm - Alarm status	1	DI1025	BV1254
AI_ReHeatCoilWaterTemp.Active	Re heat coil water temperature probe alarm - Alarm status	1	DI1026	BV1255
AI_AuxPrb_1.Active	Auxiliary probe 1 probe alarm - Alarm status	1	DI1027	BV1256
AI_AuxPrb_2.Active	Auxiliary probe 2 probe alarm - Alarm status	1	DI1028	BV1257
AI_AuxPrb_3.Active	Auxiliary probe 3 probe alarm - Alarm status	1	DI1029	BV1258
AI_AuxPrb_4.Active	Auxiliary probe 4 probe alarm - Alarm status	1	DI1030	BV1259
AI_Ain_SetP.Active	Setpoint by AIN probe alarm - Alarm status	1	DI1031	BV1260
AI_SupplyRecoveryTemp.Active	Supply recovery temperature probe alarm - Alarm status	1	DI1032	BV1261
AI_RetRecoveryTemp.Active	Return recovery temperature probe alarm - Alarm status	1	DI1033	BV1262
AI_HepaFilt_1.Active	Hepa filter 1 probe alarm - Alarm status	1	DI1034	BV1263
AI_HepaFilt_2.Active	Hepa filter 2 probe alarm - Alarm status	1	DI1035	BV1264
AI_GenericAlrmByDin.Active	Generic alarm from digital input - Alarm status	1	DI1036	BV1265
AI_MainHeat_Ovld.Active	Main coil alarm - Alarm status	1	DI1037	BV1266
AI_SupplyFanOvld.Active	Supply fan overload - Alarm status	1	DI1038	BV1267
AI_RetFanOvld.Active	Return fan overload - Alarm status	1	DI1039	BV1268
AI_FansOvld.Active	Fans overload - Alarm status	1	DI1040	BV1269
AI_CompOvld.Active	Compressor overload - Alarm status	1	DI1041	BV1270
AI_HiP_Sw.Active	High discharge pressure switch - Alarm status	1	DI1042	BV1271
AI_LowP_Sw.Active	Low suction pressure switch - Alarm status	1	DI1043	BV1272
AI_SupplyAirFlwSw.Active	Supply air flow switch alarm - Alarm status	1	DI1044	BV1273
AI_RetAirFlwSw.Active	Return air flow switch alarm - Alarm status	1	DI1045	BV1274
AI_AirFlwSw.Active	Air flow switch alarm - Alarm status	1	DI1046	BV1275
AI_AFreeze.Active	Antifreeze alarm - Alarm status	1	DI1047	BV1276
AI_LowSH_EVD_Emb.Active	EVD - Low SH - Alarm status	1	DI1048	BV1277
AI_EEV_MotErr.Active	EVD - Motor error - Alarm status	1	DI1049	BV1278
AI_SettingOutOfBound_EVD_Emb.Active	EVD - Setting out of bound - Alarm status	1	DI1050	BV1279
AI_RangeErr_EVD_Emb.Active	EVD - Settings range error - Alarm status	1	DI1051	BV1280
AI_InvOffline.Active	Inverter - Offline - Alarm status	1	DI1052	BV1281
AI_Inv01_OverA.Active	Inverter - Drive overcurrent (01) - Alarm status	1	DI1053	BV1282
AI_Inv02_MotOvld.Active	Inverter - Motor overload (02) - Alarm status	1	DI1054	BV1283
AI_Inv03_DC_BusOverV.Active	Inverter - DC Bus overvoltage (03) - Alarm status	1	DI1055	BV1284
AI_Inv04_DC_BusUnderV.Active	Inverter - DC bus undervoltage (04) - Alarm status	1	DI1056	BV1285
AI_Inv05_OverTemp.Active	Inverter - Drive overtemperature (05) - Alarm status	1	DI1057	BV1286
AI_Inv06_DrvUnderTemp.Active	Inverter - Drive undertemperature (06) - Alarm status	1	DI1058	BV1287
AI_Inv07_HW_OverA.Active	Inverter - HW overcurrent HW(07) - Alarm status	1	DI1059	BV1288
AI_Inv08_MotOverTemp.Active	Inverter - PTC motor overtemperature (08) - Alarm status	1	DI1060	BV1289
AI_Inv09_OutputFault.Active	Inverter - IGBT module error (09) - Alarm status	1	DI1061	BV1290
AI_Inv10_FlashDataErr.Active	Inverter - CPU error (10) - Alarm status	1	DI1062	BV1291
AI_Inv11_ParamDef.Active	Inverter - Parameter default (11) - Alarm status	1	DI1063	BV1292
AI_Inv12_DC_RippTooLarge.Active	Inverter - DC bus ripple (12) - Alarm status	1	DI1064	BV1293
AI_Inv13_MB_CommFault.Active	Inverter - Data communication fault (13) - Alarm status	1	DI1065	BV1294
AI_Inv14_DrvThermistorFault.Active	Inverter - Drive thermistor fault (14) - Alarm status	1	DI1066	BV1295
AI_Inv15_AutotuneFault.Active	Inverter - Autotuning fault (15) - Alarm status	1	DI1067	BV1296
AI_Inv16_DrvDis.Active	Inverter - Drive disabled (16) - Alarm status	1	DI1068	BV1297
AI_Inv17_MotPhaseFault.Active	Inverter - Motor phase fault (17) - Alarm status	1	DI1069	BV1298
AI_Inv18_FanFault.Active	Inverter - Internal fan fault (18) - Alarm status	1	DI1070	BV1299
AI_Inv19_SpeedFault.Active	Inverter - Speed fault (19) - Alarm status	1	DI1071	BV1300
AI_Inv20_PFC_Failure.Active	Inverter - PFC module error (20) - Alarm status	1	DI1072	BV1301
AI_Inv21_PFC_OverVolt.Active	Inverter - PFC overvoltage (21) - Alarm status	1	DI1073	BV1302
AI_Inv22_PFC_UnderVolt.Active	Inverter - PFC undervoltage (22) - Alarm status	1	DI1074	BV1303
AI_Inv23_STO_Survey1.Active	Inverter - STO detection error (23) - Alarm status	1	DI1075	BV1304
AI_Inv24_STO_Survey2.Active	Inverter - STO detection error (24) - Alarm status	1	DI1076	BV1305
AI_Inv25_GroundFault.Active	Inverter - Ground fault (25) - Alarm status	1	DI1077	BV1306
AI_Inv26_ADC_ConvSync.Active	Inverter - ADC conversion sync fault (26) - Alarm status	1	DI1078	BV1307

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AI_Inv27_HW_Sync.Active	Inverter - HW sync fault (27) - Alarm status	1	DI1079	BV1308
AI_Inv28_DrvOvrld.Active	Inverter - Drive overload (28) - Alarm status	1	DI1080	BV1309
AI_Inv29_uCSafe_DriveStop.Active	Inverter - Drive overtemperature (HW) (29) - Alarm status	1	DI1081	BV1310
AI_Inv99_UnexpectedStop.Active	Inverter - Unexpected stop (99) - Alarm status	1	DI1082	BV1311
AI_StartFail_BLDC1.Active	BLDC - Starting failure - Alarm status	1	DI1083	BV1312
AI_SwPrototype.Active	Prototype software - Alarm status	1	DI1084	BV1313
AI_retain.Active	High number of retain memory writings - Alarm status	1	DI1085	BV1314
AI_Err_retain_write.Active	Error in retain memory writings - Alarm status	1	DI1086	BV1315
AI_Offline_THTN.Active	th - Tune offline - Alarm status	1	DI1087	BV1316
AI_LowSupplyTemp.Active	Low supply temperature - Alarm status	1	DI1088	BV1317
Warn_MainCoilTOutOfRange.Active	Main coil water temperature out of range warning - Alarm status	1	DI1090	BV1318
AI_SupplyAirFlwSwWarn.Active	Supply air flow warning - Alarm status	1	DI1091	BV1319
AI_RetAirFlwSwWarn.Active	Return air flow warning - Alarm status	1	DI1092	BV1320
AI_AirFlwSwWarn.Active	Air flow warning - Alarm status	1	DI1093	BV1321
Warn_AFreezeWarn.Active	Antifreeze warning - Alarm status	1	DI1094	BV1322
AI_HumAlrm.Active	Humidifier alarm - Alarm status	1	DI1095	BV1323
AI_WrkHrs_Hum.Active	Warning - Humidifier maintenance required - Alarm status	1	DI1096	BV1324
AI_WrkHrs_SupplyFan.Active	Warning - Supply fan maintenance required - Alarm status	1	DI1097	BV1325
AI_WrkHrs_ReturnFan.Active	Warning - Return fan maintenance required - Alarm status	1	DI1098	BV1326
AI_WrkHrs_ThrmlWheel.Active	Warning - Thermal wheel maintenance required - Alarm status	1	DI1099	BV1327
AI_WrkHrs_DirtyFilt.Active	Warning - Filters maintenance required - Alarm status	1	DI1100	BV1328
AI_DirtyFiltByDin.Active	Common - Dirty filters alarm - Alarm status	1	DI1101	BV1329
AI_WrkHrs_Comp.Active	Warning - Compressor maintenance required - Alarm status	1	DI1102	BV1330
AI_HiRatioP_BLDC.Active	Compressor envelope - High compression ratio - Alarm status	1	DI1103	BV1331
AI_DscgHiP_BLDC.Active	Compressor envelope - High discharge pressure - Alarm status	1	DI1104	BV1332
AI_HiCurr_BLDC.Active	Compressor envelope - High motor current - Alarm status	1	DI1105	BV1333
AI_SuctHiP_BLDC.Active	Compressor envelope - High suction pressure - Alarm status	1	DI1106	BV1334
AI_LowRatioP_BLDC.Active	Compressor envelope - Low compression ratio - Alarm status	1	DI1107	BV1335
AI_LowDeltaP_BLDC.Active	Compressor envelope - Low differential pressure - Alarm status	1	DI1108	BV1336
AI_LowDscgP_BLDC.Active	Compressor envelope - Low discharge pressure - Alarm status	1	DI1109	BV1337
AI_LowSuctP_BLDC.Active	Compressor envelope - Low suction pressure - Alarm status	1	DI1110	BV1338
AI_HiDscgTemp_BLDC.Active	Compressor envelope - High discharge temperature - Alarm status	1	DI1111	BV1339
AI_LOP_EVD_Emb.Active	EVD - LOP - Alarm status	1	DI1112	BV1340
AI_MOP_EVD_Emb.Active	EVD - MOP - Alarm status	1	DI1113	BV1341
AI_HiCondTemp_EVD_Emb.Active	EVD - High condensing temperature - Alarm status	1	DI1114	BV1342
AI_LowSuctTemp_EVD_Emb.Active	EVD - Low suction temperature - Alarm status	1	DI1115	BV1343
AI_EmergClos_EVD_Emb.Active	EVD - Emergency closing - Alarm status	1	DI1116	BV1344
AI_DisStartDp_BLDC.Active	BLDC - Delta pressure greater than the allowable at startup - Alarm status	1	DI1117	BV1345
AI_ThTune_ClkBrd.Active	th - Tune clock not working - Alarm status	1	DI1118	BV1346
AI_BMS_Offline.Active	BMS offline - Alarm status	1	DI1121	BV1347
AI_Selftuning_EVD_Emb.Active	EVD - Selftuning alarm - Alarm status	1	DI1122	BV1348
AI_Offline_Humisonic.Active	Humisonic - Offline - Alarm status	1	DI1123	BV1349
AI_HiHum_Humisonic.Active	Humisonic - High humidity - Alarm status	1	DI1124	BV1350
AI_LowHum_Humisonic.Active	Humisonic - Low humidity - Alarm status	1	DI1125	BV1351
AI_NoProd_Humisonic.Active	Humisonic - No production - Alarm status	1	DI1126	BV1352
AI_FaultyDrn_Humisonic.Active	Humisonic - Faulty drain - Alarm status	1	DI1127	BV1353
AI_Wmissing_Humisonic.Active	Humisonic - Missing water - Alarm status	1	DI1128	BV1354
AI_ExtSignal_Humisonic.Active	Humisonic - External signal not correctly connected - Alarm status	1	DI1129	BV1355
AI_Functest_Humisonic.Active	Humisonic - Functional test not executed - Alarm status	1	DI1130	BV1356
AI_Autotest_Humisonic.Active	Humisonic - Autotest failure - Alarm status	1	DI1131	BV1357
AI_EEPROM_Err_Humisonic.Active	Humisonic - EEPROM error - Alarm status	1	DI1132	BV1358
AI_Offline_EBM_SupplyFan.Active	EBM supply fan - Offline - Alarm status	1	DI1133	BV1359
AI_Generic_EBM_SupplyFan.Active	EBM supply fan 1 - Generic alarm	1	DI1134	BV1360
AI_Offline_EBM_RetFan.Active	EBM return fan - Offline - Alarm status	1	DI1159	BV1385
AI_Offline_EBM_SupplyFan2.Active	EBM supply fan 2 - Offline	1	DI1135	BV1361
AI_Generic_EBM_SupplyFan2.Active	EBM supply fan 2 - Generic alarm	1	DI1136	BV1362
AI_Offline_EBM_SupplyFan3.Active	EBM supply fan 3 - Offline	1	DI1137	BV1363
AI_Generic_EBM_SupplyFan3.Active	EBM supply fan 3 - Generic alarm	1	DI1138	BV1364
AI_Offline_EBM_SupplyFan4.Active	EBM supply fan 4 - Offline	1	DI1139	BV1365
AI_Generic_EBM_SupplyFan4.Active	EBM supply fan 4 - Generic alarm	1	DI1140	BV1366
AI_NOT_USED_138.Active	Alarm NOT USED 138	1	DI1141	BV1367
AI_NOT_USED_139.Active	Alarm NOT USED 139	1	DI1142	BV1368
AI_NOT_USED_140.Active	Alarm NOT USED 140	1	DI1143	BV1369
AI_NOT_USED_141.Active	Alarm NOT USED 141	1	DI1144	BV1370
AI_NOT_USED_142.Active	Alarm NOT USED 142	1	DI1145	BV1371
AI_NOT_USED_143.Active	Alarm NOT USED 143	1	DI1146	BV1372
AI_NOT_USED_144.Active	Alarm NOT USED 144	1	DI1147	BV1373
AI_NOT_USED_145.Active	Alarm NOT USED 145	1	DI1148	BV1374
AI_NOT_USED_146.Active	Alarm NOT USED 146	1	DI1149	BV1375
AI_NOT_USED_147.Active	Alarm NOT USED 147	1	DI1150	BV1376
AI_NOT_USED_148.Active	Alarm NOT USED 148	1	DI1151	BV1377
AI_NOT_USED_149.Active	Alarm NOT USED 149	1	DI1152	BV1378
AI_NOT_USED_150.Active	Alarm NOT USED 150	1	DI1153	BV1379
AI_NOT_USED_151.Active	Alarm NOT USED 151	1	DI1154	BV1380
AI_NOT_USED_152.Active	Alarm NOT USED 152	1	DI1155	BV1381
AI_NOT_USED_153.Active	Alarm NOT USED 153	1	DI1156	BV1382
AI_NOT_USED_154.Active	Alarm NOT USED 154	1	DI1157	BV1383
AI_NOT_USED_155.Active	Alarm NOT USED 155	1	DI1158	BV1384
AI_Offline_EBM_RetFan.Active	EBM return fan - Offline - Alarm status	1	DI1159	BV1385
AI_Generic_EBM_RetFan.Active	EBM return fan 1 - Generic alarm	1	DI1160	BV1386
AI_Offline_EBM_RetFan2.Active	EBM return fan 2 - Offline	1	DI1161	BV1387
AI_Generic_EBM_RetFan2.Active	EBM return fan 2 - Generic alarm	1	DI1162	BV1388
AI_Offline_EBM_RetFan3.Active	EBM return fan 3 - Offline	1	DI1163	BV1389
AI_Generic_EBM_RetFan3.Active	EBM return fan 3 - Generic alarm	1	DI1164	BV1390
AI_Offline_EBM_RetFan4.Active	EBM return fan 4 - Offline	1	DI1165	BV1391
AI_Generic_EBM_RetFan4.Active	EBM return fan 4 - Generic alarm	1	DI1166	BV1392
AI_NOT_USED_164.Active	Alarm NOT USED 164	1	DI1167	BV1393
AI_NOT_USED_165.Active	Alarm NOT USED 165	1	DI1168	BV1394
AI_NOT_USED_166.Active	Alarm NOT USED 166	1	DI1169	BV1395
AI_NOT_USED_167.Active	Alarm NOT USED 167	1	DI1170	BV1396
AI_NOT_USED_168.Active	Alarm NOT USED 168	1	DI1171	BV1397
AI_NOT_USED_169.Active	Alarm NOT USED 169	1	DI1172	BV1398
AI_NOT_USED_170.Active	Alarm NOT USED 170	1	DI1173	BV1399
AI_NOT_USED_171.Active	Alarm NOT USED 171	1	DI1174	BV1400
AI_NOT_USED_172.Active	Alarm NOT USED 172	1	DI1175	BV1401
AI_NOT_USED_173.Active	Alarm NOT USED 173	1	DI1176	BV1402
AI_NOT_USED_174.Active	Alarm NOT USED 174	1	DI1177	BV1403
AI_NOT_USED_175.Active	Alarm NOT USED 175	1	DI1178	BV1404
AI_NOT_USED_176.Active	Alarm NOT USED 176	1	DI1179	BV1405
AI_NOT_USED_177.Active	Alarm NOT USED 177	1	DI1180	BV1406
AI_NOT_USED_178.Active	Alarm NOT USED 178	1	DI1181	BV1407
AI_NOT_USED_179.Active	Alarm NOT USED 179	1	DI1182	BV1408

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AI_NOT_USED_180.Active	Alarm NOT USED 180	1	DI1183	BV1409
AI_NOT_USED_181.Active	Alarm NOT USED 181	1	DI1184	BV1410
AI_WrkHrs_ModulHum.Active	Warning - Modulating humidifier maintenance required - Alarm status	1	DI1185	BV1411
AI_RecoveryOvld.Active	Thermal wheel overload - Alarm status	1	DI1186	BV1412
AI_Offline_ZA_SupplyFan.Active	ZA supply fan - Offline - Alarm status	1	DI1187	BV1413
AI_Generic_ZA_SupplyFan.Active	ZA supply fan 1 - Generic alarm	1	DI1188	BV1414
AI_Offline_ZA_SupplyFan2.Active	ZA supply fan 2 - Offline	1	DI1189	BV1415
AI_Generic_ZA_SupplyFan2.Active	ZA supply fan 2 - Generic alarm	1	DI1190	BV1416
AI_Offline_ZA_SupplyFan3.Active	ZA supply fan 3 - Offline	1	DI1191	BV1417
AI_Generic_ZA_SupplyFan3.Active	ZA supply fan 3 - Generic alarm	1	DI1192	BV1418
AI_Offline_ZA_SupplyFan4.Active	ZA supply fan 4 - Offline	1	DI1193	BV1419
AI_Generic_ZA_SupplyFan4.Active	ZA supply fan 4 - Generic alarm	1	DI1194	BV1420
AI_FwIncompatible_ZA_SupplyFan.Active	ZA supply fan 1 - Firmware incompatible	1	DI1195	BV1421
AI_FwIncompatible_ZA_SupplyFan2.Active	ZA supply fan 2 - Firmware incompatible	1	DI1196	BV1422
AI_FwIncompatible_ZA_SupplyFan3.Active	ZA supply fan 3 - Firmware incompatible	1	DI1197	BV1423
AI_FwIncompatible_ZA_SupplyFan4.Active	ZA supply fan 4 - Firmware incompatible	1	DI1198	BV1424
AI_Generic_ZA_RetFan.Active	ZA return fan 1 - Generic alarm	1	DI1200	BV1426
AI_Offline_ZA_RetFan2.Active	ZA return fan 2 - Offline	1	DI1201	BV1427
AI_Generic_ZA_RetFan2.Active	ZA return fan 2 - Generic alarm	1	DI1202	BV1428
AI_Offline_ZA_RetFan3.Active	ZA return fan 3 - Offline	1	DI1203	BV1429
AI_Generic_ZA_RetFan3.Active	ZA return fan 3 - Generic alarm	1	DI1204	BV1430
AI_Offline_ZA_RetFan4.Active	ZA return fan 4 - Offline	1	DI1205	BV1431
AI_Generic_ZA_RetFan4.Active	ZA return fan 4 - Generic alarm	1	DI1206	BV1432
AI_FwIncompatible_ZA_RetFan.Active	ZA return fan 1 - Firmware incompatible	1	DI1207	BV1433
AI_FwIncompatible_ZA_RetFan2.Active	ZA return fan 2 - Firmware incompatible	1	DI1208	BV1434
AI_FwIncompatible_ZA_RetFan3.Active	ZA return fan 3 - Firmware incompatible	1	DI1209	BV1435
AI_FwIncompatible_ZA_RetFan4.Active	ZA return fan 4 - Firmware incompatible	1	DI1210	BV1436
AI_PeakCurrent_ZA_RetFan.Active	ZA return fan - Peak current - Alarm status	1	DI1210	BV1436
AI_ErrCfgB2P.Active	IO - Configuration error - Alarm status	1	DI1211	BV1437
AI_HighSupplyTemp.Active	High supply temperature - Alarm status	1	DI1212	BV1438
AI_VDI_HygieneInspection_0_0.Active	Alarm VDI - Hygiene Inspection - Alarm status	1	DI1213	BV1439
AI_VDI_OutdoorAirInlets_1_1.Active	Alarm VDI - Check for contamination, damage and corrosion - Alarm status	1	DI1214	BV1440
AI_VDI_Dehum_3_1.Active	Alarm VDI - Check for contamination, damage and corrosion - Alarm status	1	DI1215	BV1441
AI_VDI_Dehum_3_2.Active	Alarm VDI - Function check drain and syphon - Alarm status	1	DI1216	BV1442
AI_VDI_Dehum_3_3.Active	Alarm VDI - Clean wet cooler, mist collector and condensate tray - Alarm status	1	DI1217	BV1443
AI_VDI_AHUHousing_4_1.Active	Alarm VDI - Check for contamination, damage and corrosion on the air side - Alarm status	1	DI1218	BV1444
AI_VDI_AHUHousing_4_2.Active	Alarm VDI - Check for water precipitation - Alarm status	1	DI1219	BV1445
AI_VDI_AHUHousing_4_3.Active	Alarm VDI - Check empty housings for contamination, damage, and corrosion - Alarm status	1	DI1220	BV1446
AI_VDI_AirHumWithNoClearW_6_2_1.Active	Alarm VDI - Check for contamination, damage, microbial growth and corrosion - Alarm status	1	DI1221	BV1447
AI_VDI_AirHumWithNoClearW_6_2_2.Active	Alarm VDI - Check condensate precipitation in the humidifier chamber - Alarm status	1	DI1222	BV1448
AI_VDI_AirHumWithNoClearW_6_2_3.Active	Alarm VDI - Check vapour distribution system for deposit - Alarm status	1	DI1223	BV1449
AI_VDI_AirHumWithNoClearW_6_2_4.Active	Alarm VDI - Check spray nozzle for deposits - Alarm status	1	DI1224	BV1450
AI_VDI_AirHumWithNoClearW_6_2_5.Active	Alarm VDI - Check drain - Alarm status	1	DI1225	BV1451
AI_VDI_AirHumWithNoClearW_6_2_6.Active	Alarm VDI - Determine number of CFU in the humidifier water - Alarm status	1	DI1226	BV1452
AI_VDI_AirHumWithNoClearW_6_2_7.Active	Alarm VDI - Function check control valve - Alarm status	1	DI1227	BV1453
AI_VDI_AirHumWithNoClearW_6_2_8.Active	Alarm VDI - Check humidity limiter - Alarm status	1	DI1228	BV1454
AI_VDI_AirFilt_8_1.Active	Alarm VDI - Check for unacceptable contamination and damage (leakage) and odours - Alarm status	1	DI1229	BV1455
AI_VDI_AirFilt_8_2.Active	Alarm VDI - Check differential pressure - Alarm status	1	DI1230	BV1456
AI_VDI_AirFilt_8_3.Active	Alarm VDI - Maximum interval until first filter stage is to be changed - Alarm status	1	DI1231	BV1457
AI_VDI_AirFilt_8_4.Active	Alarm VDI - Maximum interval until second filter stage is to be changed - Alarm status	1	DI1232	BV1458
AI_VDI_AirDuct_9_1.Active	Alarm VDI - Check accessible duct section for damage - Alarm status	1	DI1233	BV1459
AI_VDI_AirDuct_9_2.Active	Alarm VDI - Check two or three representative locations on inner ducts surface for contamination, corrosion, and water precipitation - Alarm status	1	DI1234	BV1460
AI_VDI_Silencers_11_1.Active	Alarm VDI - Check silencers for contamination. Damage, and corrosion - Alarm status	1	DI1235	BV1461
AI_VDI_Fan_12_1.Active	Alarm VDI - Check for contamination, damage, and corrosion - Alarm status	1	DI1236	BV1462
AI_VDI_HeatExch_13_1.Active	Alarm VDI - Visual inspection of air-to-air plate or cross flow heat exchanger for contamination damage and corrosion - Alarm status	1	DI1237	BV1463
AI_VDI_HeatExch_13_2.Active	Alarm VDI - Visual inspection of air-to-air rotary heat exchanger for contamination damage and corrosion - Alarm status	1	DI1238	BV1464
AI_VDI_HeatExch_13_4.Active	Alarm VDI - Heaters: Check for contamination damage, corrosion and tightness - Alarm status	1	DI1239	BV1465
AI_VDI_HeatExch_13_5.Active	Alarm VDI - Coolers: Check tube bundles, mist collectors and condensate tray for contamination, corrosion, damage and tightness - Alarm status	1	DI1240	BV1466
AI_VDI_HeatExch_13_6.Active	Alarm VDI - Function-check drain and syphon - Alarm status	1	DI1241	BV1467
AI_VDI_SupplyHum.Active	Alarm VDI - Supply humidity probe is needed - Alarm status	1	DI1242	BV1468
AI_DoorSw.Active	Alarm - Door open - Alarm status	1	DI1243	BV1469
AI_FireSmoke.Active	Alarm - Fire/Smoke - Alarm status	1	DI1244	BV1470
AI_SrsAlrmByDin.Active	Serious alarm from digital input - Alarm status	1	DI1245	BV1471
AI_GenericWarnByDin.Active	Generic warning from digital input - Alarm status	1	DI1246	BV1472
AI_Sup1_DirtyFiltByDin.Active	Supply - Dirty filter alarm - Alarm status	1	DI1247	BV1473
AI_Sup2_DirtyFiltByDin.Active	Supply 2 - Dirty filter alarm - Alarm status	1	DI1248	BV1474
AI_Ret_DirtyFiltByDin.Active	Return - Dirty filter alarm - Alarm status	1	DI1249	BV1475
AI_HEPA_Filt1.Active	HEPA Filter 1 alarm - Alarm status	1	DI1250	BV1476
AI_HEPA_Filt2.Active	HEPA Filter 2 alarm - Alarm status	1	DI1251	BV1477
AI_MainCoilPmp1_Ovld.Active	Main coil pump 1 overload - Alarm status	1	DI1252	BV1478
AI_MainCoilPmp2_Ovld.Active	Main coil pump 2 overload - Alarm status	1	DI1253	BV1479
AI_ReHeatCoilPmp1_Ovld.Active	Re heat coil pump 1 overload - Alarm status	1	DI1254	BV1480
AI_ReHeatCoilPmp2_Ovld.Active	Re heat coil pump 2 overload - Alarm status	1	DI1255	BV1481
AI_PreHeatCoilPmp1_Ovld.Active	Pre heat coil pump 1 overload - Alarm status	1	DI1256	BV1482
AI_PreHeatCoilPmp2_Ovld.Active	Pre heat coil pump 2 overload - Alarm status	1	DI1257	BV1483
AI_MainCoilFlwSw.Active	Main coil flow switch alarm - Alarm status	1	DI1258	BV1484
AI_ReHeatCoilFlwSw.Active	Re heat coil flow switch alarm - Alarm status	1	DI1259	BV1485
AI_PreHeatCoilFlwSw.Active	Pre heat coil flow switch alarm - Alarm status	1	DI1260	BV1486
AI_RecoveryClogged.Active	Recovery clogged alarm - Alarm status	1	DI1261	BV1487
AI_ReHeat_Ovld.Active	Re heat coil alarm - Alarm status	1	DI1262	BV1488
AI_PreHeat_Ovld.Active	Pre heat coil alarm - Alarm status	1	DI1263	BV1489
AI_uChiller_Alrm.Active	Alarm - uChiller - Alarm status	1	DI1264	BV1490
AI_uChiller_Offline.Active	Alarm - uChiller offline - Alarm status	1	DI1265	BV1491
AI_WrkHrs_MainCoilPmp1.Active	Warning - Main coil pump 1 maintenance required - Alarm status	1	DI1266	BV1492
AI_WrkHrs_MainCoilPmp2.Active	Warning - Main coil pump 2 maintenance required - Alarm status	1	DI1267	BV1493
AI_WrkHrs_MainCoilAout.Active	Warning - Main coil analog output maintenance required - Alarm status	1	DI1268	BV1494
AI_WrkHrs_MainCoilStep1.Active	Warning - Main coil step 1 maintenance required - Alarm status	1	DI1269	BV1495

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AI_WrkHrs_MainCoilStep2.Active	Warning - Main coil step 2 maintenance required - Alarm status	1	DI1270	BV1496
AI_WrkHrs_MainCoilStep3.Active	Warning - Main coil step 3 maintenance required - Alarm status	1	DI1271	BV1497
AI_WrkHrs_MainCoilStep4.Active	Warning - Main coil step 4 maintenance required - Alarm status	1	DI1272	BV1498
AI_WrkHrs_PreHeatCoilPmp1.Active	Warning - Pre-heating coil pump 1 maintenance required - Alarm status	1	DI1273	BV1499
AI_WrkHrs_PreHeatCoilPmp2.Active	Warning - Pre-heating coil pump 2 maintenance required - Alarm status	1	DI1274	BV1500
AI_WrkHrs_PreHeatCoilAout.Active	Warning - Pre-heating coil analog output maintenance required - Alarm status	1	DI1275	BV1501
AI_WrkHrs_PreHeatCoilStep1.Active	Warning - Pre-heating coil step 1 maintenance required - Alarm status	1	DI1276	BV1502
AI_WrkHrs_PreHeatCoilStep2.Active	Warning - Pre-heating coil step 2 maintenance required - Alarm status	1	DI1277	BV1503
AI_WrkHrs_PreHeatCoilStep3.Active	Warning - Pre-heating coil step 3 maintenance required - Alarm status	1	DI1278	BV1504
AI_WrkHrs_PreHeatCoilStep4.Active	Warning - Pre-heating coil step 4 maintenance required - Alarm status	1	DI1279	BV1505
AI_WrkHrs_ReHeatCoilStep4.Active	Warning - Re-heating coil step 4 maintenance required - Alarm status	1	DI1280	BV1506
AI_WrkHrs_ReHeatCoilPmp1.Active	Warning - Re-heating coil pump 1 maintenance required - Alarm status	1	DI1281	BV1507
AI_WrkHrs_ReHeatCoilPmp2.Active	Warning - Re-heating coil pump 2 maintenance required - Alarm status	1	DI1282	BV1508
AI_WrkHrs_ReHeatCoilAout.Active	Warning - Re-heating coil analog output maintenance required - Alarm status	1	DI1283	BV1509
AI_WrkHrs_ReHeatCoilStep1.Active	Warning - Re-heating coil step 1 maintenance required - Alarm status	1	DI1284	BV1510
AI_WrkHrs_ReHeatCoilStep2.Active	Warning - Re-heating coil step 2 maintenance required - Alarm status	1	DI1285	BV1511
AI_WrkHrs_ReHeatCoilStep3.Active	Warning - Re-heating coil step 3 maintenance required - Alarm status	1	DI1286	BV1512
AI_WrkHrs_AuxDout.Active	Warning - Auxiliary digital output maintenance required - Alarm status	1	DI1287	BV1513
AI_WrkHrs_AuxAout.Active	Warning - Auxiliary analogue output maintenance required - Alarm status	1	DI1288	BV1514
AI_WrkHrs_IEC.Active	Warning - IEC maintenance required - Alarm status	1	DI1289	BV1515
AI_WrkHrs_Unit.Active	Warning - Unit maintenance required - Alarm status	1	DI1290	BV1516
AI_Humifog.Active	Alarm - Humifog alarms present - Alarm status	1	DI1291	BV1517
AI_IEC_Humifog.Active	Alarm - IEC Humifog alarms present - Alarm status	1	DI1292	BV1518
AI_Humifog_Offline.Active	Alarm - Humifog offline - Alarm status	1	DI1293	BV1519
AI_IEC_Humifog_Offline.Active	Alarm - IEC Humifog offline - Alarm status	1	DI1294	BV1520
AI_kwater_Offline.Active	Warning - k.water offline - Alarm status	1	DI1295	BV1521
AI_EEV_HWCompatErr.Active	Alarm - EEV Hardware compatibility error - Alarm status	1	DI1296	BV1522
AI_PGDx_Offline.Active	Warning - pGDx Offline - Alarm status	1	DI1297	BV1523
AI_cpCOe_1_Offline.Active	Alarm - c.pCOe n.1 Offline - Alarm status	1	DI1298	BV3934
AI_cpCOe_2_Offline.Active	Alarm - c.pCOe n.2 Offline - Alarm status	1	DI1299	BV3935
AI_cpCOe_3_Offline.Active	Alarm - c.pCOe n.3 Offline - Alarm status	1	DI1300	BV3936
AI_cpCOe_4_Offline.Active	Alarm - c.pCOe n.4 Offline - Alarm status	1	DI1301	BV3937
Warn_PreHeatCoilTOutOfRange.Active	Preheating coil water temperature out of range warning - Alarm status	1	DI1302	BV3932
Warn_ReHeatCoilTOutOfRange.Active	Reheating coil water temperature out of range warning - Alarm status	1	DI1303	BV3933
MainCoil_FloatVlv	Main Coil type: floating valve	1	DI1304	BV3941
Coils.PreHeatCoil_FloatVlv	PreHeat coil type: floating valve	1	DI1305	BV3942
Coils.ReHeatCoil_FloatVlv	ReHeat coil type: floating valve	1	DI1306	BV3943
MainVlv_ReadyToGo	Main Coil: floating valve ready to go(FALSE: Pre-positioning in progress; TRUE: Valve ready)	1	DI1307	BV3944
PreHeatVlv_ReadyToGo	PreHeat Coil: floating valve ready to go(FALSE: Pre-positioning in progress; TRUE: Valve ready)	1	DI1308	BV3945
ReHeatVlv_ReadyToGo	ReHeat Coil: floating valve ready to go(FALSE: Pre-positioning in progress; TRUE: Valve ready)	1	DI1309	BV3946
AirQuality_PM10.Alrm_R	Air quality: PM 10 - Alarm probe broken or disconnected	1	DI1310	BV3951
AirQuality_PM10.Configured_R	Air quality: PM 10 - Configured	1	DI1311	BV3981
AirQuality_PM10.Enable_W	Air quality: PM 10 - Enable input	1	DI1312	BV3982
AirQuality_PM10.PrbOk_R	Air quality: PM 10 - Probe working correctly	1	DI1313	BV3986
AirQuality_PM25.Alrm_R	Air quality: PM 2.5 - Alarm probe broken or disconnected	1	DI1314	BV3990
AirQuality_PM25.Configured_R	Air quality: PM 2.5 - Configured	1	DI1315	BV3995
AirQuality_PM25.Enable_W	Air quality: PM 2.5 - Enable input	1	DI1316	BV3996
AirQuality_PM25.PrbOk_R	Air quality: PM 2.5 - Probe working correctly	1	DI1317	BV4000
SanificationDevice.Val_W	Sanification device	1	DI1318	BV4007
SanificationDevice.Val_Hw_R	Sanification device - Hardware value writes from board	1	DI1319	BV4008
SanificationDevice.Enable_W	Sanification device - Enable output	1	DI1320	BV4012
SanificationDevice.Configured_R	Sanification device - Configurated	1	DI1321	BV4013
AI_AirQuality_PM10.Active	PM10 probe alarm - Alarm status	1	DI1322	BV3968
AI_AirQuality_PM25.Active	PM2.5 probe alarm - Alarm status	1	DI1323	BV3969
Sanification.SanificationDevice_IO_CfgWarn	-	1	DI1324	BV3958
Regulation.QualityAirDevNotSel	-	1	DI1325	BV3960
AI_SanificationWarn.Active	Alarm - Sanification device - Alarm status	1	DI1326	BV3970
AI_WrkHrs_SanificationDevice.Active	Warning - Sanification device maintenance required - Alarm status	1	DI1327	BV3971
PurgeOn	Purge is on	1	DI1328	BV4038
SanificationDeviceOvld.Val_Hw_R	Sanification deivce overload switch - Value reads from board	1	DI1329	BV4039
SanificationDeviceOvld.Configured_R	Sanification deivce overload switch - Configured	1	DI1330	BV4040
SanificationDeviceOvld.Val_R	Sanification deivce overload switch	1	DI1331	BV4041
FC_Act	Freecooling activated	1	DI1332	BV4042
FH_Act	Freeheating activated	1	DI1333	BV4043
AI_WrkHrs_SupplyFan_2.Active	Warning - Supply fan 2 maintenance required	1	DI1334	BV4071
AI_WrkHrs_SupplyFan_3.Active	Warning - Supply fan 3 maintenance required	1	DI1335	BV4072
AI_WrkHrs_SupplyFan_4.Active	Warning - Supply fan 4 maintenance required	1	DI1336	BV4073
AI_WrkHrs_ReturnFan_2.Active	Warning - Return 2 fan maintenance required	1	DI1337	BV4074
AI_WrkHrs_ReturnFan_3.Active	Warning - Return 3 fan maintenance required	1	DI1338	BV4075
AI_WrkHrs_ReturnFan_4.Active	Warning - Return 4 fan maintenance required	1	DI1339	BV4076
SupplyFan_FireSmokeAlrm_Act	Supply Fans active during Fire/Smoke alarm	1	DI1340	BV4286
RetFan_FireSmokeAlrm_Act	Return Fans active during Fire/Smoke alarm	1	DI1341	BV4287
AI_SupplyFanInv.Active	Alarm - Supply fan inverter feedback - Alarm status	1	DI1342	BV4330
AI_RetFanInv.Active	Alarm - Return fan inverter feedback - Alarm status	1	DI1343	BV4331
AI_SupplyDampSw.Active	Alarm - Supply damper feedback - Alarm status	1	DI1344	BV4332
AI_RetDampSw.Active	Alarm - Return damper feedback - Alarm status	1	DI1345	BV4333
AI_FreshAirDampSw.Active	Alarm - Fresh air damper feedback - Alarm status	1	DI1346	BV4334
AI_ExhAirDampSw.Active	Alarm - Exhaust air damper feedback - Alarm status	1	DI1347	BV4335
AI_MixAirDampSw.Active	Alarm - Mixing air damper feedback - Alarm status	1	DI1348	BV4336
AI_HumiSteam_Offline.Active	HumiSteam - Offline alarm - Alarm status	1	DI1349	BV4337
AI_HumiSteam_Generic.Active	HumiSteam - Generic alarm - Alarm status	1	DI1350	BV4338
SummerWinter	Summer/Winter mode (FALSE:Summer, TRUE:Winter)	1	DI1351	BV4362
MainCoil_CoolHeat	Main coil cooling/heating	1	DI1352	BV4363
MainCoilCoolHeat_Din.Configured_R	Main coil cool/heat - digital input - Configured	1	DI1353	BV4364
MainCoilCoolHeat_Din.Enable_W	Main coil cool/heat - digital input - Enable input	1	DI1354	BV4365
MainCoilCoolHeat_Din.Val_R	Main coil cool/heat - digital input	1	DI1355	BV4366
HumDehum_Mode	Humidification/Dehumidification (FALSE: humidification; TRUE: dehumidification)	1	DI1356	BV4368
GenericAin1.Enable_W	Generic Ain1 - Enable input	1	DI1357	BV4377
GenericAin1.Configured_R	Generic Ain1 - Configured	1	DI1358	BV4378
GenericAin1.PrbOk_R	Generic Ain1 - Probe working correctly	1	DI1359	BV4379
GenericAin1.Alrm_R	Generic Ain1 - Alarm probe broken or disconnected	1	DI1360	BV4380
GenericAin2.Enable_W	Generic Ain2 - Enable input	1	DI1361	BV4391
GenericAin2.Configured_R	Generic Ain2 - Configured	1	DI1362	BV4392
GenericAin2.PrbOk_R	Generic Ain2 - Probe working correctly	1	DI1363	BV4393
GenericAin2.Alrm_R	Generic Ain2 - Alarm probe broken or disconnected	1	DI1364	BV4394
GenericAin3.Enable_W	Generic Ain3 - Enable input	1	DI1365	BV4405
GenericAin3.Configured_R	Generic Ain3 - Configured	1	DI1366	BV4406
GenericAin3.PrbOk_R	Generic Ain3 - Probe working correctly	1	DI1367	BV4407

Variable	Description	Dim	Modbus	BACnet
GenericAin3.Alrm_R	Generic Ain3 - Alarm probe broken or disconnected	1	DI1368	BV4408
GenericAin4.Enable_W	Generic Ain4 - Enable input	1	DI1369	BV4419
GenericAin4.Configured_R	Generic Ain4 - Configured	1	DI1370	BV4420
GenericAin4.PrbOk_R	Generic Ain4 - Probe working correctly	1	DI1371	BV4421
GenericAin4.Alrm_R	Generic Ain4 - Alarm probe broken or disconnected	1	DI1372	BV4422
GenericAin5.Enable_W	Generic Ain5 - Enable input	1	DI1373	BV4433
GenericAin5.Configured_R	Generic Ain5 - Configured	1	DI1374	BV4434
GenericAin5.PrbOk_R	Generic Ain5 - Probe working correctly	1	DI1375	BV4435
GenericAin5.Alrm_R	Generic Ain5 - Alarm probe broken or disconnected	1	DI1376	BV4436
GenericDin1.Val_Hw_R	Generic Din1 - digital input - Value reads from board	1	DI1377	BV4448
GenericDin1.Enable_W	Generic Din1 - digital input - Enable input	1	DI1378	BV4449
GenericDin1.Configured_R	Generic Din1 - digital input - Configured	1	DI1379	BV4450
GenericDin1.Val_R	Generic Din1 - digital input	1	DI1380	BV4451
GenericDin2.Val_Hw_R	Generic Din2 - digital input - Value reads from board	1	DI1381	BV4455
GenericDin2.Enable_W	Generic Din2 - digital input - Enable input	1	DI1382	BV4456
GenericDin2.Configured_R	Generic Din2 - digital input - Configured	1	DI1383	BV4457
GenericDin2.Val_R	Generic Din2 - digital input	1	DI1384	BV4458
GenericDin3.Val_Hw_R	Generic Din3 - digital input - Value reads from board	1	DI1385	BV4462
GenericDin3.Enable_W	Generic Din3 - digital input - Enable input	1	DI1386	BV4463
GenericDin3.Configured_R	Generic Din3 - digital input - Configured	1	DI1387	BV4464
GenericDin3.Val_R	Generic Din3 - digital input	1	DI1388	BV4465
GenericDin4.Val_Hw_R	Generic Din4 - digital input - Value reads from board	1	DI1389	BV4469
GenericDin4.Enable_W	Generic Din4 - digital input - Enable input	1	DI1390	BV4470
GenericDin4.Configured_R	Generic Din4 - digital input - Configured	1	DI1391	BV4471
GenericDin4.Val_R	Generic Din4 - digital input	1	DI1392	BV4472
GenericDin5.Val_Hw_R	Generic Din5 - digital input - Value reads from board	1	DI1393	BV4476
GenericDin5.Enable_W	Generic Din5 - digital input - Enable input	1	DI1394	BV4477
GenericDin5.Configured_R	Generic Din5 - digital input - Configured	1	DI1395	BV4478
GenericDin5.Val_R	Generic Din5 - digital input	1	DI1396	BV4479
AI_GenericAin1.Active	Generic Ain1 probe alarm - Alarm status	1	DI1397	BV4487
AI_GenericAin2.Active	Generic Ain2 probe alarm - Alarm status	1	DI1398	BV4488
AI_GenericAin3.Active	Generic Ain3 probe alarm - Alarm status	1	DI1399	BV4489
AI_GenericAin4.Active	Generic Ain4 probe alarm - Alarm status	1	DI1400	BV4490
AI_GenericAin5.Active	Generic Ain5 probe alarm - Alarm status	1	DI1401	BV4491
AI_GenericDin1.Active	Alarm - Generic Din 1 - Alarm status	1	DI1402	BV4492
AI_GenericDin2.Active	Alarm - Generic Din 2 - Alarm status	1	DI1403	BV4493
AI_GenericDin3.Active	Alarm - Generic Din 3 - Alarm status	1	DI1404	BV4494
AI_GenericDin4.Active	Alarm - Generic Din 4 - Alarm status	1	DI1405	BV4495
AI_GenericDin5.Active	Alarm - Generic Din 5 - Alarm status	1	DI1406	BV4496
OA _Vlv_Open.Val_Hw_R	Outdoor air pre-treatment floating valve open - Hardware value writes from board	1	DI1407	BV4517
OA_Vlv_Open.Val_W	Outdoor air pre-treatment floating valve open	1	DI1408	BV4518
OA_Vlv_Open.Enable_W	Outdoor air pre-treatment floating valve open - Enable output	1	DI1409	BV4519
OA_Vlv_Open.Configured_R	Outdoor air pre-treatment floating valve open - Configurated	1	DI1410	BV4520
OA_Vlv_Close.Val_Hw_R	Outdoor air pre-treatment floating valve close - Hardware value writes from board	1	DI1411	BV4521
OA_Vlv_Close.Val_W	Outdoor air pre-treatment floating valve close	1	DI1412	BV4522
OA_Vlv_Close.Enable_W	Outdoor air pre-treatment floating valve close - Enable output	1	DI1413	BV4523
OA_Vlv_Close.Configured_R	Outdoor air pre-treatment floating valve close - Configurated	1	DI1414	BV4524
OA_Coil_Enabled	Enable outdoor air pre-treatment coil	1	DI1415	BV4525
AI_WrkHrs_OA_CoilAout.Active	Warning - Outdoor air pre-treatment coil analog output maintenance required - Alarm status	1	DI1416	BV4526
AI_WrkHrs_OA_CoilStep1.Active	Warning - Outdoor air pre-treatment coil step 1 maintenance required - Alarm status	1	DI1417	BV4527
AI_WrkHrs_OA_CoilStep2.Active	Warning - Outdoor air pre-treatment coil step 2 maintenance required - Alarm status	1	DI1418	BV4528
AI_WrkHrs_OA_CoilStep3.Active	Warning - Outdoor air pre-treatment coil step 3 maintenance required - Alarm status	1	DI1419	BV4529
AI_WrkHrs_OA_CoilStep4.Active	Warning - Outdoor air pre-treatment coil step 4 maintenance required - Alarm status	1	DI1420	BV4530
Warn_OA_CoilTOutOfRange.Active	Outdoor air pre-treatment coil water temperature out of range warning - Alarm status	1	DI1421	BV4531
Coils.OA_Coil_FloatVlv	Outdoor air pre-treatment coil type: floating valve	1	DI1422	BV4532
OA_Vlv_ReadyToGo	Outdoor air pre-treatment Coil: floating valve ready to go(FALSE: Pre-positioning in progress; TRUE: Valve ready)	1	DI1423	BV4533

Tab. 11.p

11.1.18 Holding registers

Variable	Description	Dim	Modbus	BACnet
Scheduler_OnOffUnit.BMS_UnitProfile	BMS unit profile	1	HR001	PIV1524
Scheduler_Cfg.Prg[0].Event[0].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR002	PIV1525
Scheduler_Cfg.Prg[0].Event[0].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR003	PIV1526
Scheduler_Cfg.Prg[0].Event[0].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR004	PIV1527
Scheduler_Cfg.Prg[0].Event[1].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR005	PIV1528
Scheduler_Cfg.Prg[0].Event[1].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR006	PIV1529
Scheduler_Cfg.Prg[0].Event[1].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR007	PIV1530
Scheduler_Cfg.Prg[0].Event[2].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR008	PIV1531
Scheduler_Cfg.Prg[0].Event[2].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR009	PIV1532
Scheduler_Cfg.Prg[0].Event[2].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR010	PIV1533
Scheduler_Cfg.Prg[0].Event[3].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR011	PIV1534
Scheduler_Cfg.Prg[0].Event[3].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR012	PIV1535
Scheduler_Cfg.Prg[0].Event[3].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR013	PIV1536
Scheduler_Cfg.Prg[0].Event[4].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR014	PIV1537
Scheduler_Cfg.Prg[0].Event[4].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR015	PIV1538
Scheduler_Cfg.Prg[0].Event[4].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR016	PIV1539
Scheduler_Cfg.Prg[0].Event[5].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR017	PIV1540
Scheduler_Cfg.Prg[0].Event[5].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR018	PIV1541
Scheduler_Cfg.Prg[0].Event[5].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR019	PIV1542
Scheduler_Cfg.Prg[0].Event[6].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR020	PIV1543
Scheduler_Cfg.Prg[0].Event[6].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR021	PIV1544
Scheduler_Cfg.Prg[0].Event[6].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR022	PIV1545
Scheduler_Cfg.Prg[0].Event[7].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR023	PIV1546
Scheduler_Cfg.Prg[0].Event[7].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR024	PIV1547
Scheduler_Cfg.Prg[0].Event[7].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR025	PIV1548
Scheduler_Cfg.Prg[0].Event[8].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR026	PIV1549
Scheduler_Cfg.Prg[0].Event[8].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR027	PIV1550
Scheduler_Cfg.Prg[0].Event[8].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR028	PIV1551
Scheduler_Cfg.Prg[0].Event[9].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR029	PIV1552
Scheduler_Cfg.Prg[0].Event[9].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR030	PIV1553
Scheduler_Cfg.Prg[0].Event[9].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR031	PIV1554
Scheduler_Cfg.Prg[1].Event[0].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR032	PIV1555

Variable	Description	Dim	Modbus	BACnet
Scheduler_Cfg.Prg[1].Event[0].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR033	PIV1556
Scheduler_Cfg.Prg[1].Event[0].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR034	PIV1557
Scheduler_Cfg.Prg[1].Event[1].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR035	PIV1558
Scheduler_Cfg.Prg[1].Event[1].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR036	PIV1559
Scheduler_Cfg.Prg[1].Event[1].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR037	PIV1560
Scheduler_Cfg.Prg[1].Event[2].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR038	PIV1561
Scheduler_Cfg.Prg[1].Event[2].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR039	PIV1562
Scheduler_Cfg.Prg[1].Event[2].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR040	PIV1563
Scheduler_Cfg.Prg[1].Event[3].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR041	PIV1564
Scheduler_Cfg.Prg[1].Event[3].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR042	PIV1565
Scheduler_Cfg.Prg[1].Event[3].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR043	PIV1566
Scheduler_Cfg.Prg[1].Event[4].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR044	PIV1567
Scheduler_Cfg.Prg[1].Event[4].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR045	PIV1568
Scheduler_Cfg.Prg[1].Event[4].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Eco-	1	HR046	PIV1569
Scheduler_Cfg.Prg[1].Event[5].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR047	PIV1570
Scheduler_Cfg.Prg[1].Event[5].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR048	PIV1571
Scheduler_Cfg.Prg[1].Event[5].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR049	PIV1572
Scheduler_Cfg.Prg[1].Event[6].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR050	PIV1573
Scheduler_Cfg.Prg[1].Event[6].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR051	PIV1574
Scheduler_Cfg.Prg[1].Event[6].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR052	PIV1575
Scheduler_Cfg.Prg[1].Event[7].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR053	PIV1576
Scheduler_Cfg.Prg[1].Event[7].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR054	PIV1577
Scheduler_Cfg.Prg[1].Event[7].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR055	PIV1578
Scheduler_Cfg.Prg[1].Event[8].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR056	PIV1579
Scheduler_Cfg.Prg[1].Event[8].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR057	PIV1580
Scheduler_Cfg.Prg[1].Event[8].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR058	PIV1581
Scheduler_Cfg.Prg[1].Event[9].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR059	PIV1582
Scheduler_Cfg.Prg[1].Event[9].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR060	PIV1583
Scheduler_Cfg.Prg[1].Event[9].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR061	PIV1584
Scheduler_Cfg.Prg[2].Event[0].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR062	PIV1585
Scheduler_Cfg.Prg[2].Event[0].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR063	PIV1586
Scheduler_Cfg.Prg[2].Event[0].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR064	PIV1587
Scheduler_Cfg.Prg[2].Event[1].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR065	PIV1588
Scheduler_Cfg.Prg[2].Event[1].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR066	PIV1589
Scheduler_Cfg.Prg[2].Event[1].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR067	PIV1590
Scheduler_Cfg.Prg[2].Event[2].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR068	PIV1591
Scheduler_Cfg.Prg[2].Event[2].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR069	PIV1592
Scheduler_Cfg.Prg[2].Event[2].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR070	PIV1593
Scheduler_Cfg.Prg[2].Event[3].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR071	PIV1594
Scheduler_Cfg.Prg[2].Event[3].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR072	PIV1595
Scheduler_Cfg.Prg[2].Event[3].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR073	PIV1596
Scheduler_Cfg.Prg[2].Event[4].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR074	PIV1597
Scheduler_Cfg.Prg[2].Event[4].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR075	PIV1598
Scheduler_Cfg.Prg[2].Event[4].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR076	PIV1599
Scheduler_Cfg.Prg[2].Event[5].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR077	PIV1600
Scheduler_Cfg.Prg[2].Event[5].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR078	PIV1601
Scheduler_Cfg.Prg[2].Event[5].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR079	PIV1602
Scheduler_Cfg.Prg[2].Event[6].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR080	PIV1603
Scheduler_Cfg.Prg[2].Event[6].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR081	PIV1604
Scheduler_Cfg.Prg[2].Event[6].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR082	PIV1605
Scheduler_Cfg.Prg[2].Event[7].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR083	PIV1606
Scheduler_Cfg.Prg[2].Event[7].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR084	PIV1607
Scheduler_Cfg.Prg[2].Event[7].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR085	PIV1608
Scheduler_Cfg.Prg[2].Event[8].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR086	PIV1609
Scheduler_Cfg.Prg[2].Event[8].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR087	PIV1610
Scheduler_Cfg.Prg[2].Event[8].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR088	PIV1611
Scheduler_Cfg.Prg[2].Event[9].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR089	PIV1612
Scheduler_Cfg.Prg[2].Event[9].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR090	PIV1613
Scheduler_Cfg.Prg[2].Event[9].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR091	PIV1614
Scheduler_Cfg.Prg[3].Event[0].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR092	PIV1615
Scheduler_Cfg.Prg[3].Event[0].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR093	PIV1616
Scheduler_Cfg.Prg[3].Event[0].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR094	PIV1617
Scheduler_Cfg.Prg[3].Event[1].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR095	PIV1618
Scheduler_Cfg.Prg[3].Event[1].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR096	PIV1619
Scheduler_Cfg.Prg[3].Event[1].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR097	PIV1620
Scheduler_Cfg.Prg[3].Event[2].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR098	PIV1621
Scheduler_Cfg.Prg[3].Event[2].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR099	PIV1622
Scheduler_Cfg.Prg[3].Event[2].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR100	PIV1623
Scheduler_Cfg.Prg[3].Event[3].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR101	PIV1624
Scheduler_Cfg.Prg[3].Event[3].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR102	PIV1625
Scheduler_Cfg.Prg[3].Event[3].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR103	PIV1626
Scheduler_Cfg.Prg[3].Event[4].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR104	PIV1627
Scheduler_Cfg.Prg[3].Event[4].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR105	PIV1628
Scheduler_Cfg.Prg[3].Event[4].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR106	PIV1629
Scheduler_Cfg.Prg[3].Event[5].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR107	PIV1630
Scheduler_Cfg.Prg[3].Event[5].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR108	PIV1631
Scheduler_Cfg.Prg[3].Event[5].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR109	PIV1632
Scheduler_Cfg.Prg[3].Event[6].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR110	PIV1633
Scheduler_Cfg.Prg[3].Event[6].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR111	PIV1634
Scheduler_Cfg.Prg[3].Event[6].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR112	PIV1635
Scheduler_Cfg.Prg[3].Event[7].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR113	PIV1636
Scheduler_Cfg.Prg[3].Event[7].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR114	PIV1637
Scheduler_Cfg.Prg[3].Event[7].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR115	PIV1638
Scheduler_Cfg.Prg[3].Event[8].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR116	PIV1639
Scheduler_Cfg.Prg[3].Event[8].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR117	PIV1640
Scheduler_Cfg.Prg[3].Event[8].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR118	PIV1641
Scheduler_Cfg.Prg[3].Event[9].Hours	Scheduler: configuration - Program - Event - Start hours event	1	HR119	PIV1642
Scheduler_Cfg.Prg[3].Event[9].Mins	Scheduler: configuration - Program - Event - Start minutes event	1	HR120	PIV1643
Scheduler_Cfg.Prg[3].Event[9].Mode	Scheduler: configuration - Program - Event - 0=OFF; 1=Economy; 2=Comfort	1	HR121	PIV1644
Scheduler_Cfg.SDays[2].Day	Scheduler: configuration - Special day - Day	1	HR128	PIV1651
Scheduler_Cfg.SDays[2].Mode	Scheduler: configuration - Special day - Mode	1	HR129	PIV1652
Scheduler_Cfg.SDays[2].Month	Scheduler: configuration - Special day - Month	1	HR130	PIV1653
Scheduler_Cfg.SDays[3].Day	Scheduler: configuration - Special day - Day	1	HR131	PIV1654
Scheduler_Cfg.SDays[3].Mode	Scheduler: configuration - Special day - Mode	1	HR132	PIV1655
Scheduler_Cfg.SDays[3].Month	Scheduler: configuration - Special day - Month	1	HR133	PIV1656
Scheduler_Cfg.SDays[4].Day	Scheduler: configuration - Special day - Day	1	HR134	PIV1657
Scheduler_Cfg.SDays[4].Mode	Scheduler: configuration - Special day - Mode	1	HR135	PIV1658
Scheduler_Cfg.SDays[4].Month	Scheduler: configuration - Special day - Month	1	HR136	PIV1659
Scheduler_Cfg.SDays[5].Day	Scheduler: configuration - Special day - Day	1	HR137	PIV1660
Scheduler_Cfg.SDays[5].Mode	Scheduler: configuration - Special day - Mode	1	HR138	PIV1661
Scheduler_Cfg.SDays[5].Month	Scheduler: configuration - Special day - Month	1	HR139	PIV1662
Scheduler_Cfg.SDays[6].Day	Scheduler: configuration - Special day - Day	1	HR140	PIV1663

Variable	Description	Dim	Modbus	BACnet
Scheduler_Cfg.SDays[6].Mode	Scheduler: configuration - Special day - Mode	1	HR141	PIV1664
Scheduler_Cfg.SDays[6].Month	Scheduler: configuration - Special day - Month	1	HR142	PIV1665
Scheduler_Cfg.SDays[7].Day	Scheduler: configuration - Special day - Day	1	HR143	PIV1666
Scheduler_Cfg.SDays[7].Mode	Scheduler: configuration - Special day - Mode	1	HR144	PIV1667
Scheduler_Cfg.SDays[7].Month	Scheduler: configuration - Special day - Month	1	HR145	PIV1668
Scheduler_Cfg.SDays[8].Day	Scheduler: configuration - Special day - Day	1	HR146	PIV1669
Scheduler_Cfg.SDays[8].Mode	Scheduler: configuration - Special day - Mode	1	HR147	PIV1670
Scheduler_Cfg.SDays[8].Month	Scheduler: configuration - Special day - Month	1	HR148	PIV1671
Scheduler_Cfg.SDays[9].Day	Scheduler: configuration - Special day - Day	1	HR149	PIV1672
Scheduler_Cfg.SDays[9].Mode	Scheduler: configuration - Special day - Mode	1	HR150	PIV1673
Scheduler_Cfg.SDays[9].Month	Scheduler: configuration - Special day - Month	1	HR151	PIV1674
Scheduler_Cfg.SDays[10].Day	Scheduler: configuration - Special day - Day	1	HR152	PIV1675
Scheduler_Cfg.SDays[10].Mode	Scheduler: configuration - Special day - Mode	1	HR153	PIV1676
Scheduler_Cfg.SDays[10].Month	Scheduler: configuration - Special day - Month	1	HR154	PIV1677
Scheduler_Cfg.SDays[11].Day	Scheduler: configuration - Special day - Day	1	HR155	PIV1678
Scheduler_Cfg.SDays[11].Mode	Scheduler: configuration - Special day - Mode	1	HR156	PIV1679
Scheduler_Cfg.SDays[11].Month	Scheduler: configuration - Special day - Month	1	HR157	PIV1680
Scheduler_Cfg.SDays[12].Day	Scheduler: configuration - Special day - Day	1	HR158	PIV1681
Scheduler_Cfg.SDays[12].Mode	Scheduler: configuration - Special day - Mode	1	HR159	PIV1682
Scheduler_Cfg.SDays[12].Month	Scheduler: configuration - Special day - Month	1	HR160	PIV1683
Scheduler_Cfg.SDays[13].Day	Scheduler: configuration - Special day - Day	1	HR161	PIV1684
Scheduler_Cfg.SDays[13].Mode	Scheduler: configuration - Special day - Mode	1	HR162	PIV1685
Scheduler_Cfg.SDays[13].Month	Scheduler: configuration - Special day - Month	1	HR163	PIV1686
Scheduler_Cfg.SDays[14].Day	Scheduler: configuration - Special day - Day	1	HR164	PIV1687
Scheduler_Cfg.SDays[14].Mode	Scheduler: configuration - Special day - Mode	1	HR165	PIV1688
Scheduler_Cfg.SDays[14].Month	Scheduler: configuration - Special day - Month	1	HR166	PIV1689
Scheduler_Cfg.Vac[0].EndDay	Scheduler: configuration - Vacation period - End day	1	HR167	PIV1690
Scheduler_Cfg.Vac[0].EndMonth	Scheduler: configuration - Vacation period - End month	1	HR168	PIV1691
Scheduler_Cfg.Vac[0].Mode	Scheduler: configuration - Vacation period - Mode	1	HR169	PIV1692
Scheduler_Cfg.Vac[0].StartDay	Scheduler: configuration - Vacation period - Start day	1	HR170	PIV1693
Scheduler_Cfg.Vac[0].StartMonth	Scheduler: configuration - Vacation period - Start month	1	HR171	PIV1694
Scheduler_Cfg.Vac[1].EndDay	Scheduler: configuration - Vacation period - End day	1	HR172	PIV1695
Scheduler_Cfg.Vac[1].EndMonth	Scheduler: configuration - Vacation period - End month	1	HR173	PIV1696
Scheduler_Cfg.Vac[1].Mode	Scheduler: configuration - Vacation period - Mode	1	HR174	PIV1697
Scheduler_Cfg.Vac[1].StartDay	Scheduler: configuration - Vacation period - Start day	1	HR175	PIV1698
Scheduler_Cfg.Vac[1].StartMonth	Scheduler: configuration - Vacation period - Start month	1	HR176	PIV1699
Scheduler_Cfg.Vac[2].EndDay	Scheduler: configuration - Vacation period - End day	1	HR177	PIV1700
Scheduler_Cfg.Vac[2].EndMonth	Scheduler: configuration - Vacation period - End month	1	HR178	PIV1701
Scheduler_Cfg.Vac[2].Mode	Scheduler: configuration - Vacation period - Mode	1	HR179	PIV1702
Scheduler_Cfg.Vac[2].StartDay	Scheduler: configuration - Vacation period - Start day	1	HR180	PIV1703
Scheduler_Cfg.Vac[2].StartMonth	Scheduler: configuration - Vacation period - Start month	1	HR181	PIV1704
Scheduler_Cfg.WkDays[0]	Scheduler: configuration - Week day	1	HR182	PIV1705
Scheduler_Cfg.WkDays[1]	Scheduler: configuration - Week day	1	HR183	PIV1706
Scheduler_Cfg.WkDays[2]	Scheduler: configuration - Week day	1	HR184	PIV1707
Scheduler_Cfg.WkDays[3]	Scheduler: configuration - Week day	1	HR185	PIV1708
Scheduler_Cfg.WkDays[4]	Scheduler: configuration - Week day	1	HR186	PIV1709
Scheduler_Cfg.WkDays[5]	Scheduler: configuration - Week day	1	HR187	PIV1710
Scheduler_Cfg.WkDays[6]	Scheduler: configuration - Week day	1	HR188	PIV1711
GeneralMng.RTC_BMS.Day	BMS real time clock	1	HR189	PIV1712
GeneralMng.RTC_BMS.Month	BMS real time clock	1	HR190	PIV1713
GeneralMng.RTC_BMS.Year	BMS real time clock	1	HR191	PIV1714
CoilRegOffset	Coil regulation offset to switch on the el heater and the pump	1	HR143	PIV1666
activation	1	HR192	AV1715	PIV1667
SupplyTemp.Board_RW	Supply temperature - Board selected	1	HR193	PIV1716
SupplyTemp.Ch_Id_RW	Supply temperature - Channel id selected	1	HR194	PIV1717
SupplyTemp.Ch_Type_RW	Supply temperature - Type probe used	1	HR195	PIV1718
SupplyTemp.MinVal_RW	Supply temperature - Minimum value analog input	1	HR196	AV1719
SupplyTemp.MaxVal_RW	Supply temperature - Maximum value analog input	1	HR197	AV1720
SupplyTemp.Offset_RW	Supply temperature - Offset analog input	1	HR198	AV1721
SupplyTemp.ChFilter_RW	Supply temperature - Filter channel	1	HR199	PIV1722
SupplyHum.Board_RW	Supply humidity - Board selected	1	HR200	PIV1723
SupplyHum.Ch_Id_RW	Supply humidity - Channel id selected	1	HR201	PIV1724
SupplyHum.Ch_Type_RW	Supply humidity - Type probe used	1	HR202	PIV1725
SupplyHum.MinVal_RW	Supply humidity - Minimum value analog input	1	HR203	AV1726
SupplyHum.MaxVal_RW	Supply humidity - Maximum value analog input	1	HR204	AV1727
SupplyHum.Offset_RW	Supply humidity - Offset analog input	1	HR205	AV1728
SupplyHum.ChFilter_RW	Supply humidity - Filter channel	1	HR206	PIV1729
RetTemp.Board_RW	Return temperature - Board selected	1	HR207	PIV1730
RetTemp.Ch_Id_RW	Return temperature - Channel id selected	1	HR208	PIV1731
RetTemp.Ch_Type_RW	Return temperature - Type probe used	1	HR209	PIV1732
RetTemp.MinVal_RW	Return temperature - Minimum value analog input	1	HR210	AV1733
RetTemp.MaxVal_RW	Return temperature - Maximum value analog input	1	HR211	AV1734
RetTemp.Offset_RW	Return temperature - Offset analog input	1	HR212	AV1735
RetTemp.ChFilter_RW	Return temperature - Filter channel	1	HR213	PIV1736
RetHum.Board_RW	Return humidity - Board selected	1	HR214	PIV1737
RetHum.Ch_Id_RW	Return humidity - Channel id selected	1	HR215	PIV1738
RetHum.Ch_Type_RW	Return humidity - Type probe used	1	HR216	PIV1739
RetHum.MinVal_RW	Return humidity - Minimum value analog input	1	HR217	AV1740
RetHum.MaxVal_RW	Return humidity - Maximum value analog input	1	HR218	AV1741
RetHum.Offset_RW	Return humidity - Offset analog input	1	HR219	AV1742
RetHum.ChFilter_RW	Return humidity - Filter channel	1	HR220	PIV1743
RoomTemp.Board_RW	Room temperature - Board selected	1	HR221	PIV1744
RoomTemp.Ch_Id_RW	Room temperature - Channel id selected	1	HR222	PIV1745
RoomTemp.Ch_Type_RW	Room temperature - Type probe used	1	HR223	PIV1746
RoomTemp.MinVal_RW	Room temperature - Minimum value analog input	1	HR224	AV1747
RoomTemp.MaxVal_RW	Room temperature - Maximum value analog input	1	HR225	AV1748
RoomTemp.Offset_RW	Room temperature - Offset analog input	1	HR226	AV1749
RoomTemp.ChFilter_RW	Room temperature - Filter channel	1	HR227	PIV1750
RoomHum.Board_RW	Room humidity - Board selected	1	HR228	PIV1751
RoomHum.Ch_Id_RW	Room humidity - Channel id selected	1	HR229	PIV1752
RoomHum.Ch_Type_RW	Room humidity - Type probe used	1	HR230	PIV1753
RoomHum.MinVal_RW	Room humidity - Minimum value analog input	1	HR231	AV1754
RoomHum.MaxVal_RW	Room humidity - Maximum value analog input	1	HR232	AV1755
RoomHum.Offset_RW	Room humidity - Offset analog input	1	HR233	AV1756
RoomHum.ChFilter_RW	Room humidity - Filter channel	1	HR234	PIV1757
ExtTemp.Board_RW	Fresh air temperature - Board selected	1	HR235	PIV1758
ExtTemp.Ch_Id_RW	Fresh air temperature - Channel id selected	1	HR236	PIV1759
ExtTemp.Ch_Type_RW	Fresh air temperature - Type probe used	1	HR237	PIV1760
ExtTemp.MinVal_RW	Fresh air temperature - Minimum value analog input	1	HR238	AV1761
ExtTemp.MaxVal_RW	Fresh air temperature - Maximum value analog input	1	HR239	AV1762
ExtTemp.Offset_RW	Fresh air temperature - Offset analog input	1	HR240	AV1763
ExtTemp.ChFilter_RW	Fresh air temperature - Filter channel	1	HR241	PIV1764

Variable	Description	Dim	Modbus	BACnet
ExtHum.Board_RW	Fresh air humidity - Board selected	1	HR242	PIV1765
ExtHum.Ch_Id_RW	Fresh air humidity - Channel id selected	1	HR243	PIV1766
ExtHum.Ch_Type_RW	Fresh air humidity - Type probe used	1	HR244	PIV1767
ExtHum.MinVal_RW	Fresh air humidity - Minimum value analog input	1	HR245	AV1768
ExtHum.MaxVal_RW	Fresh air humidity - Maximum value analog input	1	HR246	AV1769
ExtHum.Offset_RW	Fresh air humidity - Offset analog input	1	HR247	AV1770
ExtHum.ChFilter_RW	Fresh air humidity - Filter channel	1	HR248	PIV1771
ExhTemp.Board_RW	Exhaust temperature - Board selected	1	HR249	PIV1772
ExhTemp.Ch_Id_RW	Exhaust temperature - Channel id selected	1	HR250	PIV1773
ExhTemp.Ch_Type_RW	Exhaust temperature - Type probe used	1	HR251	PIV1774
ExhTemp.MinVal_RW	Exhaust temperature - Minimum value analog input	1	HR252	AV1775
ExhTemp.MaxVal_RW	Exhaust temperature - Maximum value analog input	1	HR253	AV1776
ExhTemp.Offset_RW	Exhaust temperature - Offset analog input	1	HR254	AV1777
ExhTemp.ChFilter_RW	Exhaust temperature - Filter channel	1	HR255	PIV1778
ExhHum.Board_RW	Exhaust humidity - Board selected	1	HR256	PIV1779
ExhHum.Ch_Id_RW	Exhaust humidity - Channel id selected	1	HR257	PIV1780
ExhHum.Ch_Type_RW	Exhaust humidity - Type probe used	1	HR258	PIV1781
ExhHum.MinVal_RW	Exhaust humidity - Minimum value analog input	1	HR259	AV1782
ExhHum.MaxVal_RW	Exhaust humidity - Maximum value analog input	1	HR260	AV1783
ExhHum.Offset_RW	Exhaust humidity - Offset analog input	1	HR261	AV1784
ExhHum.ChFilter_RW	Exhaust humidity - Filter channel	1	HR262	PIV1785
AFreezeTemp.Board_RW	Antifreeze temperature - Board selected	1	HR263	PIV1786
AFreezeTemp.Ch_Id_RW	Antifreeze temperature - Channel id selected	1	HR264	PIV1787
AFreezeTemp.Ch_Type_RW	Antifreeze temperature - Type probe used	1	HR265	PIV1788
AFreezeTemp.MinVal_RW	Antifreeze temperature - Minimum value analog input	1	HR266	AV1789
AFreezeTemp.MaxVal_RW	Antifreeze temperature - Maximum value analog input	1	HR267	AV1790
AFreezeTemp.Offset_RW	Antifreeze temperature - Offset analog input	1	HR268	AV1791
AFreezeTemp.ChFilter_RW	Antifreeze temperature - Filter channel	1	HR269	PIV1792
SatTemp.Board_RW	Saturation temperature - Board selected	1	HR270	PIV1793
SatTemp.Ch_Id_RW	Saturation temperature - Channel id selected	1	HR271	PIV1794
SatTemp.Ch_Type_RW	Saturation temperature - Type probe used	1	HR272	PIV1795
SatTemp.MinVal_RW	Saturation temperature - Minimum value analog input	1	HR273	AV1796
SatTemp.MaxVal_RW	Saturation temperature - Maximum value analog input	1	HR274	AV1797
SatTemp.Offset_RW	Saturation temperature - Offset analog input	1	HR275	AV1798
SatTemp.ChFilter_RW	Saturation temperature - Filter channel	1	HR276	PIV1799
SatHum.Board_RW	Saturation humidity - Board selected	1	HR277	PIV1800
SatHum.Ch_Id_RW	Saturation humidity - Channel id selected	1	HR278	PIV1801
SatHum.Ch_Type_RW	Saturation humidity - Type probe used	1	HR279	PIV1802
SatHum.MinVal_RW	Saturation humidity - Minimum value analog input	1	HR280	AV1803
SatHum.MaxVal_RW	Saturation humidity - Maximum value analog input	1	HR281	AV1804
SatHum.Offset_RW	Saturation humidity - Offset analog input	1	HR282	AV1805
SatHum.ChFilter_RW	Saturation humidity - Filter channel	1	HR283	PIV1806
OA_Temp.Board_RW	Outdoor air pre-treatment temperature - Board selected	1	HR284	PIV1807
OA_Temp.Ch_Id_RW	Outdoor air pre-treatment temperature - Channel id selected	1	HR285	PIV1808
OA_Temp.Ch_Type_RW	Outdoor air pre-treatment temperature - Type probe used	1	HR286	PIV1809
OA_Temp.MinVal_RW	Outdoor air pre-treatment temperature - Minimum value analog input	1	HR287	AV1810
OA_Temp.MaxVal_RW	Outdoor air pre-treatment temperature - Maximum value analog input	1	HR288	AV1811
OA_Temp.Offset_RW	Outdoor air pre-treatment temperature - Offset analog input	1	HR289	AV1812
OA_Temp.ChFilter_RW	Outdoor air pre-treatment temperature - Filter channel	1	HR290	PIV1813
SupplyAirP.Board_RW	Supply air pressure - Board selected	1	HR291	PIV1814
SupplyAirP.Ch_Id_RW	Supply air pressure - Channel id selected	1	HR292	PIV1815
SupplyAirP.Ch_Type_RW	Supply air pressure - Type probe used	1	HR293	PIV1816
SupplyAirP.MinVal_RW	Supply air pressure - Minimum value analog input	1	HR294	AV1817
SupplyAirP.MaxVal_RW	Supply air pressure - Maximum value analog input	1	HR295	AV1818
SupplyAirP.Offset_RW	Supply air pressure - Offset analog input	1	HR296	AV1819
SupplyAirP.ChFilter_RW	Supply air pressure - Filter channel	1	HR297	PIV1820
RetAirP.Board_RW	Return air pressure - Board selected	1	HR298	PIV1821
RetAirP.Ch_Id_RW	Return air pressure - Channel id selected	1	HR299	PIV1822
RetAirP.Ch_Type_RW	Return air pressure - Type probe used	1	HR300	PIV1823
RetAirP.MinVal_RW	Return air pressure - Minimum value analog input	1	HR301	AV1824
RetAirP.MaxVal_RW	Return air pressure - Maximum value analog input	1	HR302	AV1825
RetAirP.Offset_RW	Return air pressure - Offset analog input	1	HR303	AV1826
RetAirP.ChFilter_RW	Return air pressure - Filter channel	1	HR304	PIV1827
AirQuality_CO2.Board_RW	CO2 sensor - Board selected	1	HR305	PIV1828
AirQuality_CO2.Ch_Id_RW	CO2 sensor - Channel id selected	1	HR306	PIV1829
AirQuality_CO2.Ch_Type_RW	CO2 sensor - Type probe used	1	HR307	PIV1830
AirQuality_CO2.MinVal_RW	CO2 sensor - Minimum value analog input	1	HR308	AV1831
AirQuality_CO2.MaxVal_RW	CO2 sensor - Maximum value analog input	1	HR309	AV1832
AirQuality_CO2.Offset_RW	CO2 sensor - Offset analog input	1	HR310	AV1833
AirQuality_CO2.ChFilter_RW	CO2 sensor - Filter channel	1	HR311	PIV1834
AirQuality_VOC.Board_RW	VOC sensor - Board selected	1	HR312	PIV1835
AirQuality_VOC.Ch_Id_RW	VOC sensor - Channel id selected	1	HR313	PIV1836
AirQuality_VOC.Ch_Type_RW	VOC sensor - Type probe used	1	HR314	PIV1837
AirQuality_VOC.MinVal_RW	VOC sensor - Minimum value analog input	1	HR315	AV1838
AirQuality_VOC.MaxVal_RW	VOC sensor - Maximum value analog input	1	HR316	AV1839
AirQuality_VOC.Offset_RW	VOC sensor - Offset analog input	1	HR317	AV1840
AirQuality_VOC.ChFilter_RW	VOC sensor - Filter channel	1	HR318	PIV1841
DscgP.Board_RW	Discharge pressure - Board selected	1	HR319	PIV1842
DscgP.Ch_Id_RW	Discharge pressure - Channel id selected	1	HR320	PIV1843
DscgP.Ch_Type_RW	Discharge pressure - Type probe used	1	HR321	PIV1844
DscgP.MinVal_RW	Discharge pressure - Minimum value analog input	1	HR322	AV1845
DscgP.MaxVal_RW	Discharge pressure - Maximum value analog input	1	HR323	AV1846
DscgP.Offset_RW	Discharge pressure - Offset analog input	1	HR324	AV1847
DscgP.ChFilter_RW	Discharge pressure - Filter channel	1	HR325	PIV1848
DscgT.Board_RW	Discharge temperature - Board selected	1	HR326	PIV1849
DscgT.Ch_Id_RW	Discharge temperature - Channel id selected	1	HR327	PIV1850
DscgT.Ch_Type_RW	Discharge temperature - Type probe used	1	HR328	PIV1851
DscgT.MinVal_RW	Discharge temperature - Minimum value analog input	1	HR329	AV1852
DscgT.MaxVal_RW	Discharge temperature - Maximum value analog input	1	HR330	AV1853
DscgT.Offset_RW	Discharge temperature - Offset analog input	1	HR331	AV1854
DscgT.ChFilter_RW	Discharge temperature - Filter channel	1	HR332	PIV1855
SuctP.Board_RW	Suction pressure - Board selected	1	HR333	PIV1856
SuctP.Ch_Id_RW	Suction pressure - Channel id selected	1	HR334	PIV1857
SuctP.Ch_Type_RW	Suction pressure - Type probe used	1	HR335	PIV1858
SuctP.MinVal_RW	Suction pressure - Minimum value analog input	1	HR336	AV1859
SuctP.MaxVal_RW	Suction pressure - Maximum value analog input	1	HR337	AV1860
SuctP.Offset_RW	Suction pressure - Offset analog input	1	HR338	AV1861
SuctP.ChFilter_RW	Suction pressure - Filter channel	1	HR339	PIV1862
SuctT.Board_RW	Suction temperature - Board selected	1	HR340	PIV1863
SuctT.Ch_Id_RW	Suction temperature - Channel id selected	1	HR341	PIV1864
SuctT.Ch_Type_RW	Suction temperature - Type probe used	1	HR342	PIV1865
SuctT.MinVal_RW	Suction temperature - Minimum value analog input	1	HR343	AV1866

Variable	Description	Dim	Modbus	BACnet
SuctT.MaxVal_RW	Suction temperature - Maximum value analog input	1	HR344	AV1867
SuctT.Offset_RW	Suction temperature - Offset analog input	1	HR345	AV1868
SuctT.ChFilter_RW	Suction temperature - Filter channel	1	HR346	PIV1869
OA_CoilWaterTemp.Board_RW	Outdoor air pre-treatment coil water temperature - Board selected	1	HR347	PIV1870
OA_CoilWaterTemp.Ch_Id_RW	Outdoor air pre-treatment coil water temperature - Channel id selected	1	HR348	PIV1871
OA_CoilWaterTemp.Ch_Type_RW	Outdoor air pre-treatment coil water temperature - Type probe used	1	HR349	PIV1872
OA_CoilWaterTemp.MinVal_RW	Outdoor air pre-treatment coil water temperature - Minimum value analog input	1	HR350	AV1873
OA_CoilWaterTemp.MaxVal_RW	Outdoor air pre-treatment coil water temperature - Maximum value analog	1	HR351	AV1874
OA_CoilWaterTemp.Offset_RW	Outdoor air pre-treatment coil water temperature - Offset analog input	1	HR352	AV1875
OA_CoilWaterTemp.ChFilter_RW	Outdoor air pre-treatment coil water temperature - Filter channel	1	HR353	PIV1876
PreHeatCoilWaterTemp.Board_RW	Preheat coil water temperature - Board selected	1	HR354	PIV1877
PreHeatCoilWaterTemp.Ch_Id_RW	Preheat coil water temperature - Channel id selected	1	HR355	PIV1878
PreHeatCoilWaterTemp.Ch_Type_RW	Preheat coil water temperature - Type probe used	1	HR356	PIV1879
PreHeatCoilWaterTemp.MinVal_RW	Preheat coil water temperature - Minimum value analog input	1	HR357	AV1880
PreHeatCoilWaterTemp.MaxVal_RW	Preheat coil water temperature - Maximum value analog input	1	HR358	AV1881
PreHeatCoilWaterTemp.Offset_RW	Preheat coil water temperature - Offset analog input	1	HR359	AV1882
PreHeatCoilWaterTemp.ChFilter_RW	Preheat coil water temperature - Filter channel	1	HR360	PIV1883
MainCoilWaterTemp.Board_RW	Main coil water temperature - Board selected	1	HR361	PIV1884
MainCoilWaterTemp.Ch_Id_RW	Main coil water temperature - Channel id selected	1	HR362	PIV1885
MainCoilWaterTemp.Ch_Type_RW	Main coil water temperature - Type probe used	1	HR363	PIV1886
MainCoilWaterTemp.MinVal_RW	Main coil water temperature - Minimum value analog input	1	HR364	AV1887
MainCoilWaterTemp.MaxVal_RW	Main coil water temperature - Maximum value analog input	1	HR365	AV1888
MainCoilWaterTemp.Offset_RW	Main coil water temperature - Offset analog input	1	HR366	AV1889
MainCoilWaterTemp.ChFilter_RW	Main coil water temperature - Filter channel	1	HR367	PIV1890
ReHeatCoilWaterTemp.Board_RW	Postheat coil water temperature - Board selected	1	HR368	PIV1891
ReHeatCoilWaterTemp.Ch_Id_RW	Postheat coil water temperature - Channel id selected	1	HR369	PIV1892
ReHeatCoilWaterTemp.Ch_Type_RW	Postheat coil water temperature - Type probe used	1	HR370	PIV1893
ReHeatCoilWaterTemp.MinVal_RW	Postheat coil water temperature - Minimum value analog input	1	HR371	AV1894
ReHeatCoilWaterTemp.MaxVal_RW	Postheat coil water temperature - Maximum value analog input	1	HR372	AV1895
ReHeatCoilWaterTemp.Offset_RW	Postheat coil water temperature - Offset analog input	1	HR373	AV1896
ReHeatCoilWaterTemp.ChFilter_RW	Postheat coil water temperature - Filter channel	1	HR374	PIV1897
AuxPrb_1.Board_RW	Auxiliary probe 1 - Board selected	1	HR375	PIV1898
AuxPrb_1.Ch_Id_RW	Auxiliary probe 1 - Channel id selected	1	HR376	PIV1899
AuxPrb_1.Ch_Type_RW	Auxiliary probe 1 - Type probe used	1	HR377	PIV1900
AuxPrb_1.MinVal_RW	Auxiliary probe 1 - Minimum value analog input	1	HR378	AV1901
AuxPrb_1.MaxVal_RW	Auxiliary probe 1 - Maximum value analog input	1	HR379	AV1902
AuxPrb_1.Offset_RW	Auxiliary probe 1 - Offset analog input	1	HR380	AV1903
AuxPrb_1.ChFilter_RW	Auxiliary probe 1 - Filter channel	1	HR381	PIV1904
AuxPrb_2.Board_RW	Auxiliary probe 2 - Board selected	1	HR382	PIV1905
AuxPrb_2.Ch_Id_RW	Auxiliary probe 2 - Channel id selected	1	HR383	PIV1906
AuxPrb_2.Ch_Type_RW	Auxiliary probe 2 - Type probe used	1	HR384	PIV1907
AuxPrb_2.MinVal_RW	Auxiliary probe 2 - Minimum value analog input	1	HR385	AV1908
AuxPrb_2.MaxVal_RW	Auxiliary probe 2 - Maximum value analog input	1	HR386	AV1909
AuxPrb_2.Offset_RW	Auxiliary probe 2 - Offset analog input	1	HR387	AV1910
AuxPrb_2.ChFilter_RW	Auxiliary probe 2 - Filter channel	1	HR388	PIV1911
AuxPrb_3.Board_RW	Auxiliary probe 3 - Board selected	1	HR389	PIV1912
AuxPrb_3.Ch_Id_RW	Auxiliary probe 3 - Channel id selected	1	HR390	PIV1913
AuxPrb_3.Ch_Type_RW	Auxiliary probe 3 - Type probe used	1	HR391	PIV1914
AuxPrb_3.MinVal_RW	Auxiliary probe 3 - Minimum value analog input	1	HR392	AV1915
AuxPrb_3.MaxVal_RW	Auxiliary probe 3 - Maximum value analog input	1	HR393	AV1916
AuxPrb_3.Offset_RW	Auxiliary probe 3 - Offset analog input	1	HR394	AV1917
AuxPrb_3.ChFilter_RW	Auxiliary probe 3 - Filter channel	1	HR395	PIV1918
AuxPrb_4.Board_RW	Auxiliary probe 4 - Board selected	1	HR396	PIV1919
AuxPrb_4.Ch_Id_RW	Auxiliary probe 4 - Channel id selected	1	HR397	PIV1920
AuxPrb_4.Ch_Type_RW	Auxiliary probe 4 - Type probe used	1	HR398	PIV1921
AuxPrb_4.MinVal_RW	Auxiliary probe 4 - Minimum value analog input	1	HR399	AV1922
AuxPrb_4.MaxVal_RW	Auxiliary probe 4 - Maximum value analog input	1	HR400	AV1923
AuxPrb_4.Offset_RW	Auxiliary probe 4 - Offset analog input	1	HR401	AV1924
AuxPrb_4.ChFilter_RW	Auxiliary probe 4 - Filter channel	1	HR402	PIV1925
Ain_SetP.Board_RW	Setpoint by AIN - Board selected	1	HR403	PIV1926
Ain_SetP.Ch_Id_RW	Setpoint by AIN - Channel id selected	1	HR404	PIV1927
Ain_SetP.Ch_Type_RW	Setpoint by AIN - Type probe used	1	HR405	PIV1928
Ain_SetP.MinVal_RW	Setpoint by AIN - Minimum value analog input	1	HR406	AV1929
Ain_SetP.MaxVal_RW	Setpoint by AIN - Maximum value analog input	1	HR407	AV1930
Ain_SetP.Offset_RW	Setpoint by AIN - Offset analog input	1	HR408	AV1931
Ain_SetP.ChFilter_RW	Setpoint by AIN - Filter channel	1	HR409	PIV1932
SupplyRecoveryTemp.Board_RW	Supply recovery temperature - Board selected	1	HR410	PIV1933
SupplyRecoveryTemp.Ch_Id_RW	Supply recovery temperature - Channel id selected	1	HR411	PIV1934
SupplyRecoveryTemp.Ch_Type_RW	Supply recovery temperature - Type probe used	1	HR412	PIV1935
SupplyRecoveryTemp.MinVal_RW	Supply recovery temperature - Minimum value analog input	1	HR413	AV1936
SupplyRecoveryTemp.MaxVal_RW	Supply recovery temperature - Maximum value analog input	1	HR414	AV1937
SupplyRecoveryTemp.Offset_RW	Supply recovery temperature - Offset analog input	1	HR415	AV1938
SupplyRecoveryTemp.ChFilter_RW	Supply recovery temperature - Filter channel	1	HR416	PIV1939
RetRecoveryTemp.Board_RW	Return recovery temperature - Board selected	1	HR417	PIV1940
RetRecoveryTemp.Ch_Id_RW	Return recovery temperature - Channel id selected	1	HR418	PIV1941
RetRecoveryTemp.Ch_Type_RW	Return recovery temperature - Type probe used	1	HR419	PIV1942
RetRecoveryTemp.MinVal_RW	Return recovery temperature - Minimum value analog input	1	HR420	AV1943
RetRecoveryTemp.MaxVal_RW	Return recovery temperature - Maximum value analog input	1	HR421	AV1944
RetRecoveryTemp.Offset_RW	Return recovery temperature - Offset analog input	1	HR422	AV1945
RetRecoveryTemp.ChFilter_RW	Return recovery temperature - Filter channel	1	HR423	PIV1946
HepaFilt_1.Board_RW	Hepa filter 1 - Board selected	1	HR424	PIV1947
HepaFilt_1.Ch_Id_RW	Hepa filter 1 - Channel id selected	1	HR425	PIV1948
HepaFilt_1.Ch_Type_RW	Hepa filter 1 - Type probe used	1	HR426	PIV1949
HepaFilt_1.MinVal_RW	Hepa filter 1 - Minimum value analog input	1	HR427	AV1950
HepaFilt_1.MaxVal_RW	Hepa filter 1 - Maximum value analog input	1	HR428	AV1951
HepaFilt_1.Offset_RW	Hepa filter 1 - Offset analog input	1	HR429	AV1952
HepaFilt_1.ChFilter_RW	Hepa filter 1 - Filter channel	1	HR430	PIV1953
HepaFilt_2.Board_RW	Hepa filter 2 - Board selected	1	HR431	PIV1954
HepaFilt_2.Ch_Id_RW	Hepa filter 2 - Channel id selected	1	HR432	PIV1955
HepaFilt_2.Ch_Type_RW	Hepa filter 2 - Type probe used	1	HR433	PIV1956
HepaFilt_2.MinVal_RW	Hepa filter 2 - Minimum value analog input	1	HR434	AV1957
HepaFilt_2.MaxVal_RW	Hepa filter 2 - Maximum value analog input	1	HR435	AV1958
HepaFilt_2.Offset_RW	Hepa filter 2 - Offset analog input	1	HR436	AV1959
HepaFilt_2.ChFilter_RW	Hepa filter 2 - Filter channel	1	HR437	PIV1960
SupplyAirFlwSw.Board_RW	Supply air flow switch - Board selected	1	HR438	PIV1961
SupplyAirFlwSw.Ch_Id_RW	Supply air flow switch - Channel id selected	1	HR439	PIV1962
RetAirFlwSw.Board_RW	Return air flow switch - Board selected	1	HR440	PIV1963
RetAirFlwSw.Ch_Id_RW	Return air flow switch - Channel id selected	1	HR441	PIV1964
AirFlwSw.Board_RW	Air flow switch - Board selected	1	HR442	PIV1965
AirFlwSw.Ch_Id_RW	Air flow switch - Channel id selected	1	HR443	PIV1966
AFreezeSw.Board_RW	Antifreeze switch - Board selected	1	HR444	PIV1967

Variable	Description	Dim	Modbus	BACnet
AFreezeSw.Ch_Id_RW	Antifreeze switch - Channel id selected	1	HR445	PIV1968
RemOnOff.Board_RW	Remote On/Off - Board selected	1	HR446	PIV1969
RemOnOff.Ch_Id_RW	Remote On/Off - Channel id selected	1	HR447	PIV1970
SupplyFanOvld_1.Board_RW	Supply fan overload 1 - Board selected	1	HR448	PIV1971
SupplyFanOvld_1.Ch_Id_RW	Supply fan overload 1 - Channel id selected	1	HR449	PIV1972
RetFanOvld_1.Board_RW	Return fan overload 1 - Board selected	1	HR450	PIV1973
RetFanOvld_1.Ch_Id_RW	Return fan overload 1 - Channel id selected	1	HR451	PIV1974
SupplyFanOvld_2.Board_RW	Supply fan overload 2 - Board selected	1	HR452	PIV1975
SupplyFanOvld_2.Ch_Id_RW	Supply fan overload 2 - Channel id selected	1	HR453	PIV1976
RetFanOvld_2.Board_RW	Return fan overload 2 - Board selected	1	HR454	PIV1977
RetFanOvld_2.Ch_Id_RW	Return fan overload 2 - Channel id selected	1	HR455	PIV1978
SupplyFanInvAlrm.Board_RW	Supply inverter alarm - Board selected	1	HR456	PIV1979
SupplyFanInvAlrm.Ch_Id_RW	Supply inverter alarm - Channel id selected	1	HR457	PIV1980
RetFanInvAlrm.Board_RW	Return inverter alarm - Board selected	1	HR458	PIV1981
RetFanInvAlrm.Ch_Id_RW	Return inverter alarm - Channel id selected	1	HR459	PIV1982
FansOvld.Board_RW	Fans overload - Board selected	1	HR460	PIV1983
FansOvld.Ch_Id_RW	Fans overload - Channel id selected	1	HR461	PIV1984
CompOvld.Board_RW	Compressor overload - Board selected	1	HR462	PIV1985
CompOvld.Ch_Id_RW	Compressor overload - Channel id selected	1	HR463	PIV1986
HiPSw.Board_RW	High discharge pressure switch - Board selected	1	HR464	PIV1987
HiPSw.Ch_Id_RW	High discharge pressure switch - Channel id selected	1	HR465	PIV1988
LowPSw.Board_RW	Low suction pressure switch - Board selected	1	HR466	PIV1989
LowPSw.Ch_Id_RW	Low suction pressure switch - Channel id selected	1	HR467	PIV1990
RecoveryOvld.Board_RW	Thermal wheel overload - Board selected	1	HR468	PIV1991
RecoveryOvld.Ch_Id_RW	Thermal wheel overload - Channel id selected	1	HR469	PIV1992
SrsAlrm.Board_RW	Serious alarm - Board selected	1	HR470	PIV1993
SrsAlrm.Ch_Id_RW	Serious alarm - Channel id selected	1	HR471	PIV1994
GenAlrm.Board_RW	Generic alarm - Board selected	1	HR472	PIV1995
GenAlrm.Ch_Id_RW	Generic alarm - Channel id selected	1	HR473	PIV1996
GenWarning.Board_RW	Generic warning - Board selected	1	HR474	PIV1997
GenWarning.Ch_Id_RW	Generic warning - Channel id selected	1	HR475	PIV1998
FiltAlrm.Board_RW	Filters alarm - Board selected	1	HR476	PIV1999
FiltAlrm.Ch_Id_RW	Filters alarm - Channel id selected	1	HR477	PIV2000
SupplyFiltAlrm_1.Board_RW	Supply filter alarm 1 - Board selected	1	HR478	PIV2001
SupplyFiltAlrm_1.Ch_Id_RW	Supply filter alarm 1 - Channel id selected	1	HR479	PIV2002
SupplyFiltAlrm_2.Board_RW	Supply filter alarm 2 - Board selected	1	HR480	PIV2003
SupplyFiltAlrm_2.Ch_Id_RW	Supply filter alarm 2 - Channel id selected	1	HR481	PIV2004
RetFiltAlrm.Board_RW	Return filter alarm - Board selected	1	HR482	PIV2005
RetFiltAlrm.Ch_Id_RW	Return filter alarm - Channel id selected	1	HR483	PIV2006
HumAlrm.Board_RW	Humidifier alarm - Board selected	1	HR484	PIV2007
HumAlrm.Ch_Id_RW	Humidifier alarm - Channel id selected	1	HR485	PIV2008
MainCoilPmp1_Ovld.Board_RW	Main coil pump 1 overload - Board selected	1	HR486	PIV2009
MainCoilPmp1_Ovld.Ch_Id_RW	Main coil pump 1 overload - Channel id selected	1	HR487	PIV2010
MainCoilPmp2_Ovld.Board_RW	Main coil pump 2 overload - Board selected	1	HR488	PIV2011
MainCoilPmp2_Ovld.Ch_Id_RW	Main coil pump 2 overload - Channel id selected	1	HR489	PIV2012
ReHeatCoilPmp1_Ovld.Board_RW	ReHeat coil pump 1 overload - Board selected	1	HR490	PIV2013
ReHeatCoilPmp1_Ovld.Ch_Id_RW	ReHeat coil pump 1 overload - Channel id selected	1	HR491	PIV2014
ReHeatCoilPmp2_Ovld.Board_RW	ReHeat coil pump 2 overload - Board selected	1	HR492	PIV2015
ReHeatCoilPmp2_Ovld.Ch_Id_RW	ReHeat coil pump 2 overload - Channel id selected	1	HR493	PIV2016
PreHeatCoilPmp1_Ovld.Board_RW	PreHeat coil pump 1 overload - Board selected	1	HR494	PIV2017
PreHeatCoilPmp1_Ovld.Ch_Id_RW	PreHeat coil pump 1 overload - Channel id selected	1	HR495	PIV2018
PreHeatCoilPmp2_Ovld.Board_RW	PreHeat coil pump 2 overload - Board selected	1	HR496	PIV2019
PreHeatCoilPmp2_Ovld.Ch_Id_RW	PreHeat coil pump 2 overload - Channel id selected	1	HR497	PIV2020
OA_CoilPmp1_Ovld. Board_RW	Outdoor air pre-treatment coil pump 1 overload - Board selected	1	HR498	PIV2021
OA_CoilPmp1_Ovld. Ch_Id_RW	Outdoor air pre-treatment coil pump 1 overload - Channel id selected	1	HR499	PIV2022
OA_CoilPmp2_Ovld. Board_RW	Outdoor air pre-treatment coil pump 2 overload - Board selected	1	HR500	PIV2023
OA_CoilPmp2_Ovld. Ch_Id_RW	Outdoor air pre-treatment coil pump 2 overload - Channel id selected	1	HR501	PIV2024
FreshAirDampSw.Board_RW	Fresh air damper switch - Board selected	1	HR502	PIV2025
FreshAirDampSw.Ch_Id_RW	Fresh air damper switch - Channel id selected	1	HR503	PIV2026
SupplyDamperSw.Board_RW	Supply damper switch - Board selected	1	HR504	PIV2027
SupplyDamperSw.Ch_Id_RW	Supply damper switch - Channel id selected	1	HR505	PIV2028
RetDampSw.Board_RW	Return damper switch - Board selected	1	HR506	PIV2029
RetDampSw.Ch_Id_RW	Return damper switch - Channel id selected	1	HR507	PIV2030
MainCoilFlwSw.Board_RW	Main coil flow switch - Board selected	1	HR508	PIV2031
MainCoilFlwSw.Ch_Id_RW	Main coil flow switch - Channel id selected	1	HR509	PIV2032
PreHeatCoilFlwSw.Board_RW	Pre-heating coil flow switch - Board selected	1	HR510	PIV2033
PreHeatCoilFlwSw.Ch_Id_RW	Pre-heating coil flow switch - Channel id selected	1	HR511	PIV2034
ReHeatCoilFlwSw.Board_RW	Post-Heating coil flow switch - Board selected	1	HR512	PIV2035
ReHeatCoilFlwSw.Ch_Id_RW	Post-Heating coil flow switch - Channel id selected	1	HR513	PIV2036
OA_CoilFlwSw.Board_RW	Outdoor air pre-treatment coil flow switch - Board selected	1	HR514	PIV2037
OA_CoilFlwSw.Ch_Id_RW	Outdoor air pre-treatment coil flow switch - Channel id selected	1	HR515	PIV2038
RecoveryClogged.Board_RW	Recovery clogged - Board selected	1	HR516	PIV2039
RecoveryClogged.Ch_Id_RW	Recovery clogged - Channel id selected	1	HR517	PIV2040
ReHeatAlrm.Board_RW	Re-heating alarm - Board selected	1	HR518	PIV2041
ReHeatAlrm.Ch_Id_RW	Re-heating alarm - Channel id selected	1	HR519	PIV2042
PreHeatAlrm.Board_RW	Pre-heating alarm - Board selected	1	HR520	PIV2043
PreHeatAlrm.Ch_Id_RW	Pre-heating alarm - Channel id selected	1	HR521	PIV2044
MainHeatCoilAlrm.Board_RW	Main coil alarm - Board selected	1	HR522	PIV2045
MainHeatCoilAlrm.Ch_Id_RW	Main coil alarm - Channel id selected	1	HR523	PIV2046
OA_CoilAlrm.Board_RW	Outdoor air pre-treatment -Heat alarm - Board selected	1	HR524	PIV2047
OA_CoilAlrm.Ch_Id_RW	Outdoor air pre-treatment -Heat alarm - Channel id selected	1	HR525	PIV2048
DoorSw.Board_RW	Door Switch - Board selected	1	HR526	PIV2049
DoorSw.Ch_Id_RW	Door Switch - Channel id selected	1	HR527	PIV2050
FireSmokeAlrm.Board_RW	Fire/Smoke alarm - Board selected	1	HR528	PIV2051
FireSmokeAlrm.Ch_Id_RW	Fire/Smoke alarm - Channel id selected	1	HR529	PIV2052
FiremanOverrideSw.Board_RW	Fireman override switch - Board selected	1	HR530	PIV2053
FiremanOverrideSw.Ch_Id_RW	Fireman override switch - Channel id selected	1	HR531	PIV2054
SummerWinterModeByDin.Board_RW	Summer/Winter mode by digital input - Board selected	1	HR532	PIV2055
SummerWinterModeByDin.Ch_Id_RW	Summer/Winter mode by digital input - Channel id selected	1	HR533	PIV2056
Din_SetP.Board_RW	Setpoint by digital input - Board selected	1	HR534	PIV2057
Din_SetP.Ch_Id_RW	Setpoint by digital input - Channel id selected	1	HR535	PIV2058
Eco_Mode.Board_RW	Eco mode - Board selected	1	HR536	PIV2059
Eco_Mode.Ch_Id_RW	Eco mode - Channel id selected	1	HR537	PIV2060
PreComf_Mode.Board_RW	Precomfort mode - Board selected	1	HR538	PIV2061
PreComf_Mode.Ch_Id_RW	Precomfort mode - Channel id selected	1	HR539	PIV2062
Comf_Mode.Board_RW	Comfort mode - Board selected	1	HR540	PIV2063
Comf_Mode.Ch_Id_RW	Comfort mode - Channel id selected	1	HR541	PIV2064
AuxDin_1.Board_RW	Auxiliary digital input 1 - Board selected	1	HR542	PIV2065
AuxDin_1.Ch_Id_RW	Auxiliary digital input 1 - Channel id selected	1	HR543	PIV2066
AuxDin_2.Board_RW	Auxiliary digital input 2 - Board selected	1	HR544	PIV2067
AuxDin_2.Ch_Id_RW	Auxiliary digital input 2 - Channel id selected	1	HR545	PIV2068
AuxDin_3.Board_RW	Auxiliary digital input 3 - Board selected	1	HR546	PIV2069

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AuxDin_3.Ch_Id_RW	Auxiliary digital input 3 - Channel id selected	1	HR547	PIV2070
AuxDin_4.Board_RW	Auxiliary digital input 4 - Board selected	1	HR548	PIV2071
AuxDin_4.Ch_Id_RW	Auxiliary digital input 4 - Channel id selected	1	HR549	PIV2072
DfrHeatExch_Din.Board_RW	Heat exchanger defrost by Din - Board selected	1	HR550	PIV2073
DfrHeatExch_Din.Ch_Id_RW	Heat exchanger defrost by Din - Channel id selected	1	HR551	PIV2074
BypassDamp_Dout.Board_RW	Bypass damper - Board selected	1	HR552	PIV2075
BypassDamp_Dout.Ch_Id_RW	Bypass damper - Channel id selected	1	HR553	PIV2076
BypassDamp_Dout.T_On_RW	Bypass damper - Time on cycle relay	1	HR554	PIV2077
BypassDamp_Dout.T_Off_RW	Bypass damper - Time off cycle releay	1	HR555	PIV2078
BypassDamp_Dout.Ch_Type_RW	Bypass damper - Digital output type	1	HR556	PIV2079
BypassDamp_Open.Board_RW	Bypass damper floating (open) - Board selected	1	HR557	PIV2080
BypassDamp_Open.Ch_Id_RW	Bypass damper floating (open) - Channel id selected	1	HR558	PIV2081
BypassDamp_Open.T_On_RW	Bypass damper floating (open) - Time on cycle relay	1	HR559	PIV2082
BypassDamp_Open.T_Off_RW	Bypass damper floating (open) - Time off cycle releay	1	HR560	PIV2083
BypassDamp_Open.Ch_Type_RW	Bypass damper floating (open) - Digital output type	1	HR561	PIV2084
BypassDamp_Close.Board_RW	Bypass damper floating (close) - Board selected	1	HR562	PIV2085
BypassDamp_Close.Ch_Id_RW	Bypass damper floating (close) - Channel id selected	1	HR563	PIV2086
BypassDamp_Close.T_On_RW	Bypass damper floating (close) - Time on cycle relay	1	HR564	PIV2087
BypassDamp_Close.T_Off_RW	Bypass damper floating (close) - Time off cycle releay	1	HR565	PIV2088
BypassDamp_Close.Ch_Type_RW	Bypass damper floating (close) - Digital output type	1	HR566	PIV2089
FreshAirDamp_Dout.Board_RW	Fresh air damper - Board selected	1	HR567	PIV2090
FreshAirDamp_Dout.Ch_Id_RW	Fresh air damper - Channel id selected	1	HR568	PIV2091
FreshAirDamp_Dout.T_On_RW	Fresh air damper - Time on cycle relay	1	HR569	PIV2092
FreshAirDamp_Dout.T_Off_RW	Fresh air damper - Time off cycle releay	1	HR570	PIV2093
FreshAirDamp_Dout.Ch_Type_RW	Fresh air damper - Digital output type	1	HR571	PIV2094
ExhAirDamp_Dout.Board_RW	Exhaust air damper - Board selected	1	HR572	PIV2095
ExhAirDamp_Dout.Ch_Id_RW	Exhaust air damper - Channel id selected	1	HR573	PIV2096
ExhAirDamp_Dout.T_On_RW	Exhaust air damper - Time on cycle relay	1	HR574	PIV2097
ExhAirDamp_Dout.T_Off_RW	Exhaust air damper - Time off cycle releay	1	HR575	PIV2098
ExhAirDamp_Dout.Ch_Type_RW	Exhaust air damper - Digital output type	1	HR576	PIV2099
MixingDamp_Dout.Board_RW	Mixing damper - Board selected	1	HR577	PIV2100
MixingDamp_Dout.Ch_Id_RW	Mixing damper - Channel id selected	1	HR578	PIV2101
MixingDamp_Dout.T_On_RW	Mixing damper - Time on cycle relay	1	HR579	PIV2102
MixingDamp_Dout.T_Off_RW	Mixing damper - Time off cycle releay	1	HR580	PIV2103
MixingDamp_Dout.Ch_Type_RW	Mixing damper - Digital output type	1	HR581	PIV2104
SupplyAirDamp_Dout.Board_RW	Supply air damper - Board selected	1	HR582	PIV2105
SupplyAirDamp_Dout.Ch_Id_RW	Supply air damper - Channel id selected	1	HR583	PIV2106
SupplyAirDamp_Dout.T_On_RW	Supply air damper - Time on cycle relay	1	HR584	PIV2107
SupplyAirDamp_Dout.T_Off_RW	Supply air damper - Time off cycle releay	1	HR585	PIV2108
SupplyAirDamp_Dout.Ch_Type_RW	Supply air damper - Digital output type	1	HR586	PIV2109
RetAirDamp_Dout.Board_RW	Return air damper - Board selected	1	HR587	PIV2110
RetAirDamp_Dout.Ch_Id_RW	Return air damper - Channel id selected	1	HR588	PIV2111
RetAirDamp_Dout.T_On_RW	Return air damper - Time on cycle relay	1	HR589	PIV2112
RetAirDamp_Dout.T_Off_RW	Return air damper - Time off cycle releay	1	HR590	PIV2113
RetAirDamp_Dout.Ch_Type_RW	Return air damper - Digital output type	1	HR591	PIV2114
MixingDamp_Open.Board_RW	Mixing damper floating (OPEN) - Board selected	1	HR592	PIV2115
MixingDamp_Open.Ch_Id_RW	Mixing damper floating (OPEN) - Channel id selected	1	HR593	PIV2116
MixingDamp_Open.T_On_RW	Mixing damper floating (OPEN) - Time on cycle relay	1	HR594	PIV2117
MixingDamp_Open.T_Off_RW	Mixing damper floating (OPEN) - Time off cycle releay	1	HR595	PIV2118
MixingDamp_Open.Ch_Type_RW	Mixing damper floating (OPEN) - Digital output type	1	HR596	PIV2119
MixingDamp_Close.Board_RW	Mixing damper floating (CLOSE) - Board selected	1	HR597	PIV2120
MixingDamp_Close.Ch_Id_RW	Mixing damper floating (CLOSE) - Channel id selected	1	HR598	PIV2121
MixingDamp_Close.T_On_RW	Mixing damper floating (CLOSE) - Time on cycle relay	1	HR599	PIV2122
MixingDamp_Close.T_Off_RW	Mixing damper floating (CLOSE) - Time off cycle releay	1	HR600	PIV2123
MixingDamp_Close.Ch_Type_RW	Mixing damper floating (CLOSE) - Digital output type	1	HR601	PIV2124
SupplyFan_Dout.Board_RW	Supply fan - Board selected	1	HR602	PIV2125
SupplyFan_Dout.Ch_Id_RW	Supply fan - Channel id selected	1	HR603	PIV2126
SupplyFan_Dout.T_On_RW	Supply fan - Time on cycle relay	1	HR604	PIV2127
SupplyFan_Dout.T_Off_RW	Supply fan - Time off cycle releay	1	HR605	PIV2128
SupplyFan_Dout.Ch_Type_RW	Supply fan - Digital output type	1	HR606	PIV2129
RetFan_Dout.Board_RW	Return fan - Board selected	1	HR607	PIV2130
RetFan_Dout.Ch_Id_RW	Return fan - Channel id selected	1	HR608	PIV2131
RetFan_Dout.T_On_RW	Return fan - Time on cycle relay	1	HR609	PIV2132
RetFan_Dout.T_Off_RW	Return fan - Time off cycle releay	1	HR610	PIV2133
RetFan_Dout.Ch_Type_RW	Return fan - Digital output type	1	HR611	PIV2134
SupplyFan2_Dout.Board_RW	Supply fan 2 - Board selected	1	HR612	PIV2135
SupplyFan2_Dout.Ch_Id_RW	Supply fan 2 - Channel id selected	1	HR613	PIV2136
SupplyFan2_Dout.T_On_RW	Supply fan 2 - Time on cycle relay	1	HR614	PIV2137
SupplyFan2_Dout.T_Off_RW	Supply fan 2 - Time off cycle releay	1	HR615	PIV2138
SupplyFan2_Dout.Ch_Type_RW	Supply fan 2 - Digital output type	1	HR616	PIV2139
RetFan2_Dout.Board_RW	Return fan 2 - Board selected	1	HR617	PIV2140
RetFan2_Dout.Ch_Id_RW	Return fan 2 - Channel id selected	1	HR618	PIV2141
RetFan2_Dout.T_On_RW	Return fan 2 - Time on cycle relay	1	HR619	PIV2142
RetFan2_Dout.T_Off_RW	Return fan 2 - Time off cycle releay	1	HR620	PIV2143
RetFan2_Dout.Ch_Type_RW	Return fan 2 - Digital output type	1	HR621	PIV2144
Comp_Dout.Board_RW	Compressor - Board selected	1	HR622	PIV2145
Comp_Dout.Ch_Id_RW	Compressor - Channel id selected	1	HR623	PIV2146
Comp_Dout.T_On_RW	Compressor - Time on cycle relay	1	HR624	PIV2147
Comp_Dout.T_Off_RW	Compressor - Time off cycle releay	1	HR625	PIV2148
Comp_Dout.Ch_Type_RW	Compressor - Digital output type	1	HR626	PIV2149
RevVlv.Board_RW	Reverse valve - Board selected	1	HR627	PIV2150
RevVlv.Ch_Id_RW	Reverse valve - Channel id selected	1	HR628	PIV2151
RevVlv.T_On_RW	Reverse valve - Time on cycle relay	1	HR629	PIV2152
RevVlv.T_Off_RW	Reverse valve - Time off cycle releay	1	HR630	PIV2153
RevVlv.Ch_Type_RW	Reverse valve - Digital output type	1	HR631	PIV2154
UnitOnOff_Dout.Board_RW	Unit status (On/Off) - Board selected	1	HR632	PIV2155
UnitOnOff_Dout.Ch_Id_RW	Unit status (On/Off) - Channel id selected	1	HR633	PIV2156
UnitOnOff_Dout.T_On_RW	Unit status (On/Off) - Time on cycle relay	1	HR634	PIV2157
UnitOnOff_Dout.T_Off_RW	Unit status (On/Off) - Time off cycle releay	1	HR635	PIV2158
UnitOnOff_Dout.Ch_Type_RW	Unit status (On/Off) - Digital output type	1	HR636	PIV2159
CoolHeat_Dout.Board_RW	Cool/Heat status - Board selected	1	HR637	PIV2160
CoolHeat_Dout.Ch_Id_RW	Cool/Heat status - Channel id selected	1	HR638	PIV2161
CoolHeat_Dout.T_On_RW	Cool/Heat status - Time on cycle relay	1	HR639	PIV2162
	Supply fan 2 - Time on cycle relay	1	HR614	PIV2137
	Supply fan 2 - Time off cycle releay	1	HR615	PIV2138
CoolHeat_Dout.T_Off_RW	Cool/Heat status - Time off cycle releay	1	HR640	PIV2163
CoolHeat_Dout.Ch_Type_RW	Cool/Heat status - Digital output type	1	HR641	PIV2164
GlobalAlrm_Dout.T_On_RW	Generic alarm info - Time on cycle relay	1	HR644	PIV2167
GlobalAlrm_Dout.T_Off_RW	Generic alarm info - Time off cycle releay	1	HR645	PIV2168
GlobalAlrm_Dout.Ch_Type_RW	Generic alarm info - Digital output type	1	HR646	PIV2169
LightAlrm_Dout.Board_RW	Light alarm info - Board selected	1	HR647	PIV2170
LightAlrm_Dout.Ch_Id_RW	Light alarm info - Channel id selected	1	HR648	PIV2171

Variable	Description	Dim	Modbus	BACnet
LightAlrm_Dout.T_On_RW	Light alarm info - Time on cycle relay	1	HR649	PIV2172
LightAlrm_Dout.T_Off_RW	Light alarm info - Time off cycle releay	1	HR650	PIV2173
LightAlrm_Dout.Ch_Type_RW	Light alarm info - Digital output type	1	HR651	PIV2174
SrsAlrm_Dout.Board_RW	Serious alarm info - Board selected	1	HR652	PIV2175
SrsAlrm_Dout.Ch_Id_RW	Serious alarm info - Channel id selected	1	HR653	PIV2176
SrsAlrm_Dout.T_On_RW	Serious alarm info - Time on cycle relay	1	HR654	PIV2177
SrsAlrm_Dout.T_Off_RW	Serious alarm info - Time off cycle releay	1	HR655	PIV2178
SrsAlrm_Dout.Ch_Type_RW	Serious alarm info - Digital output type	1	HR656	PIV2179
Humidifier.Board_RW	Humidifier - Board selected	1	HR657	PIV2180
Humidifier.Ch_Id_RW	Humidifier - Channel id selected	1	HR658	PIV2181
Humidifier.T_On_RW	Humidifier - Time on cycle relay	1	HR659	PIV2182
Humidifier.T_Off_RW	Humidifier - Time off cycle releay	1	HR660	PIV2183
Humidifier.Ch_Type_RW	Humidifier - Digital output type	1	HR661	PIV2184
AuxOut1_Dout.Board_RW	Auxiliary output 1 - Board selected	1	HR662	PIV2185
AuxOut1_Dout.Ch_Id_RW	Auxiliary output 1 - Channel id selected	1	HR663	PIV2186
AuxOut1_Dout.T_On_RW	Auxiliary output 1 - Time on cycle relay	1	HR664	PIV2187
AuxOut1_Dout.T_Off_RW	Auxiliary output 1 - Time off cycle releay	1	HR665	PIV2188
AuxOut1_Dout.Ch_Type_RW	Auxiliary output 1 - Digital output type	1	HR666	PIV2189
AuxOut2_Dout.Board_RW	Auxiliary output 2 - Board selected	1	HR667	PIV2190
AuxOut2_Dout.Ch_Id_RW	Auxiliary output 2 - Channel id selected	1	HR668	PIV2191
AuxOut2_Dout.T_On_RW	Auxiliary output 2 - Time on cycle relay	1	HR669	PIV2192
AuxOut2_Dout.T_Off_RW	Auxiliary output 2 - Time off cycle releay	1	HR670	PIV2193
AuxOut2_Dout.Ch_Type_RW	Auxiliary output 2 - Digital output type	1	HR671	PIV2194
AuxOut3_Dout.Board_RW	Auxiliary output 3 - Board selected	1	HR672	PIV2195
AuxOut3_Dout.Ch_Id_RW	Auxiliary output 3 - Channel id selected	1	HR673	PIV2196
AuxOut3_Dout.T_On_RW	Auxiliary output 3 - Time on cycle relay	1	HR674	PIV2197
AuxOut3_Dout.T_Off_RW	Auxiliary output 3 - Time off cycle releay	1	HR675	PIV2198
AuxOut3_Dout.Ch_Type_RW	Auxiliary output 3 - Digital output type	1	HR676	PIV2199
AuxOut4_Dout.Board_RW	Auxiliary output 4 - Board selected	1	HR677	PIV2200
AuxOut4_Dout.Ch_Id_RW	Auxiliary output 4 - Channel id selected	1	HR678	PIV2201
AuxOut4_Dout.T_On_RW	Auxiliary output 4 - Time on cycle relay	1	HR679	PIV2202
AuxOut4_Dout.T_Off_RW	Auxiliary output 4 - Time off cycle releay	1	HR680	PIV2203
AuxOut4_Dout.Ch_Type_RW	Auxiliary output 4 - Digital output type	1	HR681	PIV2204
MainVlv_Open.Board_RW	Main floating valve open - Board selected	1	HR682	PIV2205
MainVlv_Open.Ch_Id_RW	Main floating valve open - Channel id selected	1	HR683	PIV2206
MainVlv_Open.T_On_RW	Main floating valve open - Time on cycle relay	1	HR684	PIV2207
MainVlv_Open.T_Off_RW	Main floating valve open - Time off cycle releay	1	HR685	PIV2208
MainVlv_Open.Ch_Type_RW	Main floating valve open - Digital output type	1	HR686	PIV2209
PreHeatVlv_Open.Board_RW	Pre-heating floating valve open - Board selected	1	HR687	PIV2210
PreHeatVlv_Open.Ch_Id_RW	Pre-heating floating valve open - Channel id selected	1	HR688	PIV2211
PreHeatVlv_Open.T_On_RW	Pre-heating floating valve open - Time on cycle relay	1	HR689	PIV2212
PreHeatVlv_Open.T_Off_RW	Pre-heating floating valve open - Time off cycle releay	1	HR690	PIV2213
PreHeatVlv_Open.Ch_Type_RW	Pre-heating floating valve open - Digital output type	1	HR691	PIV2214
ReHeatVlv_Open.Board_RW	Re-Heating floating valve open - Board selected	1	HR692	PIV2215
ReHeatVlv_Open.Ch_Id_RW	Re-Heating floating valve open - Channel id selected	1	HR693	PIV2216
ReHeatVlv_Open.T_On_RW	Re-Heating floating valve open - Time on cycle relay	1	HR694	PIV2217
ReHeatVlv_Open.T_Off_RW	Re-Heating floating valve open - Time off cycle releay	1	HR695	PIV2218
ReHeatVlv_Open.Ch_Type_RW	Re-Heating floating valve open - Digital output type	1	HR696	PIV2219
MainVlv_Close.Board_RW	Main floating valve close - Board selected	1	HR697	PIV2220
MainVlv_Close.Ch_Id_RW	Main floating valve close - Channel id selected	1	HR698	PIV2221
MainVlv_Close.T_On_RW	Main floating valve close - Time on cycle relay	1	HR699	PIV2222
MainVlv_Close.T_Off_RW	Main floating valve close - Time off cycle releay	1	HR700	PIV2223
MainVlv_Close.Ch_Type_RW	Main floating valve close - Digital output type	1	HR701	PIV2224
PreHeatVlv_Close.Board_RW	Pre-heating floating valve close - Board selected	1	HR702	PIV2225
PreHeatVlv_Close.Ch_Id_RW	Pre-heating floating valve close - Channel id selected	1	HR703	PIV2226
PreHeatVlv_Close.T_On_RW	Pre-heating floating valve close - Time on cycle relay	1	HR704	PIV2227
PreHeatVlv_Close.T_Off_RW	Pre-heating floating valve close - Time off cycle releay	1	HR705	PIV2228
PreHeatVlv_Close.Ch_Type_RW	Pre-heating floating valve close - Digital output type	1	HR706	PIV2229
ReHeatVlv_Close.Board_RW	Re-Heating floating valve close - Board selected	1	HR707	PIV2230
ReHeatVlv_Close.Ch_Id_RW	Re-Heating floating valve close - Channel id selected	1	HR708	PIV2231
ReHeatVlv_Close.T_On_RW	Re-Heating floating valve close - Time on cycle relay	1	HR709	PIV2232
ReHeatVlv_Close.T_Off_RW	Re-Heating floating valve close - Time off cycle releay	1	HR710	PIV2233
ReHeatVlv_Close.Ch_Type_RW	Re-Heating floating valve close - Digital output type	1	HR711	PIV2234
MainCoil_Step1.Board_RW	Main step 1 - Board selected	1	HR712	PIV2235
MainCoil_Step1.Ch_Id_RW	Main step 1 - Channel id selected	1	HR713	PIV2236
MainCoil_Step1.T_On_RW	Main step 1 - Time on cycle relay	1	HR714	PIV2237
MainCoil_Step1.T_Off_RW	Main step 1 - Time off cycle releay	1	HR715	PIV2238
MainCoil_Step1.Ch_Type_RW	Main step 1 - Digital output type	1	HR716	PIV2239
MainCoil_Step2.Board_RW	Main step 2 - Board selected	1	HR717	PIV2240
MainCoil_Step2.Ch_Id_RW	Main step 2 - Channel id selected	1	HR718	PIV2241
MainCoil_Step2.T_On_RW	Main step 2 - Time on cycle relay	1	HR719	PIV2242
MainCoil_Step2.T_Off_RW	Main step 2 - Time off cycle releay	1	HR720	PIV2243
MainCoil_Step2.Ch_Type_RW	Main step 2 - Digital output type	1	HR721	PIV2244
MainCoil_Step3.Board_RW	Main step 3 - Board selected	1	HR722	PIV2245
MainCoil_Step3.Ch_Id_RW	Main step 3 - Channel id selected	1	HR723	PIV2246
MainCoil_Step3.T_On_RW	Main step 3 - Time on cycle relay	1	HR724	PIV2247
MainCoil_Step3.T_Off_RW	Main step 3 - Time off cycle releay	1	HR725	PIV2248
MainCoil_Step3.Ch_Type_RW	Main step 3 - Digital output type	1	HR726	PIV2249
MainCoil_Step4.Board_RW	Main step 4 - Board selected	1	HR727	PIV2250
MainCoil_Step4.Ch_Id_RW	Main step 4 - Channel id selected	1	HR728	PIV2251
MainCoil_Step4.T_On_RW	Main step 4 - Time on cycle relay	1	HR729	PIV2252
MainCoil_Step4.T_Off_RW	Main step 4 - Time off cycle releay	1	HR730	PIV2253
MainCoil_Step4.Ch_Type_RW	Main step 4 - Digital output type	1	HR731	PIV2254
ReHeatCoil_Step1.Board_RW	Postheat heater 1 - Board selected	1	HR732	PIV2255
ReHeatCoil_Step1.Ch_Id_RW	Postheat heater 1 - Channel id selected	1	HR733	PIV2256
ReHeatCoil_Step1.T_On_RW	Postheat heater 1 - Time on cycle relay	1	HR734	PIV2257
ReHeatCoil_Step1.T_Off_RW	Postheat heater 1 - Time off cycle releay	1	HR735	PIV2258
ReHeatCoil_Step1.Ch_Type_RW	Postheat heater 1 - Digital output type	1	HR736	PIV2259
ReHeatCoil_Step2.Board_RW	Postheat heater 2 - Board selected	1	HR737	PIV2260
ReHeatCoil_Step2.Ch_Id_RW	Postheat heater 2 - Channel id selected	1	HR738	PIV2261
ReHeatCoil_Step2.T_On_RW	Postheat heater 2 - Time on cycle relay	1	HR739	PIV2262
ReHeatCoil_Step2.T_Off_RW	Postheat heater 2 - Time off cycle releay	1	HR740	PIV2263
ReHeatCoil_Step2.Ch_Type_RW	Postheat heater 2 - Digital output type	1	HR741	PIV2264
ReHeatCoil_Step3.Board_RW	Postheat heater 3 - Board selected	1	HR742	PIV2265
ReHeatCoil_Step3.Ch_Id_RW	Postheat heater 3 - Channel id selected	1	HR743	PIV2266
ReHeatCoil_Step3.T_On_RW	Postheat heater 3 - Time on cycle relay	1	HR744	PIV2267
ReHeatCoil_Step3.T_Off_RW	Postheat heater 3 - Time off cycle releay	1	HR745	PIV2268
ReHeatCoil_Step3.Ch_Type_RW	Postheat heater 3 - Digital output type	1	HR746	PIV2269
ReHeatCoil_Step4.Board_RW	Postheat heater 4 - Board selected	1	HR747	PIV2270
ReHeatCoil_Step4.Ch_Id_RW	Postheat heater 4 - Channel id selected	1	HR748	PIV2271
ReHeatCoil_Step4.T_On_RW	Postheat heater 4 - Time on cycle relay	1	HR749	PIV2272
ReHeatCoil_Step4.T_Off_RW	Postheat heater 4 - Time off cycle releay	1	HR750	PIV2273

Variable	Description	Dim	Modbus	BACnet
ReHeatCoil_Step4.Ch_Type_RW	Postheat heater 4 - Digital output type	1	HR751	PIV2274
PreHeatCoil_Step1.Board_RW	Preheat heater 1 - Board selected	1	HR752	PIV2275
PreHeatCoil_Step1.Ch_Id_RW	Preheat heater 1 - Channel id selected	1	HR753	PIV2276
PreHeatCoil_Step1.T_On_RW	Preheat heater 1 - Time on cycle relay	1	HR754	PIV2277
PreHeatCoil_Step1.T_Off_RW	Preheat heater 1 - Time off cycle releay	1	HR755	PIV2278
PreHeatCoil_Step1.Ch_Type_RW	Preheat heater 1 - Digital output type	1	HR756	PIV2279
PreHeatCoil_Step2.Board_RW	Preheat heater 2 - Board selected	1	HR757	PIV2280
PreHeatCoil_Step2.Ch_Id_RW	Preheat heater 2 - Channel id selected	1	HR758	PIV2281
PreHeatCoil_Step2.T_On_RW	Preheat heater 2 - Time on cycle relay	1	HR759	PIV2282
PreHeatCoil_Step2.T_Off_RW	Preheat heater 2 - Time off cycle releay	1	HR760	PIV2283
PreHeatCoil_Step2.Ch_Type_RW	Preheat heater 2 - Digital output type	1	HR761	PIV2284
PreHeatCoil_Step3.Board_RW	Preheat heater 3 - Board selected	1	HR762	PIV2285
PreHeatCoil_Step3.Ch_Id_RW	Preheat heater 3 - Channel id selected	1	HR763	PIV2286
PreHeatCoil_Step3.T_On_RW	Preheat heater 3 - Time on cycle relay	1	HR764	PIV2287
PreHeatCoil_Step3.T_Off_RW	Preheat heater 3 - Time off cycle releay	1	HR765	PIV2288
PreHeatCoil_Step3.Ch_Type_RW	Preheat heater 3 - Digital output type	1	HR766	PIV2289
PreHeatCoil_Step4.Board_RW	Preheat heater 4 - Board selected	1	HR767	PIV2290
PreHeatCoil_Step4.Ch_Id_RW	Preheat heater 4 - Channel id selected	1	HR768	PIV2291
PreHeatCoil_Step4.T_On_RW	Preheat heater 4 - Time on cycle relay	1	HR769	PIV2292
PreHeatCoil_Step4.T_Off_RW	Preheat heater 4 - Time off cycle releay	1	HR770	PIV2293
PreHeatCoil_Step4.Ch_Type_RW	Preheat heater 4 - Digital output type	1	HR771	PIV2294
OA_Coil_Step1.Board_RW	Outdoor air pre-treatment heater 1 - Board selected	1	HR772	PIV2295
OA_Coil_Step1.Ch_Id_RW	Outdoor air pre-treatment heater 1 - Channel id selected	1	HR773	PIV2296
OA_Coil_Step1.T_On_RW	Outdoor air pre-treatment heater 1 - Time on cycle relay	1	HR774	PIV2297
OA_Coil_Step1.T_Off_RW	Outdoor air pre-treatment heater 1 - Time off cycle relay	1	HR775	PIV2298
OA_Coil_Step1.Ch_Type_RW	Outdoor air pre-treatment heater 1 - Digital output type	1	HR776	PIV2299
OA_Coil_Step2.Board_RW	Outdoor air pre-treatment heater 2 - Board selected	1	HR777	PIV2300
OA_Coil_Step2.Ch_Id_RW	Outdoor air pre-treatment heater 2 - Channel id selected	1	HR778	PIV2301
OA_Coil_Step2.T_On_RW	Outdoor air pre-treatment heater 2 - Time on cycle relay	1	HR779	PIV2302
OA_Coil_Step2.T_Off_RW	Outdoor air pre-treatment heater 2 - Time off cycle relay	1	HR780	PIV2303
OA_Coil_Step2.Ch_Type_RW	Outdoor air pre-treatment heater 2 - Digital output type	1	HR781	PIV2304
OA_Coil_Step3.Board_RW	Outdoor air pre-treatment heater 3 - Board selected	1	HR782	PIV2305
OA_Coil_Step3.Ch_Id_RW	Outdoor air pre-treatment heater 3 - Channel id selected	1	HR783	PIV2306
OA_Coil_Step3.T_On_RW	Outdoor air pre-treatment heater 3 - Time on cycle relay	1	HR784	PIV2307
OA_Coil_Step3.T_Off_RW	Outdoor air pre-treatment heater 3 - Time off cycle relay	1	HR785	PIV2308
OA_Coil_Step3.Ch_Type_RW	Outdoor air pre-treatment heater 3 - Digital output type	1	HR786	PIV2309
OA_Coil_Step4.Board_RW	Outdoor air pre-treatment heater 4 - Board selected	1	HR787	PIV2310
OA_Coil_Step4.Ch_Id_RW	Outdoor air pre-treatment heater 4 - Channel id selected	1	HR788	PIV2311
OA_Coil_Step4.T_On_RW	Outdoor air pre-treatment heater 4 - Time on cycle relay	1	HR789	PIV2312
OA_Coil_Step4.T_Off_RW	Outdoor air pre-treatment heater 4 - Time off cycle relay	1	HR790	PIV2313
OA_Coil_Step4.Ch_Type_RW	Outdoor air pre-treatment heater 4 - Digital output type	1	HR791	PIV2314
PreHeatPmp_1.Board_RW	Pre-Heating pump 1 - Board selected	1	HR792	PIV2315
PreHeatPmp_1.Ch_Id_RW	Pre-Heating pump 1 - Channel id selected	1	HR793	PIV2316
PreHeatPmp_1.T_On_RW	Pre-Heating pump 1 - Time on cycle relay	1	HR794	PIV2317
PreHeatPmp_1.T_Off_RW	Pre-Heating pump 1 - Time off cycle releay	1	HR795	PIV2318
PreHeatPmp_1.Ch_Type_RW	Pre-Heating pump 1 - Digital output type	1	HR796	PIV2319
PreHeatPmp_2.Board_RW	Pre-Heating pump 2 - Board selected	1	HR797	PIV2320
PreHeatPmp_2.Ch_Id_RW	Pre-Heating pump 2 - Channel id selected	1	HR798	PIV2321
PreHeatPmp_2.T_On_RW	Pre-Heating pump 2 - Time on cycle relay	1	HR799	PIV2322
PreHeatPmp_2.T_Off_RW	Pre-Heating pump 2 - Time off cycle releay	1	HR800	PIV2323
PreHeatPmp_2.Ch_Type_RW	Pre-Heating pump 2 - Digital output type	1	HR801	PIV2324
MainCoilPmp_1.Board_RW	Main pump 1 - Board selected	1	HR802	PIV2325
MainCoilPmp_1.Ch_Id_RW	Main pump 1 - Channel id selected	1	HR803	PIV2326
MainCoilPmp_1.T_On_RW	Main pump 1 - Time on cycle relay	1	HR804	PIV2327
MainCoilPmp_1.T_Off_RW	Main pump 1 - Time off cycle releay	1	HR805	PIV2328
MainCoilPmp_1.Ch_Type_RW	Main pump 1 - Digital output type	1	HR806	PIV2329
MainCoilPmp_2.Board_RW	Main pump 2 - Board selected	1	HR807	PIV2330
MainCoilPmp_2.Ch_Id_RW	Main pump 2 - Channel id selected	1	HR808	PIV2331
MainCoilPmp_2.T_On_RW	Main pump 2 - Time on cycle relay	1	HR809	PIV2332
MainCoilPmp_2.T_Off_RW	Main pump 2 - Time off cycle releay	1	HR810	PIV2333
MainCoilPmp_2.Ch_Type_RW	Main pump 2 - Digital output type	1	HR811	PIV2334
ReHeatPmp_1.Board_RW	Re-Heating pump 1 - Board selected	1	HR812	PIV2335
ReHeatPmp_1.Ch_Id_RW	Re-Heating pump 1 - Channel id selected	1	HR813	PIV2336
ReHeatPmp_1.T_On_RW	Re-Heating pump 1 - Time on cycle relay	1	HR814	PIV2337
ReHeatPmp_1.T_Off_RW	Re-Heating pump 1 - Time off cycle releay	1	HR815	PIV2338
ReHeatPmp_1.Ch_Type_RW	Re-Heating pump 1 - Digital output type	1	HR816	PIV2339
ReHeatPmp_2.Board_RW	Re-Heating pump 2 - Board selected	1	HR817	PIV2340
ReHeatPmp_2.Ch_Id_RW	Re-Heating pump 2 - Channel id selected	1	HR818	PIV2341
ReHeatPmp_2.T_On_RW	Re-Heating pump 2 - Time on cycle relay	1	HR819	PIV2342
ReHeatPmp_2.T_Off_RW	Re-Heating pump 2 - Time off cycle releay	1	HR820	PIV2343
ReHeatPmp_2.Ch_Type_RW	Re-Heating pump 2 - Digital output type	1	HR821	PIV2344
OA_CoilPmp_1.Board_RW	Outdoor air pre-treatment -Heating pump 1 - Board selected	1	HR822	PIV2345
OA_CoilPmp_1.Ch_Id_RW	Outdoor air pre-treatment -Heating pump 1 - Channel id selected	1	HR823	PIV2346
OA_CoilPmp_1.T_On_RW	Outdoor air pre-treatment -Heating pump 1 - Time on cycle relay	1	HR824	PIV2347
OA_CoilPmp_1.T_Off_RW	Outdoor air pre-treatment -Heating pump 1 - Time off cycle releay	1	HR825	PIV2348
OA_CoilPmp_1.Ch_Type_RW	Outdoor air pre-treatment -Heating pump 1 - Digital output type	1	HR826	PIV2349
OA_CoilPmp_2.Board_RW	Outdoor air pre-treatment -Heating pump 2 - Board selected	1	HR827	PIV2350
OA_CoilPmp_2.Ch_Id_RW	Outdoor air pre-treatment -Heating pump 2 - Channel id selected	1	HR828	PIV2351
OA_CoilPmp_2.T_On_RW	Outdoor air pre-treatment -Heating pump 2 - Time on cycle relay	1	HR829	PIV2352
OA_CoilPmp_2.T_Off_RW	Outdoor air pre-treatment -Heating pump 2 - Time off cycle releay	1	HR830	PIV2353
OA_CoilPmp_2.Ch_Type_RW	Outdoor air pre-treatment -Heating pump 2 - Digital output type	1	HR831	PIV2354
FiltAlrm_Dout.Board_RW	Filters alarm - Board selected	1	HR832	PIV2355
FiltAlrm_Dout.Ch_Id_RW	Filters alarm - Channel id selected	1	HR833	PIV2356
FiltAlrm_Dout.T_On_RW	Filters alarm - Time on cycle relay	1	HR834	PIV2357
FiltAlrm_Dout.T_Off_RW	Filters alarm - Time off cycle releay	1	HR835	PIV2358
FiltAlrm_Dout.Ch_Type_RW	Filters alarm - Digital output type	1	HR836	PIV2359
Recovery_Dout.Board_RW	Recovery - Board selected	1	HR837	PIV2360
Recovery_Dout.Ch_Id_RW	Recovery - Channel id selected	1	HR838	PIV2361
Recovery_Dout.T_On_RW	Recovery - Time on cycle relay	1	HR839	PIV2362
Recovery_Dout.T_Off_RW	Recovery - Time off cycle releay	1	HR840	PIV2363
Recovery_Dout.Ch_Type_RW	Recovery - Digital output type	1	HR841	PIV2364
IEC_Hum_Dout.Board_RW	IEC humidifer - Board selected	1	HR842	PIV2365
IEC_Hum_Dout.Ch_Id_RW	IEC humidifer - Channel id selected	1	HR843	PIV2366
IEC_Hum_Dout.T_On_RW	IEC humidifer - Time on cycle relay	1	HR844	PIV2367
IEC_Hum_Dout.T_Off_RW	IEC humidifer - Time off cycle releay	1	HR845	PIV2368
IEC_Hum_Dout.Ch_Type_RW	IEC humidifer - Digital output type	1	HR846	PIV2369
SupplyFan_Aout.Board_RW	Supply fan - Board selected	1	HR847	PIV2370
SupplyFan_Aout.Ch_Id_RW	Supply fan - Channel id selected	1	HR848	PIV2371
SupplyFan_Aout.MinOut_RW	Supply fan - Minimum signal analog output	1	HR849	AV2372
SupplyFan_Aout.MaxOut_RW	Supply fan - Maximum signal analog output	1	HR850	AV2373
SupplyFan_Aout.PulseWidth_RW	Supply fan - Pulse width setting	1	HR851	AV2374
SupplyFan_Aout.Ch_Type_RW	Supply fan - Analog output type	1	HR852	PIV2375

Variable	Description	Dim	Modbus	BACnet
RetFan_Aout.Board_RW	Return fan - Board selected	1	HR853	PIV2376
RetFan_Aout.Ch_Id_RW	Return fan - Channel id selected	1	HR854	PIV2377
RetFan_Aout.MinOut_RW	Return fan - Minimum signal analog output	1	HR855	AV2378
RetFan_Aout.MaxOut_RW	Return fan - Maximum signal analog output	1	HR856	AV2379
RetFan_Aout.PulseWidth_RW	Return fan - Pulse width setting	1	HR857	AV2380
RetFan_Aout.Ch_Type_RW	Return fan - Analog output type	1	HR858	PIV2381
BypassDamp_Aout.Board_RW	Bypass damper - Board selected	1	HR859	PIV2382
BypassDamp_Aout.Ch_Id_RW	Bypass damper - Channel id selected	1	HR860	PIV2383
BypassDamp_Aout.MinOut_RW	Bypass damper - Minimum signal analog output	1	HR861	AV2384
BypassDamp_Aout.MaxOut_RW	Bypass damper - Maximum signal analog output	1	HR862	AV2385
BypassDamp_Aout.PulseWidth_RW	Bypass damper - Pulse width setting	1	HR863	AV2386
BypassDamp_Aout.Ch_Type_RW	Bypass damper - Analog output type	1	HR864	PIV2387
MixingDamp_Aout.Board_RW	Mixing damper - Board selected	1	HR865	PIV2388
MixingDamp_Aout.Ch_Id_RW	Mixing damper - Channel id selected	1	HR866	PIV2389
MixingDamp_Aout.MinOut_RW	Mixing damper - Minimum signal analog output	1	HR867	AV2390
MixingDamp_Aout.MaxOut_RW	Mixing damper - Maximum signal analog output	1	HR868	AV2391
MixingDamp_Aout.PulseWidth_RW	Mixing damper - Pulse width setting	1	HR869	AV2392
MixingDamp_Aout.Ch_Type_RW	Mixing damper - Analog output type	1	HR870	PIV2393
FreshAirDamp_Aout.Board_RW	Fresh air damper - Board selected	1	HR871	PIV2394
FreshAirDamp_Aout.Ch_Id_RW	Fresh air damper - Channel id selected	1	HR872	PIV2395
FreshAirDamp_Aout.MinOut_RW	Fresh air damper - Minimum signal analog output	1	HR873	AV2396
FreshAirDamp_Aout.MaxOut_RW	Fresh air damper - Maximum signal analog output	1	HR874	AV2397
FreshAirDamp_Aout.PulseWidth_RW	Fresh air damper - Pulse width setting	1	HR875	AV2398
FreshAirDamp_Aout.Ch_Type_RW	Fresh air damper - Analog output type	1	HR876	PIV2399
ReHeatCoil_Aout.Board_RW	Reheat heater - Board selected	1	HR877	PIV2400
ReHeatCoil_Aout.Ch_Id_RW	Reheat heater - Channel id selected	1	HR878	PIV2401
ReHeatCoil_Aout.MinOut_RW	Reheat heater - Minimum signal analog output	1	HR879	AV2402
ReHeatCoil_Aout.MaxOut_RW	Reheat heater - Maximum signal analog output	1	HR880	AV2403
ReHeatCoil_Aout.PulseWidth_RW	Reheat heater - Pulse width setting	1	HR881	AV2404
ReHeatCoil_Aout.Ch_Type_RW	Reheat heater - Analog output type	1	HR882	PIV2405
PreHeatCoil_Aout.Board_RW	Pre-Heating heater - Board selected	1	HR883	PIV2406
PreHeatCoil_Aout.Ch_Id_RW	Pre-Heating heater - Channel id selected	1	HR884	PIV2407
PreHeatCoil_Aout.MinOut_RW	Pre-Heating heater - Minimum signal analog output	1	HR885	AV2408
PreHeatCoil_Aout.MaxOut_RW	Pre-Heating heater - Maximum signal analog output	1	HR886	AV2409
PreHeatCoil_Aout.PulseWidth_RW	Pre-Heating heater - Pulse width setting	1	HR887	AV2410
PreHeatCoil_Aout.Ch_Type_RW	Pre-Heating heater - Analog output type	1	HR888	PIV2411
OA_Coil_Aout.Board_RW	Outdoor air pre-treatment heater - Board selected	1	HR889	PIV2412
OA_Coil_Aout.Ch_Id_RW	Outdoor air pre-treatment heater - Channel id selected	1	HR890	PIV2413
OA_Coil_Aout.MinOut_RW	Outdoor air pre-treatment heater - Minimum signal analog output	1	HR891	AV2414
OA_Coil_Aout.MaxOut_RW	Outdoor air pre-treatment heater - Maximum signal analog output	1	HR892	AV2415
OA_Coil_Aout.PulseWi- dth_RW	Outdoor air pre-treatment heater - Pulse width setting	1	HR893	AV2416
OA_Coil_Aout.Ch_Type_RW	Outdoor air pre-treatment heater - Analog output type	1	HR894	PIV2417
MainCoil_Aout.Board_RW	Main coil valve - Board selected	1	HR895	PIV2418
MainCoil_Aout.Ch_Id_RW	Main coil valve - Channel id selected	1	HR896	PIV2419
MainCoil_Aout.MinOut_RW	Main coil valve - Minimum signal analog output	1	HR897	AV2420
MainCoil_Aout.MaxOut_RW	Main coil valve - Maximum signal analog output	1	HR898	AV2421
MainCoil_Aout.PulseWidth_RW	Main coil valve - Pulse width setting	1	HR899	AV2422
MainCoil_Aout.Ch_Type_RW	Main coil valve - Analog output type	1	HR900	PIV2423
ThrmlWheel_Aout.Board_RW	Thermal wheel - Board selected	1	HR901	PIV2424
ThrmlWheel_Aout.Ch_Id_RW	Thermal wheel - Channel id selected	1	HR902	PIV2425
ThrmlWheel_Aout.MinOut_RW	Thermal wheel - Minimum signal analog output	1	HR903	AV2426
ThrmlWheel_Aout.MaxOut_RW	Thermal wheel - Maximum signal analog output	1	HR904	AV2427
ThrmlWheel_Aout.PulseWidth_RW	Thermal wheel - Pulse width setting	1	HR905	AV2428
ThrmlWheel_Aout.Ch_Type_RW	Thermal wheel - Analog output type	1	HR906	PIV2429
Humidifier_Aout.Board_RW	Humidifier - Board selected	1	HR907	PIV2430
Humidifier_Aout.Ch_Id_RW	Humidifier - Channel id selected	1	HR908	PIV2431
Humidifier_Aout.MinOut_RW	Humidifier - Minimum signal analog output	1	HR909	AV2432
Humidifier_Aout.MaxOut_RW	Humidifier - Maximum signal analog output	1	HR910	AV2433
Humidifier_Aout.PulseWidth_RW	Humidifier - Pulse width setting	1	HR911	AV2434
Humidifier_Aout.Ch_Type_RW	Humidifier - Analog output type	1	HR912	PIV2435
ExhAirDamp_Aout.Board_RW	Exhaust air damper - Board selected	1	HR913	PIV2436
ExhAirDamp_Aout.Ch_Id_RW	Exhaust air damper - Channel id selected	1	HR914	PIV2437
ExhAirDamp_Aout.MinOut_RW	Exhaust air damper - Minimum signal analog output	1	HR915	AV2438
ExhAirDamp_Aout.MaxOut_RW	Exhaust air damper - Maximum signal analog output	1	HR916	AV2439
ExhAirDamp_Aout.PulseWidth_RW	Exhaust air damper - Pulse width setting	1	HR917	AV2440
ExhAirDamp_Aout.Ch_Type_RW	Exhaust air damper - Analog output type	1	HR918	PIV2441
AuxAout_1.Board_RW	Auxiliary output 1 - Board selected	1	HR919	PIV2442
AuxAout_1.Ch_Id_RW	Auxiliary output 1 - Channel id selected	1	HR920	PIV2443
AuxAout_1.MinOut_RW	Auxiliary output 1 - Minimum signal analog output	1	HR921	AV2444
AuxAout_1.MaxOut_RW	Auxiliary output 1 - Maximum signal analog output	1	HR922	AV2445
AuxAout_1.PulseWidth_RW	Auxiliary output 1 - Pulse width setting	1	HR923	AV2446
AuxAout_1.Ch_Type_RW	Auxiliary output 1 - Analog output type	1	HR924	PIV2447
AuxAout_2.Board_RW	Auxiliary output 2 - Board selected	1	HR925	PIV2448
AuxAout_2.Ch_Id_RW	Auxiliary output 2 - Channel id selected	1	HR926	PIV2449
AuxAout_2.MinOut_RW	Auxiliary output 2 - Minimum signal analog output	1	HR927	AV2450
AuxAout_2.MaxOut_RW	Auxiliary output 2 - Maximum signal analog output	1	HR928	AV2451
AuxAout_2.PulseWidth_RW	Auxiliary output 2 - Pulse width setting	1	HR929	AV2452
AuxAout_2.Ch_Type_RW	Auxiliary output 2 - Analog output type	1	HR930	PIV2453
AuxAout_3.Board_RW	Auxiliary output 3 - Board selected	1	HR931	PIV2454
AuxAout_3.Ch_Id_RW	Auxiliary output 3 - Channel id selected	1	HR932	PIV2455
AuxAout_3.MinOut_RW	Auxiliary output 3 - Minimum signal analog output	1	HR933	AV2456
AuxAout_3.MaxOut_RW	Auxiliary output 3 - Maximum signal analog output	1	HR934	AV2457
AuxAout_3.PulseWidth_RW	Auxiliary output 3 - Pulse width setting	1	HR935	AV2458
AuxAout_3.Ch_Type_RW	Auxiliary output 3 - Analog output type	1	HR936	PIV2459
AuxAout_4.Board_RW	Auxiliary output 4 - Board selected	1	HR937	PIV2460
AuxAout_4.Ch_Id_RW	Auxiliary output 4 - Channel id selected	1	HR938	PIV2461
AuxAout_4.MinOut_RW	Auxiliary output 4 - Minimum signal analog output	1	HR939	AV2462
AuxAout_4.MaxOut_RW	Auxiliary output 4 - Maximum signal analog output	1	HR940	AV2463
AuxAout_4.PulseWidth_RW	Auxiliary output 4 - Pulse width setting	1	HR941	AV2464
AuxAout_4.Ch_Type_RW	Auxiliary output 4 - Analog output type	1	HR942	PIV2465
IEC_Aout.Board_RW	IEC - Board selected	1	HR943	PIV2466
IEC_Aout.Ch_Id_RW	IEC - Channel id selected	1	HR944	PIV2467
IEC_Aout.MinOut_RW	IEC - Minimum signal analog output	1	HR945	AV2468
IEC_Aout.MaxOut_RW	IEC - Maximum signal analog output	1	HR946	AV2469
IEC_Aout.PulseWidth_RW	IEC - Pulse width setting	1	HR947	AV2470
IEC_Aout.Ch_Type_RW	IEC - Analog output type	1	HR948	PIV2471
Recovery_Aout.Board_RW	Recovery pump - Board selected	1	HR949	PIV2472
Recovery_Aout.Ch_Id_RW	Recovery pump - Channel id selected	1	HR950	PIV2473
Recovery_Aout.MinOut_RW	Recovery pump - Minimum signal analog output	1	HR951	AV2474
Recovery_Aout.MaxOut_RW	Recovery pump - Maximum signal analog output	1	HR952	AV2475
Recovery_Aout.PulseWidth_RW	Recovery pump - Pulse width setting	1	HR953	AV2476
Recovery_Aout.Ch_Type_RW	Recovery pump - Analog output type	1	HR954	PIV2477

Variable	Description	Dim	Modbus	BACnet
SupplyAirDamp_Aout.Board_RW	Supply air damper - Board selected	1	HR955	PIV2478
SupplyAirDamp_Aout.Ch_Id_RW	Supply air damper - Channel id selected	1	HR956	PIV2479
SupplyAirDamp_Aout.MinOut_RW	Supply air damper - Minimum signal analog output	1	HR957	AV2480
SupplyAirDamp_Aout.MaxOut_RW	Supply air damper - Maximum signal analog output	1	HR958	AV2481
SupplyAirDamp_Aout.PulseWidth_RW	Supply air damper - Pulse width setting	1	HR959	AV2482
SupplyAirDamp_Aout.Ch_Type_RW	Supply air damper - Analog output type	1	HR960	PIV2483
RetAirDamp_Aout.Board_RW	Return air damper - Board selected	1	HR961	PIV2484
RetAirDamp_Aout.Ch_Id_RW	Return air damper - Channel id selected	1	HR962	PIV2485
RetAirDamp_Aout.MinOut_RW	Return air damper - Minimum signal analog output	1	HR963	AV2486
RetAirDamp_Aout.MaxOut_RW	Return air damper - Maximum signal analog output	1	HR964	AV2487
RetAirDamp_Aout.PulseWidth_RW	Return air damper - Pulse width setting	1	HR965	AV2488
RetAirDamp_Aout.Ch_Type_RW	Return air damper - Analog output type	1	HR966	PIV2489
CurrTempSetP	Current temperature setpoint	1	HR970	AV2493
CurrSupplyAirFlwSetP	Current supply air flow setpoint	2	HR971	AV2496
CurrAirQuality_CO2_SetP	Current air quality CO2 setpoint	1	HR973	AV2497
CurrSupplyStaticP_SetP	Current supply static pressure setpoint	1	HR974	AV2498
CurrRetAirFlwSetP	Current return air flow setpoint	2	HR975	AV2499
CurrRetStaticP_SetP	Current return static pressure setpoint	1	HR977	AV2500
STD_UOM_ZONE_UI	Unit of measure for user interface	2	HR978	IV2501
AuxReg1_Cfg.SetP	Auxiliary Regulation 1 - Regulation setpoint	1	HR980	AV2502
CurrHumSetP	Current humidity setpoint	1	HR981	AV2503
CoolHeat_Chg_DT	Cooling/Heating change delay time	1	HR982	PIV2504
VarToShow.Ch_Type	-	1	HR983	PIV2505
ObjMsk.Min_StaticPress	High/low limit alarm with hysteresis - Minimum value static pressure	1	HR984	AV2506
ObjMsk.Min_AirQual	High/low limit alarm with hysteresis - Minimum value air quality	1	HR985	AV2507
ObjMsk.Min_RfrgPress	High/low limit alarm with hysteresis - Minimum value refrigerant pressure	1	HR986	AV2508
ObjMsk.Min_FlowRate	High/low limit alarm with hysteresis - Minimum flow rate	1	HR987	AV2509
ObjMsk.Min_AirFlow	High/low limit alarm with hysteresis - Minimum value air flow	1	HR988	AV2510
ObjMsk.Min_Temp	High/low limit alarm with hysteresis - Minimum value temperature	1	HR989	AV2511
ObjMsk.Min_Aout	High/low limit alarm with hysteresis - Minimum value AOUT	1	HR990	AV2512
ObjMsk.Min_Hum	High/low limit alarm with hysteresis - Minimum value humidity	1	HR991	AV2513
ObjMsk.Min_Generic	High/low limit alarm with hysteresis - Minimum value generic	1	HR992	AV2514
ObjMsk.Min_Percent	High/low limit alarm with hysteresis - Minimum value percent	1	HR993	AV2515
ObjMsk.Max_StaticPress	High/low limit alarm with hysteresis - Maximum value static pressure	1	HR994	AV2516
ObjMsk.Max_AirQual	High/low limit alarm with hysteresis - Maximum value air quality	1	HR995	AV2517
ObjMsk.Max_RfrgPress	High/low limit alarm with hysteresis - Maximum value refrigerant pressure	1	HR996	AV2518
ObjMsk.Max_FlowRate	High/low limit alarm with hysteresis - Maximum flow rate	1	HR997	AV2519
ObjMsk.Max_AirFlow	High/low limit alarm with hysteresis - Maximum air flow	1	HR998	AV2520
ObjMsk.Max_Hum	High/low limit alarm with hysteresis - Maxmimum value humidity	1	HR999	AV2521
ObjMsk.Max_Temp	High/low limit alarm with hysteresis - Maximum value temperature	1	HR1000	AV2522
ObjMsk.Max_Aout	High/low limit alarm with hysteresis - Maximum value AOUT	1	HR1001	AV2523
ObjMsk.Max_Generic	High/low limit alarm with hysteresis - Maximum value generic	1	HR1002	AV2524
ObjMsk.Max_Percent	High/low limit alarm with hysteresis - Maximum value percent	1	HR1003	AV2525
ObjMsk.ValOffsetRfrgPress	High/low limit alarm with hysteresis - Offset value refrigerant pressure	1	HR1004	AV2526
ObjMsk.ValOffsetFlowRate	High/low limit alarm with hysteresis - Offset value flow rate	1	HR1005	AV2527
ObjMsk.ValOffsetAirFLow	High/low limit alarm with hysteresis - Offset value air flow	1	HR1006	AV2528
ObjMsk.ValOffsetHum	High/low limit alarm with hysteresis - Offset value humidity	1	HR1007	AV2529
ObjMsk.ValOffsetTemp	High/low limit alarm with hysteresis - Offset value temperature	1	HR1008	AV2530
ObjMsk.ValOffsetPercent	High/low limit alarm with hysteresis - Offset value percent	1	HR1009	AV2531
ObjMsk.ValOffsetAirQual	High/low limit alarm with hysteresis - Offset value air quality	1	HR1010	AV2532
ObjMsk.ValOffsetStaticPress	High/low limit alarm with hysteresis - Offset value static pressure	1	HR1011	AV2533
ObjMsk.ValOffsetGeneric	High/low limit alarm with hysteresis - Offset value generic probe	1	HR1012	AV2534
VarToShow.ChFilter	-	1	HR1013	PIV2535
GeneralMng.WizardType	Wizard type (0: skip, 1: Pre-Loaded, 2: Custom)	1	HR1014	PIV2536
GeneralMng.DriveTyp	Drive type (0: Internal public volume; 1: USB pendrive)	1	HR1015	PIV2537
GeneralMng.PreLoadConfNumber	-	2	HR1016	IV2538
GeneralMng.ExpCfg_Char0	-	2	HR1018	IV2539
GeneralMng.ExpCfg_Char1	-	2	HR1020	IV2540
GeneralMng.ExpCfg_Char2	-	2	HR1022	IV2541
GeneralMng.ExpCfg_Char3	-	2	HR1024	IV2542
GeneralMng.ExpCfg_Char4	-	2	HR1026	IV2543
GeneralMng.ExpCfg_Char5	-	2	HR1028	IV2544
GeneralMng.ExpCfg_Char6	-	2	HR1030	IV2545
GeneralMng.ExpCfg_Char7	-	2	HR1032	IV2546
GeneralMng.ExpCfg_Char8	-	2	HR1034	IV2547
GeneralMng.ExpCfg_Char9	-	2	HR1036	IV2548
GeneralMng.ExpCfg_Char10	-	2	HR1038	IV2549
GeneralMng.WizardConfirm	-	1	HR1040	BV2550
FreshAirDampManModeVal	Fresh air damper manual mode value	1	HR1041	AV2551
FreshAirDampManModeVal_OnOff	For mask usage	1	HR1042	PIV2552
MixDampManModeVal	Mixing damper manual mode value	1	HR1043	AV2553
MixDampManModeVal_OnOff	For mask usage	1	HR1044	PIV2554
ExhAirDampManModeVal	Exhaust air damper manual mode value	1	HR1045	AV2555
ExhAirDampManModeVal_OnOff	For mask usage	1	HR1046	PIV2556
BypassDampManModeVal	Bypaas damper manual mode value	1	HR1047	AV2557
BypassDampManModeVal_OnOff	For mask usage	1	HR1048	PIV2558
SupplyFanManModeVal_3Speed	For mask usage	1	HR1049	PIV2559
SupplyFanManModeVal	Supply fan manual mode value	1	HR1050	AV2560
SupplyFanManModeVal_OnOff	For mask usage	1	HR1051	PIV2561
RetFanManModeVal_3Speed	For mask usage	1	HR1052	PIV2562
RetFanManModeVal	Return fan manual mode value	1	HR1053	AV2563
RetFanManModeVal_OnOff	For mask usage	1	HR1054	PIV2564
PreHeatCoilManModeVal	Pre heating coil manual mode value	1	HR1055	AV2565
MainCoilManModeVal	Main coil manual mode value	1	HR1056	AV2566
ReHeatCoilManModeVal	Post heating coil manual mode value	1	HR1057	AV2567
CompManModeVal	Compressor manual mode value	1	HR1058	AV2568
CompManModeVal_USINT	For mask usage	1	HR1059	PIV2569
HumManModeVal	Humidifier manual mode value	1	HR1060	AV2570
ThermWhlManModeVal	Thermal wheel manual mode value	1	HR1061	AV2571
UnitSetP.TempSetP.Summer.PreComfort	Unit setpoints - Temperature setpoint - Summer - Pre-comfort	1	HR1068	AV2578
UnitSetP.TempSetP.Winter.PreComfort	Unit setpoints - Temperature setpoint - Winter - Pre-comfort	1	HR1069	AV2579
UnitSetP.TempSetP.Summer.Comfort	Unit setpoints - Temperature setpoint - Summer - Comfort	1	HR1074	AV2584
UnitSetP.TempSetP.Winter.Comfort	Unit setpoints - Temperature setpoint - Winter - Comfort	1	HR1075	AV2585
TempSetP_MinVal	Temperature setpoint - minimum value	1	HR1076	AV2586
TempSetP_MaxVal	Temperature setpoint - maximum value	1	HR1077	AV2587
UnitSetP.SupplyStaticP_SetP.Economy	Unit setpoints - Supply static pressure - Economy	1	HR1116	AV2626
UnitSetP.SupplyStaticP_SetP.PreComfort	Unit setpoints - Supply static pressure - Pre-comfort	1	HR1119	AV2629
UnitSetP.SupplyStaticP_SetP.Comfort	Unit setpoints - Supply static pressure - Comfort	1	HR1122	AV2632
SupplyStaticPressSetP_MinVal	Supply static pressure setpoint - minimum value	1	HR1123	AV2633
SupplyStaticPressSetP_MaxVal	Supply static pressure setpoint - maximum value	1	HR1124	AV2634
UnitSetP.SupplyAirFlwSetP.Economy	Unit setpoints - Supply air flow - Economy	2	HR1125	PIV2635
UnitSetP.SupplyAirFlwSetP.PreComfort	Unit setpoints - Supply air flow - Pre-comfort	2	HR1127	PIV2637

Variable	Description	Dim	Modbus	BACnet
UnitSetP.SupplyAirFlwSetP.Comfort	Unit setpoints - Supply air flow - Comfort	2	HR1129	PIV2639
SupplyAirFlwSetP_MinVal	Supply air flow setpoint - minimum value	2	HR1131	PIV2641
SupplyAirFlwSetP_MaxVal	Supply air flow setpoint - maximum value	2	HR1133	PIV2643
UnitSetP.AirQuality_CO2_SetP.Economy	Unit setpoints - Air quality CO2 - Economy	1	HR1135	AV2645
UnitSetP.AirQuality_CO2_SetP.PreComfort	Unit setpoints - Air quality CO2 - Pre-comfort	1	HR1137	AV2647
UnitSetP.AirQuality_CO2_SetP.Comfort	Unit setpoints - Air quality CO2 - Comfort	1	HR1140	AV2650
AirQualityCO2SetP_MinVal	Air quality CO2 setpoint - minimum value	1	HR1141	AV2651
AirQualityCO2SetP_MaxVal	Air quality CO2 setpoint - maximum value	1	HR1142	AV2652
UnitSetP.RetStaticP_SetP.Economy	Unit setpoints - Return static pressure - Economy	1	HR1143	AV2653
UnitSetP.RetStaticP_SetP.PreComfort	Unit setpoints - Return static pressure - Pre-comfort	1	HR1146	AV2656
UnitSetP.RetStaticP_SetP.Comfort	Unit setpoints - Return static pressure - Comfort	1	HR1149	AV2659
RetStaticPressSetP_MinVal	Return static pressure setpoint - minimum value	1	HR1150	AV2660
RetStaticPressSetP_MaxVal	Return static pressure setpoint - maximum value	1	HR1151	AV2661
UnitSetP.RetAirFlwSetP.Economy	Unit setpoints - Return air flow - Economy	1	HR1152	PIV2662
UnitSetP.RetAirFlwSetP.PreComfort	Unit setpoints - Return air flow - Pre-comfort	2	HR1154	PIV2664
UnitSetP.RetAirFlwSetP.Comfort	Unit setpoints - Return air flow - Comfort	2	HR1156	PIV2666
RetAirFlwSetP_MinVal	Return air flow setpoint - minimum value	2	HR1158	PIV2668
RetAirFlwSetP_MaxVal	Return air flow setpoint - maximum value	2	HR1160	PIV2670
UnitSetP.HumSetP.Summer.Economy	Unit setpoints - Humidity - Summer - Economy	1	HR1162	AV2672
UnitSetP.HumSetP.Winter.Economy	Unit setpoints - Humidity - Winter - Economy	1	HR1163	AV2673
UnitSetP.HumSetP.Summer.PreComfort	Unit setpoints - Humidity - Summer - Pre-comfort	1	HR1167	AV2677
UnitSetP.HumSetP.Winter.PreComfort	Unit setpoints - Humidity - Winter - Pre-comfort	1	HR1168	AV2678
UnitSetP.HumSetP.Summer.Comfort	Unit setpoints - Humidity - Summer - Comfort	1	HR1173	AV2683
UnitSetP.HumSetP.Winter.Comfort	Unit setpoints - Humidity - Winter - Comfort	1	HR1174	AV2684
HumSetP_MinVal	Humidity setpoint - minimum value	1	HR1175	AV2685
HumSetP_MaxVal	Humidity setpoint - maximum value	1	HR1176	AV2686
Regulation.SummerExtTempCompensThrsh	Summer: external temperature compensation delta	1	HR1179	AV2689
Regulation.SummerExtTempCompensDelta	Summer: external temperature compensation delta	1	HR1180	AV2690
Regulation.SummerMaxCompensOffset	Summer: maximum compensation offset	1	HR1181	AV2691
Regulation.WinterExtTempCompensThrsh	Winter: external temperature compensation threshold	1	HR1182	AV2692
Regulation.WinterExtTempCompensDelta	Winter: external temperature compensation delta	1	HR1183	AV2693
Regulation.WinterMaxCompensOffset	Winter: maximum compensation offset	1	HR1184	AV2694
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.PrgNr	-	2	HR1185	IV2695
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[0].Hours	Event - Start hours event	1	HR1187	PIV2696
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[0].Mins	Event - Start minutes event	1	HR1188	PIV2697
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[0].Mode	Event - 0=OFF; 1=Economy; 2=Comfort	1	HR1189	PIV2698
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[1].Hours	Event - Start hours event	1	HR1190	PIV2699
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[1].Mins	Event - Start minutes event	1	HR1191	PIV2700
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[1].Mode	Event - 0=OFF; 1=Economy; 2=Comfort	1	HR1192	PIV2701
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[2].Hours	Event - Start hours event	1	HR1193	PIV2702
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[2].Mins	Event - Start minutes event	1	HR1194	PIV2703
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[2].Mode	Event - 0=OFF; 1=Economy; 2=Comfort	1	HR1195	PIV2704
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[3].Hours	Event - Start hours event	1	HR1196	PIV2705
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[3].Mins	Event - Start minutes event	1	HR1197	PIV2706
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[3].Mode	Event - 0=OFF; 1=Economy; 2=Comfort	1	HR1198	PIV2707
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[4].Hours	Event - Start hours event	1	HR1199	PIV2708
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[4].Mins	Event - Start minutes event	1	HR1200	PIV2709
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[4].Mode	Event - 0=OFF; 1=Economy; 2=Comfort	1	HR1201	PIV2710
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[5].Hours	Event - Start hours event	1	HR1202	PIV2711
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[5].Mins	Event - Start minutes event	1	HR1203	PIV2712
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[5].Mode	Event - 0=OFF; 1=Economy; 2=Comfort	1	HR1204	PIV2713
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[6].Hours	Event - Start hours event	1	HR1205	PIV2714
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[6].Mins	Event - Start minutes event	1	HR1206	PIV2715
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[6].Mode	Event - 0=OFF; 1=Economy; 2=Comfort	1	HR1207	PIV2716
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[7].Hours	Event - Start hours event	1	HR1208	PIV2717
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[7].Mins	Event - Start minutes event	1	HR1209	PIV2718
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[7].Mode	Event - 0=OFF; 1=Economy; 2=Comfort	1	HR1210	PIV2719
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[8].Hours	Event - Start hours event	1	HR1211	PIV2720
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[8].Mins	Event - Start minutes event	1	HR1212	PIV2721
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[8].Mode	Event - 0=OFF; 1=Economy; 2=Comfort	1	HR1213	PIV2722
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[9].Hours	Event - Start hours event	1	HR1214	PIV2723
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[9].Mins	Event - Start minutes event	1	HR1215	PIV2724
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Prg_T_Msk.Event[9].Mode	Event - 0=OFF; 1=Economy; 2=Comfort	1	HR1216	PIV2725
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SaveData	-	1	HR1217	PIV2726
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.CopyTo_Prg	-	2	HR1218	IV2727

Variable	Description	Dim	Modbus	BACnet
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.En_PrgCopy	-	1	HR1220	PIV2728
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.WkDays_T_Msk[0]	Monday program	1	HR1221	PIV2729
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.WkDays_T_Msk[1]	Tuesday program	1	HR1222	PIV2730
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.WkDays_T_Msk[2]	Wednesday program	1	HR1223	PIV2731
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.WkDays_T_Msk[3]	Thursday program	1	HR1224	PIV2732
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.WkDays_T_Msk[4]	Friday program	1	HR1225	PIV2733
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.WkDays_T_Msk[5]	Saturday program	1	HR1226	PIV2734
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.WkDays_T_Msk[6]	Sunday program	1	HR1227	PIV2735
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SaveData_DaysPrg	-	1	HR1228	PIV2736
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Vac_T_Msk[0].StartDay	Vacation period - Start day	1	HR1229	PIV2737
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Vac_T_Msk[0].StartMonth	Vacation period - Start month	1	HR1230	PIV2738
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Vac_T_Msk[0].EndDay	Vacation period - End day	1	HR1231	PIV2739
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Vac_T_Msk[0].EndMonth	Vacation period - End month	1	HR1232	PIV2740
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Vac_T_Msk[0].Mode	Vacation period - Mode	1	HR1233	PIV2741
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Vac_T_Msk[1].StartDay	Vacation period - Start day	1	HR1234	PIV2742
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Vac_T_Msk[1].StartMonth	Vacation period - Start month	1	HR1235	PIV2743
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Vac_T_Msk[1].EndDay	Vacation period - End day	1	HR1236	PIV2744
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Vac_T_Msk[1].EndMonth	Vacation period - End month	1	HR1237	PIV2745
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Vac_T_Msk[1].Mode	Vacation period - Mode	1	HR1238	PIV2746
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Vac_T_Msk[2].StartDay	Vacation period - Start day	1	HR1239	PIV2747
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Vac_T_Msk[2].StartMonth	Vacation period - Start month	1	HR1240	PIV2748
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Vac_T_Msk[2].EndDay	Vacation period - End day	1	HR1241	PIV2749
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Vac_T_Msk[2].EndMonth	Vacation period - End month	1	HR1242	PIV2750
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.Vac_T_Msk[2].Mode	Vacation period - Mode	1	HR1243	PIV2751
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SaveData_VacationsPrg	-	1	HR1244	PIV2752
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[0].Day	Special day - Day	1	HR1245	PIV2753
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[0].Month	Special day - Month	1	HR1246	PIV2754
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[0].Mode	Special day - Mode	1	HR1247	PIV2755
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[1].Day	Special day - Day	1	HR1248	PIV2756
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[1].Month	Special day - Month	1	HR1249	PIV2757
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[1].Mode	Special day - Mode	1	HR1250	PIV2758
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[2].Day	Special day - Day	1	HR1251	PIV2759
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[2].Month	Special day - Month	1	HR1252	PIV2760
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[2].Mode	Special day - Mode	1	HR1253	PIV2761
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[3].Day	Special day - Day	1	HR1254	PIV2762
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[3].Month	Special day - Month	1	HR1255	PIV2763
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[3].Mode	Special day - Mode	1	HR1256	PIV2764
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[4].Day	Special day - Day	1	HR1257	PIV2765
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[4].Month	Special day - Month	1	HR1258	PIV2766
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[4].Mode	Special day - Mode	1	HR1259	PIV2767
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[5].Day	Special day - Day	1	HR1260	PIV2768
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[5].Month	Special day - Month	1	HR1261	PIV2769
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[5].Mode	Special day - Mode	1	HR1262	PIV2770
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[6].Day	Special day - Day	1	HR1263	PIV2771
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[6].Month	Special day - Month	1	HR1264	PIV2772
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[6].Mode	Special day - Mode	1	HR1265	PIV2773
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[7].Day	Special day - Day	1	HR1266	PIV2774
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[7].Month	Special day - Month	1	HR1267	PIV2775

Variable	Description	Dim	Modbus	BACnet
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[7].Mode	Special day - Mode	1	HR1268	PIV2776
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[8].Day	Special day - Day	1	HR1269	PIV2777
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[8].Month	Special day - Month	1	HR1270	PIV2778
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[8].Mode	Special day - Mode	1	HR1271	PIV2779
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[9].Day	Special day - Day	1	HR1272	PIV2780
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[9].Month	Special day - Month	1	HR1273	PIV2781
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[9].Mode	Special day - Mode	1	HR1274	PIV2782
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[10].Day	Special day - Day	1	HR1275	PIV2783
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[10].Month	Special day - Month	1	HR1276	PIV2784
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[10].Mode	Special day - Mode	1	HR1277	PIV2785
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[11].Day	Special day - Day	1	HR1278	PIV2786
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[11].Month	Special day - Month	1	HR1279	PIV2787
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[11].Mode	Special day - Mode	1	HR1280	PIV2788
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[12].Day	Special day - Day	1	HR1281	PIV2789
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[12].Month	Special day - Month	1	HR1282	PIV2790
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[12].Mode	Special day - Mode	1	HR1283	PIV2791
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[13].Day	Special day - Day	1	HR1284	PIV2792
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[13].Month	Special day - Month	1	HR1285	PIV2793
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[13].Mode	Special day - Mode	1	HR1286	PIV2794
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[14].Day	Special day - Day	1	HR1287	PIV2795
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[14].Month	Special day - Month	1	HR1288	PIV2796
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SDays_T_Msk[14].Mode	Special day - Mode	1	HR1289	PIV2797
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.SaveData_SpecDays	-	1	HR1290	PIV2798
Scheduler_OnOffUnit.PartyMode_DT	Party mode duration	1	HR1291	PIV2799
FanTyp	Fans type (0: On/Off; 1: 3 speeds; 2: Modulating; 3: Modbus RTU)	1	HR1292	PIV2800
HeatExchgTyp	Heating exchanger type	1	HR1293	PIV2801
HumTyp	Humidifier type (0:None;1:Isothermal;2:Adiabatic;3:Humisonic;4:Humifog; 5:HumiSteam)	1	HR1294	PIV2802
IEC_Typ	IEC type (0: None; 1: OnOff; 2: Modulating; 3: Humisonic)	1	HR1295	PIV2803
PreHeatCoil_Typ	PreHeating coil type	1	HR1296	PIV2804
MainCoil_Typ	Main coil type	1	HR1297	PIV2805
ReHeatCoil_Typ	PostHeating coil type	1	HR1298	PIV2806
FreshAirDampTyp	Fresh air damper type (0: On/Off; 1: Modulating)	1	HR1299	PIV2807
ExhAirDampTyp	Exhaust air damper type (0: On/Off; 1: Modulating)	1	HR1300	PIV2808
MixingAirDampTyp	Mixing air damper type (0: On/Off; 1: Modulating)	1	HR1301	PIV2809
SupplyAirDampTyp	Supply air damper type (0: On/Off; 1: Modulating)	1	HR1302	PIV2810
RetAirDampTyp	Return air damper type (0: On/Off; 1: Modulating)	1	HR1303	PIV2811
BypassDampTyp	Bypass damper type (0: On/Off; 1: Modulating)	1	HR1304	PIV2812
Filters_Cfg	Filters configuration	1	HR1305	PIV2813
HEPA_Filt_Cfg	HEPA Filter configuration (0: None; 1: Filt 1; Filt 1 & 2)	1	HR1306	PIV2814
RegTyp	Regulation type (0: Supply only; 1:Return only; 2: Room only; 3: Return + Supply; 4: Room + Supply; 5: Disabled)	1	HR1307	PIV2815
Regulation.SetP_Offs_Kp	Regulation set point offset: proportional gain	1	HR1308	AV2816
Regulation.SetP_Offs_Ti	Regulation set point offset: integral time	1	HR1309	PIV2817
UnitHumDehumMode_Cfg	Unit humidification/dehumidification mode configuration (0: Fixed by season; 1: Automatic by humidity regulation)	1	HR1310	PIV2818
UnitCoolHeatMode_Cfg	Unit cooling heating mode configuration	1	HR1311	PIV2819
Regulation.SummerExtTempThrsh	Summer external temperature threshold	1	HR1312	AV2820
Regulation.WinterExtTempThrsh	Winter external temperature threshold	1	HR1313	AV2821
Coil_SummerThrsh	Summer coil water temperature threshold	1	HR1314	AV2822
Coil_WinterThrsh	Winter coil water temperature threshold	1	HR1315	AV2823
Coil_WaterT_OutOfRange_DT	Main coil: water temperature out of range warning delay time	1	HR1316	PIV2824
Coil_WaterT_Cfg	Coil water temperature: action configuration	1	HR1317	PIV2825
HumDehum_CtrlPrb	Humidification/Dehumidification: Control probe (0: Supply; 1: Return; 2: Room)	1	HR1318	PIV2826
HumDehum_CtrlTyp	Humidification/Dehumidification: Control type (0: Relative; 1: Absolute)	1	HR1319	PIV2827
Dehum_RegTyp	Dehumidification: Regulation type (0: DewPoint; 1: Request)	1	HR1320	PIV2828
HumDehum_RegBand	Humidification/Dehumidification: Regulation band	1	HR1321	AV2829
HumDehum_RegChgDT	Humidification/Dehumidification: Regulation change delay time	1	HR1322	PIV2830
Regulation.FC_DeltaT_Act	Freecooling activation delta	1	HR1323	AV2831
Regulation.FH_DeltaT_Act	Freeheating activation delta	1	HR1324	AV2832
FC_PID_Params.Kp	Free cooling PID parameters - Proportional gain	1	HR1325	AV2833
FC_PID_Params.Ti	Free cooling PID parameters - Integral time	1	HR1326	PIV2834
FH_PID_Params.Kp	Free heating PID parameters - Proportional gain	1	HR1327	AV2835
FH_PID_Params.Ti	Free heating PID parameters - Integral time	1	HR1328	PIV2836
StateMachine.LowWarmUpThrshExtTemp	Low external temperature threshold for the activation of warm up procedure	1	HR1329	AV2837
StateMachine.StartUpFanActDT	Settable delay between return and supply fan activation (seconds). To be used only when warm up procedure is disabled	1	HR1330	PIV2838
StateMachine.WarmUpDT	Warm up delay time	1	HR1331	PIV2839
StateMachine.WarmUpFanActDT	Warm up fan activation delay time	1	HR1332	PIV2840
SupplyFanWarmUpReq_3Speed	For mask usage	1	HR1333	PIV2841
SupplyFanWarmUpReq	Supply fan request for automatic warm up	1	HR1334	AV2842
SupplyFanWarmUpReq_OnOff	For mask usage	1	HR1335	PIV2843
RetFanWarmUpReq_3Speed	For mask usage	1	HR1336	PIV2844
RetFanWarmUpReq	Return fan request for automatic warm up	1	HR1337	AV2845
RetFanWarmUpReq_OnOff	For mask usage	1	HR1338	PIV2846

Variable	Description	Dim	Modbus	BACnet
PreHeatCoilWarmUpReq	PreHeating coil warm up request	1	HR1339	AV2847
MainCoilWarmUpReq	Main coil warm up request	1	HR1340	AV2848
ReHeatCoilWarmUpReq	PostHeating coil warm up request	1	HR1341	AV2849
ByPassDampWarmUpReq	Bypass damper warm up request	1	HR1342	AV2850
ThermWhlWarmUpReq	Thermal wheel warm up request	1	HR1343	AV2851
BypassDampWarmUpReq_OnOff	For mask usage	1	HR1344	PIV2852
SupplyFanSwitchOnReq_3Speed	For mask usage	1	HR1345	PIV2853
SupplyFanSwitchOnReq	Supply fan request for automatic switch on when warm up is not enabled	1	HR1346	AV2854
SupplyFanSwitchOnReq_OnOff	For mask usage	1	HR1347	PIV2855
AFreezeTyp	Antifreeze type (0: NONE; 1: Ext.Temp.; 2: AFreeze Temp.; 3: DigitalInput)	1	HR1348	PIV2856
Antifreeze.AfreezeTempThrsh	Antifreeze temperature threshold	1	HR1349	AV2857
Antifreeze.AFreezeEndingDelta	Antifreeze ending delta	1	HR1350	AV2858
Antifreeze.AFreezeWarnDT	Anti freeze warning delay time	1	HR1351	PIV2859
Antifreeze.AI_AFreezeDT	Antifreeze alarm delay time	1	HR1352	PIV2860
Antifreeze.PrevAFreezeTempThrsh	Prevent antifreeze threshold	1	HR1353	AV2861
LowSupplyTempThrsh	Low supply temperature threshold	1	HR1354	AV2862
LowTempAlrmDT_StartUp	Low supply temperature alarm delay time at start up	1	HR1355	PIV2863
LowTempAlrmDT_Run	Low supply temperature alarm delay time at unit in run mode	1	HR1356	PIV2864
HighSupplyTempThrsh	High supply temperature threshold	1	HR1357	AV2865
HighTempAlrmDT_StartUp	High supply temperature alarm delay time at start up	1	HR1358	PIV2866
HighTempAlrmDT_Run	High supply temperature alarm delay time at unit in run mode	1	HR1359	PIV2867
LowHighSupplyT_Kp	Low supply temp: proportional part	1	HR1360	AV2868
LowHighSupplyT_Ti	Low supply temp: integral time	1	HR1361	PIV2869
RegPrbErrFreshAirDampReq	Fresh air damper request in case of regulation probe error: modulating	1	HR1362	AV2870
RegPrbErrFreshAirDampReq_OnOff	Fresh air damper request in case of regulation probe error: on/off	1	HR1363	PIV2871
RegPrbErrByPassDampReq	Bypass damper request in case of regulation probe error: modulating	1	HR1364	AV2872
RegPrbErrThermWhlReq	Thermal wheel request in case of regulation probe error: modulating	1	HR1365	AV2873
RegPrbErrByPassDampReq_OnOff	Bypass damper request in case of regulation probe error: on/off	1	HR1366	PIV2874
RegPrbErrMixDampReq	Mixing damper request in case of regulation probe error	1	HR1367	AV2875
RegPrbErrMixDampReq_OnOff	Mixing damper request in case of regulation probe error	1	HR1368	PIV2876
RegPrbErrExhDampReq	Exhaust damper request in case of regulation probe error	1	HR1369	AV2877
RegPrbErrExhDampReq_OnOff	Exhaust damper request in case of regulation probe error	1	HR1370	PIV2878
RegPrbErrSupplyAirDampReq	Supply damper request in case of regulation probe error	1	HR1371	AV2879
RegPrbErrSupplyAirDampReq_OnOff	Supply damper request in case of regulation probe error	1	HR1372	PIV2880
RegPrbErrRetAirDampReq	Return damper request in case of regulation probe error	1	HR1373	AV2881
RegPrbErrRetAirDampReq_OnOff	Return damper request in case of regulation probe error	1	HR1374	PIV2882
RegPrbErrMainCoilReq	Main coil request in case of regulation probe error	1	HR1375	AV2883
RegPrbErrPreHeatCoilReq	PreHeating coil request in case of regulation probe error	1	HR1376	AV2884
RegPrbErrReHeatCoilReq	PostHeating coil request in case of regulation probe error	1	HR1377	AV2885
RegPrbErrSupplyFanReq_3Speed	Supply fan speed request in case of regulation probe error	1	HR1378	PIV2886
RegPrbErrSupplyFanReq	Supply fan speed request in case of regulation probe error	1	HR1379	AV2887
RegPrbErrSupplyFanReq_OnOff	Supply fan speed request in case of regulation probe error	1	HR1380	PIV2888
RegPrbErrRetFanReq_3Speed	Supply fan speed request in case of regulation probe error	1	HR1381	PIV2889
RegPrbErrRetFanReq	Return fan speed request in case of regulation probe error	1	HR1382	AV2890
RegPrbErrRetFanReq_OnOff	Supply fan speed request in case of regulation probe error	1	HR1383	PIV2891
RegPrbErrCompReq	Compressor request in case of regulation probe error: BLDC	1	HR1384	AV2892
RegPrbErrCompReq_OnOff	Compressor request in case of regulation probe error: On/off	1	HR1385	PIV2893
RegPrbErrHumReq	Humidification request in case of regulation probe error	1	HR1386	AV2894
RegPrbErr_IECReq	IEC: request in case of regulation probe error	1	HR1387	AV2895
AuxRegTyp	Auxiliary regulation type	1	HR1389	PIV2897
BMS_Offline_MngTyp	BMS Offline alarm management (0: Disabled; 1: Only Warning; 2: Alarm; 3: Alarm with timeout)	1	HR1390	PIV2898
BMS_Offline_Alrm_Timeout	BMS Offline alarm timeout [s]	1	HR1391	PIV2899
MaskMng.ValA_Selection_PGDX	pGDx: Main variable selection	1	HR1392	PIV2900
MaskMng.ValB_Selection_PGDX	pGDx: Second variable selection	1	HR1393	PIV2901
GeneralMng.SetWipeMem	Set wipe memory	1	HR1394	PIV2902
WrkHrs_Unit.WrkHrs_Thrsh	Unit - Working hours threshold (1000hrs)	1	HR1395	PIV2903
WrkHrs_Unit.WrkHrs_Res	Unit - Working hours reset	1	HR1396	PIV2904
WrkHrs_SupplyFan.WrkHrs_Thrsh	Supply Fan - Working hours threshold (1000hrs)	1	HR1397	PIV2905
WrkHrs_SupplyFan.WrkHrs_Res	Supply Fan - Working hours reset	1	HR1398	PIV2906
WrkHrs_ReturnFan.WrkHrs_Thrsh	Return Fan - Working hours threshold (1000hrs)	1	HR1399	PIV2907
WrkHrs_ReturnFan.WrkHrs_Res	Return Fan - Working hours reset	1	HR1400	PIV2908
WrkHrs_DirtyFilt.WrkHrs_Thrsh	Dirty filters - Working hours threshold (1000hrs)	1	HR1401	PIV2909
WrkHrs_DirtyFilt.WrkHrs_Res	Dirty filters - Working hours reset	1	HR1402	PIV2910
WrkHrs_ThrmlWheel.WrkHrs_Thrsh	Thermal wheel - Working hours threshold (1000hrs)	1	HR1403	PIV2911
WrkHrs_ThrmlWheel.WrkHrs_Res	Thermal wheel - Working hours reset	1	HR1404	PIV2912
WrkHrs_Comp.WrkHrs_Thrsh	Compressor - Working hours threshold (1000hrs)	1	HR1405	PIV2913
WrkHrs_Comp.WrkHrs_Res	Compressor - Working hours reset	1	HR1406	PIV2914
WrkHrs_IEC.WrkHrs_Thrsh	IEC - Working hours threshold (1000hrs)	1	HR1407	PIV2915
WrkHrs_IEC.WrkHrs_Res	IEC - Working hours reset	1	HR1408	PIV2916
WrkHrs_Humidifier.WrkHrs_Thrsh	Humidifier - Working hours threshold (1000hrs)	1	HR1409	PIV2917
WrkHrs_Humidifier.WrkHrs_Res	Humidifier - Working hours reset	1	HR1410	PIV2918
WrkHrs_AuxDout.WrkHrs_Thrsh	Auxiliary digital output - Working hours threshold (1000hrs)	1	HR1411	PIV2919
WrkHrs_AuxDout.WrkHrs_Res	Auxiliary digital output - Working hours reset	1	HR1412	PIV2920
WrkHrs_AuxAout.WrkHrs_Thrsh	Auxiliary analogue output - Working hours threshold (1000hrs)	1	HR1413	PIV2921
WrkHrs_AuxAout.WrkHrs_Res	Auxiliary analogue output - Working hours reset	1	HR1414	PIV2922
WrkHrs_MainCoilPmp1.WrkHrs_Thrsh	Main coil pump 1 - Working hours threshold (1000hrs)	1	HR1415	PIV2923
WrkHrs_MainCoilPmp1.WrkHrs_Res	Main coil pump 1 - Working hours reset	1	HR1416	PIV2924
WrkHrs_MainCoilPmp2.WrkHrs_Thrsh	Main coil pump 2 - Working hours threshold (1000hrs)	1	HR1417	PIV2925
WrkHrs_MainCoilPmp2.WrkHrs_Res	Main coil pump 2 - Working hours reset	1	HR1418	PIV2926
WrkHrs_MainCoilAout.WrkHrs_Thrsh	Main coil analog output - Working hours threshold (1000hrs)	1	HR1419	PIV2927
WrkHrs_MainCoilAout.WrkHrs_Res	Main coil analog output - Working hours reset	1	HR1420	PIV2928
WrkHrs_MainCoilStep1.WrkHrs_Thrsh	Main coil step 1 - Working hours threshold (1000hrs)	1	HR1421	PIV2929
WrkHrs_MainCoilStep1.WrkHrs_Res	Main coil step 1 - Working hours reset	1	HR1422	PIV2930
WrkHrs_MainCoilStep2.WrkHrs_Thrsh	Main coil step 2 - Working hours threshold (1000hrs)	1	HR1423	PIV2931
WrkHrs_MainCoilStep2.WrkHrs_Res	Main coil step 2 - Working hours reset	1	HR1424	PIV2932
WrkHrs_MainCoilStep3.WrkHrs_Thrsh	Main coil step 3 - Working hours threshold (1000hrs)	1	HR1425	PIV2933
WrkHrs_MainCoilStep3.WrkHrs_Res	Main coil step 3 - Working hours reset	1	HR1426	PIV2934
WrkHrs_MainCoilStep4.WrkHrs_Thrsh	Main coil step 4 - Working hours threshold (1000hrs)	1	HR1427	PIV2935
WrkHrs_MainCoilStep4.WrkHrs_Res	Main coil step 4 - Working hours reset	1	HR1428	PIV2936
WrkHrs_PreHeatCoilPmp1.WrkHrs_Thrsh	Pre-heat coil pump 1 - Working hours threshold (1000hrs)	1	HR1429	PIV2937
WrkHrs_PreHeatCoilPmp1.WrkHrs_Res	Pre-heat coil pump 1 - Working hours reset	1	HR1430	PIV2938
WrkHrs_PreHeatCoilPmp2.WrkHrs_Thrsh	Pre-heat coil pump 2 - Working hours threshold (1000hrs)	1	HR1431	PIV2939
WrkHrs_PreHeatCoilPmp2.WrkHrs_Res	Pre-heat coil pump 2 - Working hours reset	1	HR1432	PIV2940
WrkHrs_PreHeatCoilAout.WrkHrs_Thrsh	Pre-heat coil analog output - Working hours threshold (1000hrs)	1	HR1433	PIV2941
WrkHrs_PreHeatCoilAout.WrkHrs_Res	Pre-heat coil analog output - Working hours reset	1	HR1434	PIV2942
WrkHrs_PreHeatCoilStep1.WrkHrs_Thrsh	Pre-heat coil step 1 - Working hours threshold (1000hrs)	1	HR1435	PIV2943
WrkHrs_PreHeatCoilStep1.WrkHrs_Res	Pre-heat coil step 1 - Working hours reset	1	HR1436	PIV2944
WrkHrs_PreHeatCoilStep2.WrkHrs_Thrsh	Pre-heat coil step 2 - Working hours threshold (1000hrs)	1	HR1437	PIV2945
WrkHrs_PreHeatCoilStep2.WrkHrs_Res	Pre-heat coil step 2 - Working hours reset	1	HR1438	PIV2946
WrkHrs_PreHeatCoilStep3.WrkHrs_Thrsh	Pre-heat coil step 3 - Working hours threshold (1000hrs)	1	HR1439	PIV2947

Variable	Description	Dim	Modbus	BACnet
WrkHrs_PreHeatCoilStep3.WrkHrs_Res	Pre-heat coil step 3 - Working hours reset	1	HR1440	PIV2948
WrkHrs_PreHeatCoilStep4.WrkHrs_Thrsh	Pre-heat coil step 4 - Working hours threshold (1000hrs)	1	HR1441	PIV2949
WrkHrs_PreHeatCoilStep4.WrkHrs_Res	Pre-heat coil step 4 - Working hours reset	1	HR1442	PIV2950
WrkHrs_ReHeatCoilPmp1.WrkHrs_Thrsh	Re-heat coil pump 1 - Working hours threshold (1000hrs)	1	HR1443	PIV2951
WrkHrs_ReHeatCoilPmp1.WrkHrs_Res	Re-heat coil pump 1 - Working hours reset	1	HR1444	PIV2952
WrkHrs_ReHeatCoilPmp2.WrkHrs_Thrsh	Re-heat coil pump 2 - Working hours threshold (1000hrs)	1	HR1445	PIV2953
WrkHrs_ReHeatCoilPmp2.WrkHrs_Res	Re-heat coil pump 2 - Working hours reset	1	HR1446	PIV2954
WrkHrs_ReHeatCoilAout.WrkHrs_Thrsh	Re-heat coil analog output - Working hours threshold (1000hrs)	1	HR1447	PIV2955
WrkHrs_ReHeatCoilAout.WrkHrs_Res	Re-heat coil analog output - Working hours reset	1	HR1448	PIV2956
WrkHrs_ReHeatCoilStep1.WrkHrs_Thrsh	Re-heat coil step 1 - Working hours threshold (1000hrs)	1	HR1449	PIV2957
WrkHrs_ReHeatCoilStep1.WrkHrs_Res	Re-heat coil step 1 - Working hours reset	1	HR1450	PIV2958
WrkHrs_ReHeatCoilStep2.WrkHrs_Thrsh	Re-heat coil step 2 - Working hours threshold (1000hrs)	1	HR1451	PIV2959
WrkHrs_ReHeatCoilStep2.WrkHrs_Res	Re-heat coil step 2 - Working hours reset	1	HR1452	PIV2960
WrkHrs_ReHeatCoilStep3.WrkHrs_Thrsh	Re-heat coil step 3 - Working hours threshold (1000hrs)	1	HR1453	PIV2961
WrkHrs_ReHeatCoilStep3.WrkHrs_Res	Re-heat coil step 3 - Working hours reset	1	HR1454	PIV2962
WrkHrs_ReHeatCoilStep4.WrkHrs_Thrsh	Re-heat coil step 4 - Working hours threshold (1000hrs)	1	HR1455	PIV2963
WrkHrs_ReHeatCoilStep4.WrkHrs_Res	Re-heat coil step 4 - Working hours reset	1	HR1456	PIV2964
WorkingHrs.WrkHrs_ResTotCnt	Reset total working hours counter of all devices	1	HR1457	PIV2965
Regulation.BypassDampHeatRecovDelta_Cool	Heat recovery delta for bypass damp in cooling mode	1	HR1458	AV2966
Regulation.BypassDampHeatRecovDelta_Heat	Heat recovery delta for bypass damp in heating mode	1	HR1459	AV2967
HeatExchg_PID_Params.Kp	Heat exchanger PID parameters - Proportional gain	1	HR1460	AV2968
HeatExchg_PID_Params.Ti	Heat exchanger PID parameters - Integral time	1	HR1461	PIV2969
Defrost.BypassDamp_MinOpThrsh	Bypass damper: minimum opening threshold	1	HR1462	AV2970
Defrost.BypassDamp_MaxOpThrsh	Bypass damper: maximum opening threshold	1	HR1463	AV2971
Defrost.MinT_BetweenDfr_HeatExchg	Minimum time between heat exchanger defrost	2	HR1464	PIV2972
Defrost.MaxDfrDuration_HeatExchg	Maximum defrost heat exchanger duration	2	HR1466	PIV2973
Defrost.ExhTempThrsh	Exhaust temperature threshold for defrost	1	HR1468	AV2974
HeatExchanger.DeltaHeatExchgEfficiency	Stratification correction factor of the room temperature	1	HR1469	AV2975
Fans.AirP_PrbErr_RetFanReq	Return fan request in case of air pressure probe error	1	HR1470	AV2976
Fans_regulation.RetFanOffsetReq	Return fan offset request	1	HR1471	AV2977
RetFanRampUpT	Time in [s]for a positive change for return fan	1	HR1472	PIV2978
RetFanRampDwnT	Time in [s] for a negative change of set value for return fan	1	HR1473	PIV2979
RetFan_EmergencySet_rpm	Return Fan ebmpapst - speed in emergency in rpm	2	HR1474	IV2980
RetFan_EmergLagT	Time in ms before entering in emergency mode for Ebmpapst return fan	1	HR1476	PIV2981
RetFan_SerDevCfg_Timeout	Return Fan - Serial interface settings - Frame timeout (ms)	2	HR1481	PIV2985
RetFan_SerDevCfg_CmdDT	Return Fan - Serial interface settings - Command delay time (ms)	2	HR1483	PIV2986
ZiehlAbegg_ReturnFan.SerialInterface_ZA_1.SerDevCfg.DevAddr	ZA1 Return - Serial interface parameters - Fan Network address	2	HR1487	PIV2989
FanRegTyp	Fan regulation type (0: Static pressure; 1: Air flow; 2: Fixed speed)	1	HR1491	PIV2992
FansAirQuality_PID_Params.Kp	Air Quality - Fans PID parameters - Proportional gain	1	HR1492	AV2993
FansAirQuality_PID_Params.Ti	Air Quality - Fans PID parameters - Integral time	1	HR1493	PIV2994
AirFlwSwTyp	Air flow switch check type: 0=none; 1=common; 2=supply onlu; 3=supply+return	1	HR1494	PIV2995
AirFlw_ChkTyp	Air flow check type	1	HR1495	PIV2996
StateMachine.RetryNoAirFlwAlrm	Number of retry after return or supply air flow switch error detected during start up procedure before turn off the unit	1	HR1496	PIV2997
AirFlwSwDT	Timeout for air flow switch detection (seconds)	1	HR1497	PIV2998
Fans.AirFlwSwRunAlrmDT	Air flow switch alarm delay time in running mode (s)	1	HR1498	PIV2999
AirFlw_ChkPThrsh	Air flow check pressure threshold	1	HR1499	AV3000
StateMachine.FanPostVentilationT	Fan post ventilation time	1	HR1500	PIV3001
NightMinVent_StartHour	Night minimum ventilation: starting hour	1	HR1501	PIV3002
NightMinVent_StartMin	Night minimum ventilation: starting minutes	1	HR1502	PIV3003
NightMinVent_EndHour	Night minimum ventilation: ending hour	1	HR1503	PIV3004
NightMinVent_EndMin	Night minimum ventilation: ending minutes	1	HR1504	PIV3005
Fans_regulation.NightMinVent_MaxReq	Night minimum ventilation request	1	HR1505	AV3006
Fans_regulation.AirFlw_K_Factor	Fan K factor for air flow calculations	1	HR1506	AV3007
Fans_regulation.FanFixSpeed_Req	Fan fixed speed request	1	HR1507	AV3008
Fans_regulation.FansThreeSpeedFixSpeedReq	(0 = SPEED1; 1= SPEED2; 2= SPEED 3) Three speed fan request in fixed speed regulation	1	HR1508	PIV3009
FansThreeSpeed1	Three speed fan limit 1	1	HR1509	AV3010
FansThreeSpeed2	Three speed fan limit 2	1	HR1510	AV3011
FansThreeSpeed3	Three speed fan limit 3	1	HR1511	AV3012
Fans_regulation.AirQualityFanMinReq	Fan air quality minimum request	1	HR1512	AV3013
FanTempReg_PID_Params.Kp	Fan temperature regulation PID parameters - Proportional gain	1	HR1513	AV3014
FanTempReg_PID_Params.Ti	Fan temperature regulation PID parameters - Integral time	1	HR1514	PIV3015
Fans_regulation.SupplyFan_PID_Params.Kp	Proportional gain	1	HR1515	AV3016
Fans_regulation.SupplyFan_PID_Params.Ti	Integral time	1	HR1516	PIV3017
Fans_regulation.SupplyFan_PID_Params.DeadBand	Dead band	1	HR1517	AV3018
Fans_regulation.SupplyAirFlwDeadband	Supply air flow deadband	1	HR1518	AV3019
CompMinOnT	Compressor minumum On time	1	HR1519	PIV3020
CompMinOffT	Compressor minumum Off time	1	HR1520	PIV3021
CompMinOnOnSameT	Compressor minumum time between two start	1	HR1521	PIV3022
AlarmsMng.LowSuctP_Sw_AlrmStartUpDT	Low suction pressure alarm delay time at start up	1	HR1522	PIV3023
AlarmsMng.LowSuctP_Sw_AlrmRunDT	Low suction pressure alarm delay time at running time	1	HR1523	PIV3024
LowSuctP_Alrm_CntMax	Low suction pressure alarm: counter max	1	HR1524	PIV3025
LowSuctP_Alrm_TimeValue	Low suction pressure alarm: time value	1	HR1525	PIV3026
Defrost.DfrStartThrsh	Evaporator defrost start threshold	1	HR1526	AV3027
Defrost.DfrEndThrsh	Evaporator defrost end threshold	1	HR1527	AV3028
Defrost.DfrDeltaBypassDamp	Defrost delta bypass damper	1	HR1528	AV3029
Defrost.DfrStartDT	Evaporator defrost start delay time	1	HR1529	PIV3030
Defrost.DfrT_StopComp	Defrost time for stop compressor	1	HR1530	PIV3031
DfrMinT	Defrost minimum time	1	HR1531	PIV3032
DfrMaxT	Defrost maximum time	1	HR1532	PIV3033
DfrIntervalT	Time between two defrost	1	HR1533	PIV3034
DfrDripT	Defrost dripping time	1	HR1534	PIV3035
DfrPostDripT	Post-dripping time [s]	1	HR1535	PIV3036
RevVlvSpeedRps	BLDC minimum speed in defrost	1	HR1536	AV3037
RevVlvDeltaP	Reverse valve delta P	1	HR1537	AV3038
Defrost.DfrBeforeChgOverDT	Defrost: delay time before change over	1	HR1538	PIV3039
Defrost.DfrAfterChgOverDT	Defrost: delay time after change over	1	HR1539	PIV3040
FansDfrReq_3Speed	Fans request during evaporator defrost	1	HR1540	PIV3041
FansDfrReq	Fans request during evaporator defrost	1	HR1541	AV3042
FansDfrReq_OnOff	Fans request during evaporator defrost	1	HR1542	PIV3043
FansDfrDrippingReq_3Speed	Fans request during evaporator defrost: dripping	1	HR1543	PIV3044
FansDfrDrippingReq	Fans request during evaporator defrost: dripping	1	HR1544	AV3045
FansDfrDrippingReq_OnOff	Fans request during evaporator defrost: dripping	1	HR1545	PIV3046
FansDfrPostDrippingReq_3Speed	Fans request during evaporator defrost: post dripping	1	HR1546	PIV3047
FansDfrPostDrippingReq	Fans request during evaporator defrost: post dripping	1	HR1547	AV3048
FansDfrPostDrippingReq_OnOff	Fans request during evaporator defrost: post dripping	1	HR1548	PIV3049
HumDehumReg.Hum_PID.Kp	Humidification PID parameters - Proportional gain	1	HR1549	AV3050

Variable	Description	Dim	Modbus	BACnet
HumDehumReg.Hum_PID.Ti	Humidification PID parameters - Integral time	1	HR1550	PIV3051
HumDehumReg.Hum_PID.Td	Humidification PID parameters - Derivative time	1	HR1551	PIV3052
Hum_MaxLim_Thrsh	Humidifier: Max humidity threshold	1	HR1552	AV3053
Hum_MaxLim_Kp	Humidifier: Max humidity proportional part	1	HR1553	AV3054
Hum_MaxLim_Ti	Humidifier: Max humidity integral time	1	HR1554	PIV3055
Hum_MinTemp_Kp	Humidifier: Min temperature proportional part (Only adiabatic hum)	1	HR1555	AV3056
Hum_MinTemp_Ti	Humidifier: Min temperature integral time (Only adiabatic hum)	1	HR1556	PIV3057
Humisonic.DevSettings_HUMS.WashingTime-Set.DTBetweenWash	Parameters for device configuration - Timings for washing operations - Delay time between two consecutive washes (mins)	1	HR1557	IV3058
Humisonic.DevSettings_HUMS.WashingTime-Set.DTInactivWash	Parameters for device configuration - Timings for washing operations - No production time for inactivity wash (hours)	1	HR1558	IV3059
Humisonic.DevSettings_HUMS.WashingTime-Set.WashTime	Parameters for device configuration - Timings for washing operations - Washing phase time (fill + drain) (mins)	1	HR1559	IV3060
AlarmsMng.DirtyFiltAlrmDT	Delay time for dirty filter by DIN	2	HR1560	PIV3061
HEPA_Filter_AlrmThrsh	HEPA filter alarm threshold	1	HR1562	AV3062
Fans.AirP_PrbErr_SupplyFanReq	Supply fan request in case of air pressure probe error	1	HR1563	AV3063
AFreezeFansMinSpeed	Minimum fan speed during antifreeze	1	HR1564	AV3064
SupplyFanRampUpT	Time in [s]for a positive change for Supply fan	1	HR1565	PIV3065
SupplyFanRampDwnT	Time in [s] for a negative change of set value for supply fan	1	HR1566	PIV3066
SupplyFan_EmergencySet_rpm	Fan speed in emergency in rpm	2	HR1567	IV3067
SupplyFan_EmergLagT	Time in ms before entering in emergency mode for Ebmpapst fan	1	HR1569	PIV3068
Ebmpapst_SupplyFan.SerInterfaceSet_EBM_1.CfgProtocol.DevAddr	EBM1 Supply - Serial interface settings - Network address for Ebmpapst fan	2	HR1570	PIV3069
SupplyFan_SerDevCfg_Timeout	Supply Fan - Serial interface settings - Frame timeout (ms)	2	HR1574	PIV3072
SupplyFan_SerDevCfg_CmdDT	Supply Fan - Serial interface settings - Command delay time (ms)	2	HR1576	PIV3073
ZiehlAbegg_SupplyFan.SerialInterface_ZA_1.SerDevCfg.DevAddr	ZA1 Supply - Serial interface parameters - Fan Network address	2	HR1580	PIV3076
AuxReg1_Cfg.InputSel	Auxiliary Regulation 1 - Input selection	1	HR1584	PIV3079
AuxReg1_Cfg.OutputSel	Auxiliary Regulation 1 - Output selection	1	HR1585	PIV3080
AuxReg1_Cfg.Modul_ErrorValue	Auxiliary Regulation 1 - Modulating: Error value	1	HR1586	AV3081
AuxReg1_Cfg.EnableSel	Auxiliary Regulation 1 - Enable selection	1	HR1587	PIV3082
AuxReg1_Cfg.SetPSel	Auxiliary Regulation 1 - Setpoint selection	1	HR1588	PIV3083
AuxReg1_Cfg.Modul_LowLim	Auxiliary Regulation 1 - Modulating: Low limit	1	HR1589	AV3084
AuxReg1_Cfg.DOut_Diff	Auxiliary Regulation 1 - Dout: Differential	1	HR1590	AV3085
AuxReg1_Cfg.Modul_HighLim	Auxiliary Regulation 1 - Modulating: High limit	1	HR1591	AV3086
AuxReg1_Cfg.Modul_Kp	Auxiliary Regulation 1 - Modulating: Kp	1	HR1592	AV3087
AuxReg1_Cfg.Modul_Ti	Auxiliary Regulation 1 - Modulating: Integral time	1	HR1593	PIV3088
AuxReg1_Cfg.Modul_Td	Auxiliary Regulation 1 - Modulating: Derivative time	1	HR1594	PIV3089
AuxReg1_Cfg.Modul_DeadBand	Auxiliary Regulation 1 - Modulating: Dead Band	1	HR1595	AV3090
AuxReg1_Cfg.Modul_ManModeVal	Auxiliary Regulation 1 - Modulating: Manual mode value	1	HR1596	AV3091
AuxReg2_Cfg.InputSel	Auxiliary Regulation 2 - Input selection	1	HR1597	PIV3092
AuxReg2_Cfg.OutputSel	Auxiliary Regulation 2 - Output selection	1	HR1598	PIV3093
AuxReg2_Cfg.Modul_ErrorValue	Auxiliary Regulation 2 - Modulating: Error value	1	HR1599	AV3094
AuxReg2_Cfg.EnableSel	Auxiliary Regulation 2 - Enable selection	1	HR1600	PIV3095
AuxReg2_Cfg.SetPSel	Auxiliary Regulation 2 - Setpoint selection	1	HR1601	PIV3096
AuxReg2_Cfg.SetP	Auxiliary Regulation 2 - Regulation setpoint	1	HR1602	AV3097
AuxReg2_Cfg.Modul_LowLim	Auxiliary Regulation 2 - Modulating: Low limit	1	HR1603	AV3098
AuxReg2_Cfg.DOut_Diff	Auxiliary Regulation 2 - Dout: Differential	1	HR1604	AV3099
AuxReg2_Cfg.Modul_HighLim	Auxiliary Regulation 2 - Modulating: High limit	1	HR1605	AV3100
AuxReg2_Cfg.Modul_Kp	Auxiliary Regulation 2 - Modulating: Kp	1	HR1606	AV3101
AuxReg2_Cfg.Modul_Ti	Auxiliary Regulation 2 - Modulating: Integral time	1	HR1607	PIV3102
AuxReg2_Cfg.Modul_Td	Auxiliary Regulation 2 - Modulating: Derivative time	1	HR1608	PIV3103
AuxReg2_Cfg.Modul_DeadBand	Auxiliary Regulation 2 - Modulating: Dead Band	1	HR1609	AV3104
AuxReg2_Cfg.Modul_ManModeVal	Auxiliary Regulation 2 - Modulating: Manual mode value	1	HR1610	AV3105
AuxReg3_Cfg.InputSel	Auxiliary Regulation 3 - Input selection	1	HR1611	PIV3106
AuxReg3_Cfg.OutputSel	Auxiliary Regulation 3 - Output selection	1	HR1612	PIV3107
AuxReg3_Cfg.Modul_ErrorValue	Auxiliary Regulation 3 - Modulating: Error value	1	HR1613	AV3108
AuxReg3_Cfg.EnableSel	Auxiliary Regulation 3 - Enable selection	1	HR1614	PIV3109
AuxReg3_Cfg.SetPSel	Auxiliary Regulation 3 - Setpoint selection	1	HR1615	PIV3110
AuxReg3_Cfg.SetP	Auxiliary Regulation 3 - Regulation setpoint	1	HR1616	AV3111
AuxReg3_Cfg.Modul_LowLim	Auxiliary Regulation 3 - Modulating: Low limit	1	HR1617	AV3112
AuxReg3_Cfg.DOut_Diff	Auxiliary Regulation 3 - Dout: Differential	1	HR1618	AV3113
AuxReg3_Cfg.Modul_HighLim	Auxiliary Regulation 3 - Modulating: High limit	1	HR1619	AV3114
AuxReg3_Cfg.Modul_Kp	Auxiliary Regulation 3 - Modulating: Kp	1	HR1620	AV3115
AuxReg3_Cfg.Modul_Ti	Auxiliary Regulation 3 - Modulating: Integral time	1	HR1621	PIV3116
AuxReg3_Cfg.Modul_Td	Auxiliary Regulation 3 - Modulating: Derivative time	1	HR1622	PIV3117
AuxReg3_Cfg.Modul_DeadBand	Auxiliary Regulation 3 - Modulating: Dead Band	1	HR1623	AV3118
AuxReg3_Cfg.Modul_ManModeVal	Auxiliary Regulation 3 - Modulating: Manual mode value	1	HR1624	AV3119
AuxReg4_Cfg.InputSel	Auxiliary Regulation 4 - Input selection	1	HR1625	PIV3120
AuxReg4_Cfg.OutputSel	Auxiliary Regulation 4 - Output selection	1	HR1626	PIV3121
AuxReg4_Cfg.Modul_ErrorValue	Auxiliary Regulation 4 - Modulating: Error value	1	HR1627	AV3122
AuxReg4_Cfg.EnableSel	Auxiliary Regulation 4 - Enable selection	1	HR1628	PIV3123
AuxReg4_Cfg.SetPSel	Auxiliary Regulation 4 - Setpoint selection	1	HR1629	PIV3124
AuxReg4_Cfg.SetP	Auxiliary Regulation 4 - Regulation setpoint	1	HR1630	AV3125
AuxReg4_Cfg.Modul_LowLim	Auxiliary Regulation 4 - Modulating: Low limit	1	HR1631	AV3126
AuxReg4_Cfg.DOut_Diff	Auxiliary Regulation 4 - Dout: Differential	1	HR1632	AV3127
AuxReg4_Cfg.Modul_HighLim	Auxiliary Regulation 4 - Modulating: High limit	1	HR1633	AV3128
AuxReg4_Cfg.Modul_Kp	Auxiliary Regulation 4 - Modulating: Kp	1	HR1634	AV3129
AuxReg4_Cfg.Modul_Ti	Auxiliary Regulation 4 - Modulating: Integral time	1	HR1635	PIV3130
AuxReg4_Cfg.Modul_Td	Auxiliary Regulation 4 - Modulating: Derivative time	1	HR1636	PIV3131
AuxReg4_Cfg.Modul_DeadBand	Auxiliary Regulation 4 - Modulating: Dead Band	1	HR1637	AV3132
AuxReg4_Cfg.Modul_ManModeVal	Auxiliary Regulation 4 - Modulating: Manual mode value	1	HR1638	AV3133
DampOpT	Damper opening time	1	HR1639	PIV3134
DampAirQuality_PID_Params.Kp	Air Quality - Dampers PID parameters - Proportional gain	1	HR1640	AV3135
DampAirQuality_PID_Params.Ti	Air Quality - Dampers PID parameters - Integral time	1	HR1641	PIV3136
FreshAirDamp_MinVal	Fresh air damper - Minimum regulation value	1	HR1642	AV3137
FreshAirDamp_MaxVal	Fresh air damper - Maximum regulation value	1	HR1643	AV3138
MixAirDamp_MinVal	Mixing air damper - Minimum regulation value	1	HR1644	AV3139
MixAirDamp_MaxVal	Mixing air damper - Maximum regulation value	1	HR1645	AV3140
IEC_PID_Params.Kp	IEC: PID parameters - Proportional gain	1	HR1646	AV3141
IEC_PID_Params.Ti	IEC: PID parameters - Integral time	1	HR1647	PIV3142
IEC_RetHumActThrsh	IEC: Return humidity activation threshold	1	HR1648	AV3143
IEC_RetHumActDiff	IEC: Return humidity activation differential	1	HR1649	AV3144
Regulation.IEC_ExhHumLim_Thrsh	IEC: Exhaust humidity limit threshold	1	HR1650	AV3145
Regulation.IEC_ExhHumLim_Kp	IEC: Exhaust humidity limit proportional gain	1	HR1651	AV3146
Regulation.IEC_ExhHumLim_Ti	IEC: Exhaust humidity limit integral time	1	HR1652	PIV3147
Regulation.IEC_FreshAirDamp_MaxLim	IEC: Fresh air damper maximum limitation	1	HR1653	AV3148
MainCoil_Cfg	Main coil configuration	1	HR1654	PIV3149
MainCoil_StpN	Main coil steps number	1	HR1655	PIV3150
CoolCoil_PID_Params.Kp	Cooling coil PID parameters - Proportional gain	1	HR1656	AV3151
CoolCoil_PID_Params.Ti	Cooling coil PID parameters - Integral time	1	HR1657	PIV3152

Variable	Description	Dim	Modbus	BACnet
HeatCoil_PID_Params.Kp	Heating coil PID parameters - Proportional gain	1	HR1658	AV3153
HeatCoil_PID_Params.Ti	Heating coil PID parameters - Integral time	1	HR1659	PIV3154
HumDehumReg.DeHum_PID.Kp	Dehumidification PID parameters - Proportional gain	1	HR1660	AV3155
HumDehumReg.DeHum_PID.Ti	Dehumidification PID parameters - Integral time	1	HR1661	PIV3156
HumDehumReg.DeHum_PID.Td	Dehumidification PID parameters - Derivative time	1	HR1662	PIV3157
HumDehumReg.Dehum_MaxDelta	Maximum dehumidification offset	1	HR1663	AV3158
AFreezeHeatCoilReq	Heating coil request during antifreeze off status	1	HR1664	AV3159
AFreezeCoolCoilReq	Cooling coil request during antifreeze off status	1	HR1665	AV3160
MainCoil_PmpNo	Cooling/Heating coil pumps number	1	HR1666	PIV3161
Coils.MainCoil_PmpFlwChk_StartupT	Cooling/Heating coil pumps flow check startup delay	1	HR1667	PIV3162
Coils.MainCoil_PmpFlwChk_RunT	Cooling/Heating coil pumps flow check run delay	1	HR1668	PIV3163
Coils.MainCoil_PmpRotT	Cooling/Heating coil pumps rotation time	1	HR1669	PIV3164
PreHeatCoil_StpN	PreHeating coil steps number	1	HR1670	PIV3165
PreHeatCoil_PID_Params.Kp	Pre heating PID parameters - Proportional gain	1	HR1671	AV3166
PreHeatCoil_PID_Params.Ti	Pre heating PID parameters - Integral time	1	HR1672	PIV3167
AFreezePreHeatCoilReq	PreHeating coil request during antifreeze off status	1	HR1673	AV3168
PreHeatCoil_PmpNo	PreHeating coil pumps number	1	HR1674	PIV3169
Coils.PreHeatCoil_PmpFlwChk_StartupT	PreHeating coil pumps flow check startup delay	1	HR1675	PIV3170
Coils.PreHeatCoil_PmpFlwChk_RunT	PreHeating coil pumps flow check run delay	1	HR1676	PIV3171
Coils.PreHeatCoil_PmpRotT	PreHeating coil pumps rotation time	1	HR1677	PIV3172
ReHeatCoil_StpN	PostHeating coil steps number	1	HR1678	PIV3173
ReHeatCoil_PID_Params.Kp	Post heating PID parameters - Proportional gain	1	HR1679	AV3174
ReHeatCoil_PID_Params.Ti	Post heating PID parameters - Integral time	1	HR1680	PIV3175
AFreezeReHeatCoilReq	PostHeating coil request during antifreeze off status	1	HR1681	AV3176
ReHeatCoil_PmpNo	Post Heating coil pumps number	1	HR1682	PIV3177
Coils.ReHeatCoil_PmpFlwChk_StartupT	Re Heating coil pumps flow check startup delay	1	HR1683	PIV3178
Coils.ReHeatCoil_PmpFlwChk_RunT	ReHeating coil pumps flow check run delay	1	HR1684	PIV3179
Coils.ReHeatCoil_PmpRotT	Re Heating coil pumps rotation time	1	HR1685	PIV3180
VDI_InactivityStartUp_Delay	VDI Inactivity startup activation delay	1	HR1686	PIV3181
VDI_InactStartUp_Duration	VDI Inactivity startup duration	1	HR1687	PIV3182
VDI_HiSatHumThrsh	VDI high saturation humidity threshold	1	HR1688	AV3183
VDI_HiSatHumDiff	VDI high saturation humidity differential	1	HR1689	AV3184
VDI_Typ	VDI Type: 0: Standard; 1: Custom	1	HR1690	PIV3185
VDI_Conf[0].MonthSel	Month selection variable	1	HR1691	PIV3186
VDI_Conf[1].MonthSel	Month selection variable	1	HR1692	PIV3187
VDI_Conf[2].MonthSel	Month selection variable	1	HR1693	PIV3188
VDI_Conf[3].MonthSel	Month selection variable	1	HR1694	PIV3189
VDI_Conf[4].MonthSel	Month selection variable	1	HR1695	PIV3190
VDI_Conf[5].MonthSel	Month selection variable	1	HR1696	PIV3191
VDI_Conf[6].MonthSel	Month selection variable	1	HR1697	PIV3192
VDI_Conf[7].MonthSel	Month selection variable	1	HR1698	PIV3193
VDI_Conf[8].MonthSel	Month selection variable	1	HR1699	PIV3194
VDI_Conf[9].MonthSel	Month selection variable	1	HR1700	PIV3195
VDI_Conf[10].MonthSel	Month selection variable	1	HR1701	PIV3196
VDI_Conf[11].MonthSel	Month selection variable	1	HR1702	PIV3197
VDI_Conf[12].MonthSel	Month selection variable	1	HR1703	PIV3198
VDI_Conf[13].MonthSel	Month selection variable	1	HR1704	PIV3199
VDI_Conf[14].MonthSel	Month selection variable	1	HR1705	PIV3200
VDI_Conf[15].MonthSel	Month selection variable	1	HR1706	PIV3201
VDI_Conf[16].MonthSel	Month selection variable	1	HR1707	PIV3202
VDI_Conf[17].MonthSel	Month selection variable	1	HR1708	PIV3203
VDI_Conf[18].MonthSel	Month selection variable	1	HR1709	PIV3204
VDI_Conf[19].MonthSel	Month selection variable	1	HR1710	PIV3205
VDI_Conf[20].MonthSel	Month selection variable	1	HR1711	PIV3206
VDI_Conf[21].MonthSel	Month selection variable	1	HR1712	PIV3207
VDI_Conf[22].MonthSel	Month selection variable	1	HR1713	PIV3208
VDI_Conf[23].MonthSel	Month selection variable	1	HR1714	PIV3209
VDI_Conf[24].MonthSel	Month selection variable	1	HR1715	PIV3210
VDI_Conf[25].MonthSel	Month selection variable	1	HR1716	PIV3211
VDI_Conf[26].MonthSel	Month selection variable	1	HR1717	PIV3212
VDI_Conf[27].MonthSel	Month selection variable	1	HR1718	PIV3213
VDI_Conf[28].MonthSel	Month selection variable	1	HR1719	PIV3214
GeneralMng.DateFormat	Date format (0: DD/MM/YY; 1: MM/DD/YY; 2: YY/MM/DD)	1	HR1720	IV3215
GeneralMng.RTC_BMS.Hour	BMS real time clock	1	HR1721	PIV3216
GeneralMng.RTC_BMS.Minute	BMS real time clock	1	HR1722	PIV3217
PwdUser	User password	1	HR1723	PIV3218
PwdService	Service password	1	HR1724	PIV3219
PwdManuf	Manufacturer password	1	HR1725	PIV3220
GeneralMng.SPV_Addr	BMS address	1	HR1727	PIV3221
GeneralMng.SPV_Timeout	BMS timeout	1	HR1728	PIV3222
GeneralMng.BMS_Baudrate_msk	BMS baudrate (0=9600; 1=19200; 2=38400)	1	HR1729	PIV3223
GeneralMng.BMS_Parity	BMS parity	1	HR1730	PIV3224
GeneralMng.BMS_StopBit	BMS stopbit	1	HR1731	PIV3225
GeneralMng.FB_Baudrate_msk	For mask usage	1	HR1732	PIV3226
GeneralMng.FB_Parity	Fieldbus parity	1	HR1733	PIV3227
GeneralMng.FB_StopBit	Fieldbus stopbit	1	HR1734	PIV3228
BLDC_compressor.MiscMng_BLDC1.Mng_Pwr-pAddr	PowerPlus address	2	HR1735	PIV3229
uChiller_mng.DevAddr_uCh	Device address	1	HR1737	PIV3230
IEC.IEC_HUMFOG_DevAddr	Device address	2	HR1738	PIV3231
Humisonic.DevAddr_HUMS	Device address	2	HR1740	PIV3232
Humisonic.Timeout_HUMS	Modbus timeout for Humisonic (delete after Humisonic library update)	2	HR1742	PIV3233
Humisonic.CmdDelay_HUMS	Modbus command delay for Humisonic (delete after Humisonic library update)	2	HR1744	PIV3234
HumifogMng.HUMFOG_DevAddr	Device address	2	HR1746	PIV3235
Scheduler_OnOffUnit.SerDevCfg_THTN. DevAddr	Serial device configuration - Device address	2	HR1748	PIV3236
GeneralMng.StationAdr	7seg number	2	HR1750	PIV3237
Data_EVD_Emb_1.Superparameters.EEVtype. Val	Superparameters - Valve	1	HR1752	IV3238
Data_EVD_Emb_1.EVD.Regulation.GasTyp.Val	EVD parameters - Regulation parameters configuration - Refrigerant	1	HR1753	IV3239
EVD_Emb_Circ.EEV_SH_SetP_Cool	Superheat setpoint: cooling mode	1	HR1754	AV3240
EVD_Emb_Circ.EEV_SH_SetP_Heat	Superheat setpoint: heating mode	1	HR1755	AV3241
EVD_Emb_Circ.EEV_StartOpRatio_Cool	EEV start opening ratio: cooling mode	1	HR1756	IV3242
EVD_Emb_Circ.EEV_StartOpRatio_Heat	EEV start opening ratio: heating mode	1	HR1757	IV3243
Data_EVD_Emb_1.EVD.Regulation.SH_WaitDT. Val	EVD parameters - Regulation parameters configuration - Regulation starting delay	1	HR1758	IV3244
Data_EVD_Emb_1.EVD.Regulation.StandByE-EV_OpPos.Val	EVD parameters - Regulation parameters configuration - Standby valve opening position %	1	HR1759	IV3245
EVD_Emb_Circ.EEV_PID_Kp_Cool	EEV Proportional gain: cooling mode	1	HR1760	AV3246
EVD_Emb_Circ.EEV_PID_Ti_Cool	EEV Integral time: cooling mode	1	HR1761	AV3247

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EVD_Emb_Circ.EEV_PID_Td_Cool	EEV Integral time: cooling mode	1	HR1762	AV3248
EVD_Emb_Circ.EEV_PID_Kp_Heat	EEV Proportional gain: heating mode	1	HR1763	AV3249
EVD_Emb_Circ.EEV_PID_Ti_Heat	EEV Integral time: heating mode	1	HR1764	AV3250
EVD_Emb_Circ.EEV_PID_Td_Heat	EEV Integral time: cooling mode	1	HR1765	AV3251
Data_EVD_Emb_1.EVD.Regulation.LowSH_AlrmDT.Val	EVD parameters - Regulation parameters configuration - LowSH (low superheat) alarm timeout	1	HR1766	IV3252
EVD_Emb_Circ.EEV_LowSH_Thrsh_Cool	EEV Low superheat threshold: cooling mode	1	HR1767	AV3253
EVD_Emb_Circ.EEV_LowSH_Ti_Cool	EEV Low superheat integral time: cooling mode	1	HR1768	AV3254
EVD_Emb_Circ.EEV_LowSH_Thrsh_Heat	EEV Low superheat threshold: heating mode	1	HR1769	AV3255
EVD_Emb_Circ.EEV_LowSH_Ti_Heat	EEV Low superheat integral time: heating mode	1	HR1770	AV3256
Data_EVD_Emb_1.EVD.Regulation.LOP_AlrmDT.Val	EVD parameters - Regulation parameters configuration - LOP (low evaporating temperature) alarm timeout	1	HR1771	IV3257
EVD_Emb_Circ.EEV_LOP_Thrsh_Cool	EEV LOP threshold: cooling mode	1	HR1772	AV3258
EVD_Emb_Circ.EEV_LOP_Ti_Cool	EEV LOP integral time: cooling mode	1	HR1773	AV3259
EVD_Emb_Circ.EEV_LOP_Thrsh_Heat	EEV LOP threshold: heating mode	1	HR1774	AV3260
EVD_Emb_Circ.EEV_LOP_Ti_Heat	EEV LOP integral time: heating mode	1	HR1775	AV3261
Data_EVD_Emb_1.EVD.Regulation.MOP_AlrmDT.Val	EVD parameters - Regulation parameters configuration - MOP (high evaporating temperature) alarm timeout	1	HR1776	IV3262
EVD_Emb_Circ.EEV_MOP_Thrsh_Cool	EEV MOP threshold: cooling mode	1	HR1777	AV3263
EVD_Emb_Circ.EEV_MOP_Ti_Cool	EEV MOP integral time: cooling mode	1	HR1778	AV3264
EVD_Emb_Circ.EEV_MOP_Thrsh_Heat	EEV MOP threshold: heating mode	1	HR1779	AV3265
EVD_Emb_Circ.EEV_MOP_Ti_Heat	EEV MOP integral time: heating mode	1	HR1780	AV3266
EVD_Emb_Circ.EEV_ManPositSteps	EEV manual poition steps	1	HR1781	IV3267
Data_EVD_Emb_1.EVD.Regulation.LowSuctAlrmThrsh.Val	EVD parameters - Regulation parameters configuration - Low suction temperature alarm threshold	1	HR1782	AV3268
Data_EVD_Emb_1.EVD.Regulation.LowSuctAlrmDT.Val	EVD parameters - Regulation parameters configuration - Low suction temperature alarm timeout	1	HR1783	IV3269
Data_EVD_Emb_1.EVD.EEV_Config.RegMinPos.Val	EVD parameters - Valve configuration - EEV minimum steps	1	HR1784	IV3270
Data_EVD_Emb_1.EVD.EEV_Config.RegMaxPos.Val	EVD parameters - Valve configuration - EEV maximum steps	1	HR1785	IV3271
Data_EVD_Emb_1.EVD.EEV_Config.FullClosSteps.Val	EVD parameters - Valve configuration - EEV closing steps	1	HR1786	IV3272
Data_EVD_Emb_1.EVD.EEV_Config.MoveRate.Val	EVD parameters - Valve configuration - EEV step rate	1	HR1787	IV3273
Data_EVD_Emb_1.EVD.EEV_Config.FastClosMoveRate.Val	EVD parameters - Valve configuration - EEV: emergency EEV closing speed	1	HR1788	IV3274
Data_EVD_Emb_1.EVD.EEV_Config.MoveDuty.Val	EVD parameters - Valve configuration - EEV duty cycle	1	HR1789	IV3275
BLDC_compressor.MiscMng_BLDC1.Mng_PwrpMotTyp	Compressor model (PowerPlus)	1	HR1790	PIV3276
BLDC_compressor.MiscMng_BLDC1.Mng_CompTyp	Compressor model	1	HR1791	PIV3277
BLDC_compressor.MiscMng_PWRP1.Mng_DriveTyp	Drive type	1	HR1792	PIV3278
BLDC_compressor.MiscMng_PWRP1.Mng_WriteDefault	Write default request	1	HR1793	IV3279
BLDC_compressor.CurrCompCfg_PWRP1.HR29_DataCommTimeout	Curr compressor configuration (Powerplus) - Data communication fault timeout	1	HR1794	PIV3280
BLDC_compressor.CurrCompCfg_PWRP1.HR07_MinOutFreq	Curr compressor configuration (Powerplus) - Min output frequency	1	HR1795	AV3281
BLDC_compressor.CurrCompCfg_PWRP1.HR06_MaxOutFreq	Curr compressor configuration (Powerplus) - Max output frequency	1	HR1796	AV3282
BLDC_compressor.CurrCompCfg_PWRP1.HR10_SkipFreqSetP	Curr compressor configuration (Powerplus) - Skip frequency: set 1	1	HR1797	AV3283
BLDC_compressor.CurrCompCfg_PWRP1.HR11_SkipFreqBand	Curr compressor configuration (Powerplus) - Skip frequency: band 1	1	HR1798	AV3284
BLDC_compressor.CurrCompCfg_PWRP1.HR67_SkipFreqSetP_2	Curr compressor configuration (Powerplus) - Skip frequency setpoint 2	1	HR1799	AV3285
BLDC_compressor.CurrCompCfg_PWRP1.HR68_SkipFreqBand_2	Curr compressor configuration (Powerplus) - Skip frequency band 2	1	HR1800	AV3286
BLDC_compressor.CurrCompCfg_PWRP1.HR69_SkipFreqSetp_3	Curr compressor configuration (Powerplus) - Skip frequency setpoint 3	1	HR1801	AV3287
BLDC_compressor.CurrCompCfg_PWRP1.HR70_SkipFreqBand_3	Curr compressor configuration (Powerplus) - Skip frequency band 3	1	HR1802	AV3288
BLDC_compressor.CurrCompCfg_PWRP1.HR24_SwitchingFreq	Curr compressor configuration (Powerplus) - Switching frequency	1	HR1803	PIV3289
BLDC_compressor.CurrCompCfg_PWRP1.HR25_SwitchingFreqDerating	Curr compressor configuration (Powerplus) - Switching frequency derating	1	HR1804	PIV3290
BLDC_compressor.CurrCompCfg_PWRP1.HR27_MotOvTempAlrmPTC_En	Curr compressor configuration (Powerplus) - Motor overtemperature alarm (PTC) enable	1	HR1805	PIV3291
BLDC_compressor.CurrCompCfg_PWRP1.HR28_MotOvTempAlrmPTC_Delay	Curr compressor configuration (Powerplus) - Motor overtemperature alarm delay	1	HR1806	PIV3292
BLDC_compressor.CurrCompCfg_PWRP1.HR08_EnRevSpeed	Curr compressor configuration (Powerplus) - Reverse speed enable	1	HR1807	PIV3293
BLDC_compressor.CurrCompCfg_PWRP1.HR09_SpeedDeratingMode	Curr compressor configuration (Powerplus) - Speed derating mode	1	HR1808	PIV3294
BLDC_compressor.CurrCompCfg_PWRP1.HR33_StopMode	Curr compressor configuration (Powerplus) - Stop mode	1	HR1809	PIV3295
BLDC_compressor.CurrCompCfg_PWRP1.HR34_FlyingRestart	Curr compressor configuration (Powerplus) - Flying restart	1	HR1810	PIV3296
BLDC_compressor.CurrCompCfg_PWRP1.HR26_RelayCfg	Curr compressor configuration (Powerplus) - Relay configuration	1	HR1811	PIV3297
BLDC_compressor.MiscMng_PWRP1.Mng_MotPoles	Motor pole pairs	1	HR1812	PIV3298
BLDC_compressor.CurrCompCfg_PWRP1.HR00_MotCtrlMode	Curr compressor configuration (Powerplus) - Motor control mode	1	HR1813	PIV3299
BLDC_compressor.CurrCompCfg_PWRP1.HR01_MotBaseFreq	Curr compressor configuration (Powerplus) - Motor base frequency	1	HR1814	AV3300
BLDC_compressor.CurrCompCfg_PWRP1.HR02_MotBaseV	Curr compressor configuration (Powerplus) - Motor base voltage	1	HR1815	PIV3301
BLDC_compressor.CurrCompCfg_PWRP1.HR03_MotRatedA	Curr compressor configuration (Powerplus) - Motor rated current	1	HR1816	AV3302
BLDC_compressor.CurrCompCfg_PWRP1.HR04_MotPwrFactor	Curr compressor configuration (Powerplus) - Motor power factor	1	HR1817	PIV3303
BLDC_compressor.CurrCompCfg_PWRP1.HR05_MaxOutCurrent	Curr compressor configuration (Powerplus) - Max output current	1	HR1818	AV3304

Variable	Description	Dim	Modbus	BACnet
BLDC_compressor.CurrCompCfg_PWRP1.HR12_SpeedProfileFreq1	Curr compressor configuration (Powerplus) - Speed profile: frequency 1	1	HR1819	AV3305
BLDC_compressor.CurrCompCfg_PWRP1.HR13_SpeedProfileFreq2	Curr compressor configuration (Powerplus) - Speed profile: frequency 2	1	HR1820	AV3306
BLDC_compressor.CurrCompCfg_PWRP1.HR14_SpeedProfileFreq3	Curr compressor configuration (Powerplus) - Speed profile: frequency 3	1	HR1821	AV3307
BLDC_compressor.CurrCompCfg_PWRP1.HR15_SpeedProfileAcceleration1	Curr compressor configuration (Powerplus) - Speed profile: acceleration 1 [Hz/s]	1	HR1822	AV3308
BLDC_compressor.CurrCompCfg_PWRP1.HR16_SpeedProfileAcceleration2	Curr compressor configuration (Powerplus) - Speed profile: acceleration 2 [Hz/s]	1	HR1823	AV3309
BLDC_compressor.CurrCompCfg_PWRP1.HR17_SpeedProfileAcceleration3	Curr compressor configuration (Powerplus) - Speed profile: acceleration 3 [Hz/s]	1	HR1824	AV3310
BLDC_compressor.CurrCompCfg_PWRP1.HR18_SpeedProfileAcceleration4	Curr compressor configuration (Powerplus) - Speed profile: acceleration 4 [Hz/s]	1	HR1825	AV3311
BLDC_compressor.CurrCompCfg_PWRP1.HR19_SpeedProfileDelay1	Curr compressor configuration (Powerplus) - Speed profile: delay 1	1	HR1826	PIV3312
BLDC_compressor.CurrCompCfg_PWRP1.HR20_SpeedProfileDelay2	Curr compressor configuration (Powerplus) - Speed profile: delay 2	1	HR1827	PIV3313
BLDC_compressor.CurrCompCfg_PWRP1.HR21_SpeedProfileDelay3	Curr compressor configuration (Powerplus) - Speed profile: delay 3	1	HR1828	PIV3314
BLDC_compressor.CurrCompCfg_PWRP1.HR23_SpeedProfileDeceleration	Curr compressor configuration (Powerplus) - Speed profile: deceleration [Hz/s]	1	HR1829	AV3315
BLDC_compressor.CurrCompCfg_PWRP1.HR35_V_F_BoostV	Curr compressor configuration (Powerplus) - V/f boost voltage	1	HR1830	AV3316
BLDC_compressor.CurrCompCfg_PWRP1.HR36_V_F_FreqAdj	Curr compressor configuration (Powerplus) - V/f frequency adjustment	1	HR1831	AV3317
BLDC_compressor.CurrCompCfg_PWRP1.HR37_V_F_VAdj	Curr compressor configuration (Powerplus) - V/f voltage adjustment	1	HR1832	AV3318
BLDC_compressor.CurrCompCfg_PWRP1.HR45_MotMagnetizingCurrent	Curr compressor configuration (Powerplus) - Motor magnetizing current	1	HR1833	AV3319
BLDC_compressor.CurrCompCfg_PWRP1.HR46_StatorResistance	Curr compressor configuration (Powerplus) - Stator resistance [mohm]	1	HR1834	PIV3320
BLDC_compressor.CurrCompCfg_PWRP1.HR47_RotorResistance	Curr compressor configuration (Powerplus) - Rotor resistance [mohm]	1	HR1835	PIV3321
BLDC_compressor.CurrCompCfg_PWRP1.HR48_StatorInductanceLd	Curr compressor configuration (Powerplus) - Stator inductance Ld [mH]	1	HR1836	AV3322
BLDC_compressor.CurrCompCfg_PWRP1.HR49_LeakageFactor	Curr compressor configuration (Powerplus) - Leakage factor	1	HR1837	PIV3323
BLDC_compressor.CurrCompCfg_PWRP1.HR50_LqInductance	Curr compressor configuration (Powerplus) - Stator inductance Lq [mH]	1	HR1838	AV3324
BLDC_compressor.CurrCompCfg_PWRP1.HR55_SpeedLoopKp	Curr compressor configuration (Powerplus) - Speed loop Kp	1	HR1839	AV3325
BLDC_compressor.CurrCompCfg_PWRP1.HR56_SpeedLoopTi	Curr compressor configuration (Powerplus) - Speed loop Ti	1	HR1840	PIV3326
BLDC_compressor.CurrCompCfg_PWRP1.HR51_MagnetizingTime	Curr compressor configuration (Powerplus) - Magnetizing time	1	HR1841	PIV3327
BLDC_compressor.CurrCompCfg_PWRP1.HR57_StartingCurrent	Curr compressor configuration (Powerplus) - Starting current	1	HR1842	AV3328
BLDC_compressor.CurrCompCfg_PWRP1.HR58_StartingAFreq	Curr compressor configuration (Powerplus) - Frequency for starting current	1	HR1843	AV3329
BLDC_compressor.CurrCompCfg_PWRP1.CrankCaseHeaterMode	Curr compressor configuration (Powerplus) - Crank-case heater mode (0=Strategy mng; 1=forcedON; 2=forcedOFF)	1	HR1844	PIV3330
BLDC_compressor.CurrCompCfg_PWRP1.HR65_CrankCaseHeaterCurrent	Curr compressor configuration (Powerplus) - Crank-case heater current	1	HR1845	AV3331
BLDC_compressor.CurrCompCfg_PWRP1.HR66_STOResetStrategy	Curr compressor configuration (Powerplus) - Safety torque off alarm autore-set on drive stand-by	1	HR1846	PIV3332
BLDC_compressor.CurrCompCfg_PWRP1.HR77_InductSaturFactor	Curr compressor configuration (Powerplus) - Inductance saturation factor	1	HR1847	AV3333
BLDC_compressor.AlrmResetMng_PWRP1.RetryThrs	Maximum semiautomatic alarm reset retry number	2	HR1848	IV3334
BLDC_compressor.AlrmResetMng_PWRP1.TimeThrs	Time threshold for semiautomatic reset	2	HR1850	PIV3335
BLDC_compressor.MiscMng_BLDC1.Mng_ModbusTimeout	Modbus communication timeout [ms]	2	HR1852	PIV3336
BLDC_compressor.MiscMng_BLDC1.Mng_ModbusCmdDelay	Modbus command delay [ms]	2	HR1854	PIV3337
BLDC_compressor.CfgEnvCtrl_BLDC1.StartUp_MaxDeltaP	BLDC envelope configuration - Max. permitted Delta P to start up [bar]	1	HR1856	AV3338
BLDC_compressor.CfgEnvCtrl_BLDC1.StartUp_EVDEqualMaxT	BLDC envelope configuration - Maximum time of EVD propening to equa-lize pressure	1	HR1857	IV3339
BLDC_compressor.CfgEnvCtrl_BLDC1.StartUp_EVDEqualPreopen	BLDC envelope configuration - Preopening of EVD in case of prestart to equalize pressure	1	HR1858	IV3340
BLDC_compressor.CfgEnvCtrl_BLDC1.StartUp_DeltaPVariation	BLDC envelope configuration - Min. variation of Delta P to considered compressor started [bar]	1	HR1859	AV3341
BLDC_compressor.CfgEnvCtrl_BLDC1.StartUp_DeltaPDelay	BLDC envelope configuration - Delay to check increasing DeltaP to validate compressor started	1	HR1860	IV3342
BLDC_compressor.CfgEnvCtrl_BLDC1.StartUp_RestartDelay	BLDC envelope configuration - Restart delay after a start failure	1	HR1861	IV3343
BLDC_compressor.CfgEnvCtrl_BLDC1.StartUp_Attempts	BLDC envelope configuration - Max Number of starting attempts	1	HR1862	IV3344
BLDC_compressor.CfgEnvCtrl_BLDC1.Speed_StartUpSpeed	BLDC envelope configuration - Start up speed	1	HR1863	AV3345
BLDC_compressor.CfgEnvCtrl_BLDC1.Speed_MinSpeedRpsCustom	BLDC envelope configuration - Min speed custom (rps)	1	HR1865	AV3347
BLDC_compressor.CfgEnvCtrl_BLDC1.Speed_MaxDescendSpeedRate	BLDC envelope configuration - Max. decrease speed rate (in regulation) [rps/s]	1	HR1866	AV3348
BLDC_compressor.CfgEnvCtrl_BLDC1.Speed_MaxRisingSpeedRate	BLDC envelope configuration - Max. increase speed rate (in regulation) [rps/s]	1	HR1867	AV3349
BLDC_compressor.CfgEnvCtrl_BLDC1.Speed_SwitchOffSpeedRate	BLDC envelope configuration - Decrease max speed rate (= max admitted value, to stop compressor) [rps/s]	1	HR1868	AV3350
BLDC_compressor.CfgEnvCtrl_BLDC1.Speed_MaxSlowdownSpeedRate	BLDC envelope configuration - Decrease speed rate (to come back inside envelope) [rps/s]	1	HR1869	AV3351
BLDC_compressor.CfgEnvCtrl_BLDC1.Speed_MinSpeedControlled	BLDC envelope configuration - Min speed permitted to control compressor working conditions inside envelop	1	HR1870	AV3352
BLDC_compressor.CfgEnvCtrl_BLDC1.CstmEnv_EnvOutMaxT	BLDC envelope configuration - Out of envelop alarm delay time	1	HR1871	IV3353

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BLDC_compressor.CfgEnvCtrl_BLDC1.CstmEnv_LowDeltaPAlrmDelay	BLDC envelope configuration - Low Delta P alarm delay	1	HR1872	IV3354
BLDC_compressor.CfgEnvCtrl_BLDC1.CstmEnv_SuctTSaturationThrshZone1b1c	BLDC envelope configuration - Suction sat.temp. threshold from zone 1b (Max120rps) to zone 1c (Max90rps SIAM only)	1	HR1873	AV3355
BLDC_compressor.CfgEnvCtrl_BLDC1.CstmEnv_MaxSpeedZone1c	BLDC envelope configuration - Max Speed in rps for Zone 1c (SIAM Scroll) N.B.: integer rps!	1	HR1874	IV3356
BLDC_compressor.CfgEnvCtrl_BLDC1.CstmEnv_DscgTempCtrlThrshZone1a	BLDC envelope configuration - Discharge gas temperature control threshold for Zone 1a (SIAM scroll only)	1	HR1875	AV3357
BLDC_compressor.CfgEnvCtrl_BLDC1.CstmEnv_DscgTempAlrmThrshZone1a	BLDC envelope configuration - Discharge gas limit temperature for Zone 1a (SIAM Scroll only)	1	HR1876	AV3358
BLDC_compressor.CfgEnvCtrl_BLDC1.CstmEnv_DscgTempCtrlThrsh	BLDC envelope configuration - Discharge gas temperature control threshold (SIAM scroll only: for zone 1b)	1	HR1877	AV3359
BLDC_compressor.CfgEnvCtrl_BLDC1.CstmEnv_DscgTempAlrmThrsh	BLDC envelope configuration - Discharge gas limit temperature (SIAM Scroll only: for Zone 1b)	1	HR1878	AV3360
BLDC_compressor.CfgEnvCtrl_BLDC1.CstmEnv_DscgTempLimDistance	BLDC envelope configuration - Action distance from High Temperature limit (to reduce speed rate)	1	HR1879	AV3361
BLDC_compressor.CfgEnvCtrl_BLDC1.CstmEnv_DscgTempPause	BLDC envelope configuration - Pause between speed reductions when discharge temp. is over control limit	1	HR1880	IV3362
BLDC_compressor.CfgEnvCtrl_BLDC1.CstmEnv_DscgTempSpeedReduction	BLDC envelope configuration - Speed Reduction percentage when discharge temp is over control limit	1	HR1881	AV3363
CstEvapMinTemp	Custom minimum evaporating temperature	1	HR1882	AV3364
CstCondMaxTemp	Custom maximum temperature condensing	1	HR1883	AV3365
BLDC_compressor.CfgEnvCtrl_BLDC1.EvdReg_SubTypeRegMode	BLDC envelope configuration - Regol. Evd SubType: 0=null; 1=SSH; 2=DSH; 3= DLT	1	HR1884	IV3366
BLDC_compressor.CfgEnvCtrl_BLDC1.EvdReg_DscgTempNTCT	BLDC envelope configuration - Time constant of discharge temp sensor	1	HR1885	AV3367
BLDC_compressor.CfgEnvCtrl_BLDC1.EvdReg_DscgSHSetP	BLDC envelope configuration - SetPoint of Discharge SH (sent to EVD)	1	HR1886	AV3368
BLDC_compressor.CfgEnvCtrl_BLDC1.EvdReg_DTDscgSHRegOn	BLDC envelope configuration - Setpoint offset for Discharge Super Heat regulation activation	1	HR1887	AV3369
BLDC_compressor.CfgEnvCtrl_BLDC1.EvdReg_DTDscgSHHyst	BLDC envelope configuration - Hysteresys for Discharge Super Heat regulation deactivation	1	HR1888	AV3370
BLDC_compressor.CfgEnvCtrl_BLDC1.EvdReg_DscgTempSetP	BLDC envelope configuration - SetPoint of Discharge Temp (sent to EVD)	1	HR1889	AV3371
BLDC_compressor.CfgEnvCtrl_BLDC1.EvdReg_DTDLTRegOn	BLDC envelope configuration - Setpoint offset for Discharge Limit Temp. regulation activation	1	HR1890	AV3372
BLDC_compressor.CfgEnvCtrl_BLDC1.EvdReg_DTDLTHyst	BLDC envelope configuration - Hysteresys for Discharge Limit Temp. regulation deactivation	1	HR1891	AV3373
BLDC_compressor.AlrmResetMng_BLDC_1.RetryThrs	Automatically generated - Maximum semiautomatic alarm reset retry number	2	HR1892	IV3374
BLDC_compressor.AlrmResetMng_BLDC_1.TimeThrs	Automatically generated - Time threshold for semiautomatic reset	2	HR1894	PIV3375
SupplyFanMinVal	Supply fan: Minimum regulation value	1	HR1896	AV3376
SupplyFanMaxVal	Supply fan: Maximum regulation value	1	HR1897	AV3377
RetFanMinVal	Return fan: Minimum regulation value	1	HR1898	AV3378
RetFanMaxVal	Return fan: Maximum regulation value	1	HR1899	AV3379
GeneralMng.pGDx_MACAddress1	PGDx Browser - MAC Address Last Four Digit - Part 1 -	1	HR1900	PIV3380
GeneralMng.pGDx_MACAddress2	PGDx Browser - MAC Address Last Four Digit - Part 2 -	1	HR1901	PIV3381
GeneralMng.pGDx_MACAddress3	PGDx Browser - MAC Address Last Four Digit - Part 3 -	1	HR1902	PIV3382
GeneralMng.pGDx_MACAddress4	PGDx Browser - MAC Address Last Four Digit - Part 4 -	1	HR1903	PIV3383
BMS_Line	BMS Line (0=None; 1=Modbus; 2=BACnet)	1	HR1904	PIV3384
BMS2_Line	BMS2 Line (0=None; 1=Modbus; 2=BACnet)	1	HR1905	PIV3385
ETH_Line	Ethernet Line (0=None; 1=Modbus)	1	HR1906	PIV3386
ETH2_Line	Ethernet 2 Line (0=None; 1=BACnet)	1	HR1907	PIV3387
GeneralMng.BACnet_ID	BACnet Device Instance (and Station address in MSTP)	2	HR1908	PIV3388
GeneralMng.BACnet_Timeout	BACnet timeout	1	HR1910	PIV3389
GeneralMng.BMS2_Baudrate_msk	BMS baudrate (0=9600; 1=19200; 2=38400)	1	HR1911	PIV3390
GeneralMng.BMS2_Parity	BMS 2 parity	1	HR1912	PIV3391
GeneralMng.BMS2_StopBit	BMS 2 stopbit	1	HR1913	PIV3392
CoilVlv_OpenTime	Coil floating valve: Opening duration total time(from0% to100%)	1	HR1914	PIV3940
AuxReg1_Cfg.CoolHeatMode	Auxiliary Regulation 1 - Cooling/Heating mode	1	HR1915	PIV265
AuxReg2_Cfg.CoolHeatMode	Auxiliary Regulation 2 - Cooling/Heating mode	1	HR1916	PIV272
AuxReg3_Cfg.CoolHeatMode	Auxiliary Regulation 3 - Cooling/Heating mode	1	HR1917	PIV279
AuxReg4_Cfg.CoolHeatMode	Auxiliary Regulation 4 - Cooling/Heating mode	1	HR1918	PIV286
HumDehumStartReg_DT	Humidification/Dehumidification: start regulation delay time	1	HR1919	PIV3950
AirQuality_PM10.Board_RW	Air quality: PM 10 - Board selected	1	HR1920	PIV3952
AirQuality_PM10.Ch_Id_RW	Air quality: PM 10 - Channel id selected	1	HR1921	PIV3978
AirQuality_PM10.Ch_Type_RW	Air quality: PM 10 - Type probe used	1	HR1922	PIV3979
AirQuality_PM10.ChFilter_RW	Air quality: PM 10 - Filter channel	1	HR1923	PIV3980
AirQuality_PM10.MaxVal_RW	Air quality: PM 10 - Maximum value	1	HR1924	AV3983
AirQuality_PM10.MinVal_RW	Air quality: PM 10 - Minimum value	1	HR1925	AV3984
AirQuality_PM10.Offset_RW	Air quality: PM 10 - Offset	1	HR1926	AV3985
AirQuality_PM25.Board_RW	Air quality: PM 2.5 - Board selected	1	HR1927	PIV3991
AirQuality_PM25.Ch_Id_RW	Air quality: PM 2.5 - Channel id selected	1	HR1928	PIV3992
AirQuality_PM25.Ch_Type_RW	Air quality: PM 2.5 - Type probe used	1	HR1929	PIV3993
AirQuality_PM25.ChFilter_RW	Air quality: PM 2.5 - Filter channel	1	HR1930	PIV3994
AirQuality_PM25.MaxVal_RW	Air quality: PM 2.5 - Maximum value	1	HR1931	AV3997
AirQuality_PM25.MinVal_RW	Air quality: PM 2.5 - Minimum value	1	HR1932	AV3998
AirQuality_PM25.Offset_RW	Air quality: PM 2.5 - Offset	1	HR1933	AV3999
SanificationDevice.Board_RW	Sanification device - Board selected	1	HR1934	PIV4004
SanificationDevice.Ch_Id_RW	Sanification device - Channel id selected	1	HR1935	PIV4005
SanificationDevice.Ch_Type_RW	Sanification device - Digital output type	1	HR1936	PIV4006
SanificationDevice.T_On_RW	Sanification device - Time on cycle relay	1	HR1937	PIV4009
SanificationDevice.T_Off_RW	Sanification device - Time off cycle releay	1	HR1938	PIV4010
FansAirQualityVOC_PID_Params.Kp	Air Quality VOC - Fans PID parameters - Proportional gain	1	HR1939	AV3954
FansAirQualityVOC_PID_Params.Ti	Air Quality VOC - Fans PID parameters - Integral time	1	HR1940	PIV3953
DampAirQualityVOC_PID_Params.Kp	Air Quality VOC - Dampers PID parameters - Proportional gain	1	HR1941	AV3955
DampAirQualityVOC_PID_Params.Ti	Air Quality VOC - Dampers PID parameters - Integral time	1	HR1942	PIV3956
QualitySignal	Quality signal used (0: NONE, 1:CO2; 2: VOC;3:CO2 + VOC)	1	HR1943	PIV3959
ModeSanDevOffByBmsOrSched	Mode sanification during off by BMS or scheduler (0: OFF,1:ON,2:Blink)	1	HR1944	PIV3961
SanificationDeviceTimeOn	Sanification device time on	1	HR1945	PIV3962
SanificationDeviceTimeOff	Sanification device time off	1	HR1946	PIV3963
WrkHrs_SanificationDevice.WrkHrs_Thrsh	Sanification device - Working hours threshold (1000hrs)	1	HR1947	PIV3965
WrkHrs_SanificationDevice.WrkHrs_Res	Sanification device - Working hours reset	1	HR1948	PIV3967
PurgeTime	Purge time	1	HR1949	PIV3972
PurgeMode	Purge mode (0:NO AUTO, 1:FIXED TIME, 2:DAILY SCHED, 3: FIXED+DAILY SCHED)	1	HR1950	PIV3973
PurgeHour	Purge start time - Hour	1	HR1951	PIV3974
PurgeMinute	Purge start time - Minute	1	HR1952	PIV3975

Variable	Description	Dim	Modbus	BACnet
BLDC_compressor.Speed_MaxSpeedRpsCustom_Cooling	Maximum speed in cooling mode	1	HR1953	AV3976
BLDC_compressor.Speed_MaxSpeedRpsCustom_Heating	Maximum speed in heating mode	1	HR1954	AV3977
SanificationDeviceOvld.Board_RW	Sanification deivce overload switch - Board selected	1	HR1955	PIV4044
SanificationDeviceOvld.Ch_Id_RW	Sanification deivce overload switch - Channel id selected	1	HR1956	PIV4045
CurrAirQuality_VOC_SetP	Current air quality VOC setpoint	1	HR1957	AV4014
AirQualityVOCSetP_MaxVal	Air quality VOC setpoint - maximum value	1	HR1958	AV4023
AirQualityVOCSetP_MinVal	Air quality VOC setpoint - minimum value	1	HR1959	AV4022
UnitSetP.AirQuality_VOC_SetP.Comfort	Unit setpoints - Air quality VOC - Comfort	1	HR1960	AV4021
UnitSetP.AirQuality_VOC_SetP.Economy	Unit setpoints - Air quality VOC - Economy	1	HR1963	AV4015
UnitSetP.AirQuality_VOC_SetP.PreComfort	Unit setpoints - Air quality VOC - Pre-comfort	1	HR1966	AV4018
DfrEnActions	Defrost enabled actions (0=None, 1=Only phase 1, 2=Only phase 2, 3=Phase 1 + 2)	1	HR1967	PIV4024
OilRecov_CompMinSpeedThrsh	Oil recovery minimun compressor speed for activation	1	HR1968	AV4026
OilRecov_FrcCompSpeed	Oil recovery compressor speed in which the compressor is forced	1	HR1969	AV4027
OilRecov_FrcSpeedT	Oil recovery duration in which the compressor speed is forced	1	HR1970	PIV4028
OilRecov_WaitT	Oil recovery time before activation in which the compressor can run at minimum speed	1	HR1971	PIV4029
EVD_Emb_Circ.EEV_PID_Kp_Cool_Dfr	EEV Proportional gain: cooling mode (Defrost)	1	HR1972	AV4046
EVD_Emb_Circ.EEV_PID_Kp_Heat_Dfr	EEV Proportional gain: heating mode (Defrost)	1	HR1973	AV4047
EVD_Emb_Circ.EEV_PID_Td_Cool_Dfr	EEV Integral time: cooling mode (Defrost)	1	HR1974	AV4048
EVD_Emb_Circ.EEV_PID_Td_Heat_Dfr	EEV Integral time: cooling mode (Defrost)	1	HR1975	AV4049
EVD_Emb_Circ.EEV_PID_Ti_Cool_Dfr	EEV Integral time: cooling mode (Defrost)	1	HR1976	AV4050
EVD_Emb_Circ.EEV_PID_Ti_Heat_Dfr	EEV Integral time: heating mode (Defrost)	1	HR1977	AV4051
FC_FH_Typ	Free cooling/Free heating selection type (0=Temperature, 1=Enthalpy)	1	HR1978	PIV4030
Regulation.FC_DeltaEnth_Act	Freecooling activation delta enthalpy	1	HR1979	AV4031
Regulation.FH_DeltaEnth_Act	Freeheating activation delta enthalpy	1	HR1980	AV4032
GeneralMng.pGDx_HostName_ASCII[1]	PGDx - hostname prefix ASCII	1	HR1981	IV4052
GeneralMng.pGDx_HostName_ASCII[2]	PGDx - hostname prefix ASCII	1	HR1982	IV4053
GeneralMng.pGDx_HostName_ASCII[3]	PGDx - hostname prefix ASCII	1	HR1983	IV4054
GeneralMng.pGDx_HostName_ASCII[4]	PGDx - hostname prefix ASCII	1	HR1984	IV4055
GeneralMng.pGDx_HostName_ASCII[5]	PGDx - hostname prefix ASCII	1	HR1985	IV4056
GeneralMng.pGDx_HostName_ASCII[6]	PGDx - hostname prefix ASCII	1	HR1986	IV4057
FanNr	Fan number enabled via Bus	1	HR1987	PIV4058
Ebmpapst_SupplyFan.SerInterfaceSet_ EBM_2.CfgProtocol.DevAddr	EBM2 Supply - Serial interface settings - Network address for Ebmpapst fan	2	HR1988	PIV4059
Ebmpapst_SupplyFan.SerInterfaceSet_ EBM_3.CfgProtocol.DevAddr	EBM3 Supply - Serial interface settings - Network address for Ebmpapst fan	2	HR1990	PIV4060
Ebmpapst_SupplyFan.SerInterfaceSet_ EBM_4.CfgProtocol.DevAddr	EBM4 Supply - Serial interface settings - Network address for Ebmpapst fan	2	HR1992	PIV4061
Ebmpapst_ReturnFan.SerInterfaceSet_ EBM_2.CfgProtocol.DevAddr	EBM2 Return - Serial interface settings - Network address for Ebmpapst fan	2	HR1994	PIV4062
Ebmpapst_ReturnFan.SerInterfaceSet_ EBM_3.CfgProtocol.DevAddr	EBM3 Return - Serial interface settings - Network address for Ebmpapst fan	2	HR1996	PIV4063
Ebmp3pst_ReturnFan.SerInterfaceSet_ EBM_4.CfgProtocol.DevAddr	EBM4 Return - Serial interface settings - Network address for Ebmpapst fan	2	HR1998	PIV4064
ZiehlAbegg_SupplyFan.SerialInterfa- ce_ZA_2.SerDevCfg.DevAddr	ZA2 Supply - Serial interface parameters - Fan Network address	2	HR2000	PIV4065
ZiehlAbegg_SupplyFan.SerialInterfa- ce_ZA_3.SerDevCfg.DevAddr	ZA3 Supply - Serial interface parameters - Fan Network address	2	HR2002	PIV4066
ZiehlAbegg_SupplyFan.SerialInterfa- ce_ZA_4.SerDevCfg.DevAddr	ZA4 Supply - Serial interface parameters - Fan Network address	2	HR2004	PIV4067
ZiehlAbegg_ReturnFan.SerialInterfa- ce_ZA_2.SerDevCfg.DevAddr	ZA2 Return - Serial interface parameters - Fan Network address	2	HR2006	PIV4068
ZiehlAbegg_ReturnFan.SerialInterfa- ce_ZA_3.SerDevCfg.DevAddr	ZA3 Return - Serial interface parameters - Fan Network address	2	HR2008	PIV4069
ZiehlAbegg_ReturnFan.SerialInterfa- ce_ZA_4.SerDevCfg.DevAddr	ZA4 Return - Serial interface parameters - Fan Network address	2	HR2010	PIV4070
WrkHrs_SupplyFan_2.WrkHrs_Thrsh	Supply Fan 2- Working hours threshold (1000hrs)	1	HR2012	PIV4255
WrkHrs_SupplyFan_2.WrkHrs_Res	Supply Fan 2- Working hours reset	1	HR2013	PIV4256
WrkHrs_SupplyFan_3.WrkHrs_Thrsh	Supply Fan 3- Working hours threshold (1000hrs)	1	HR2014	PIV4257
WrkHrs_SupplyFan_3.WrkHrs_Res	Supply Fan 3- Working hours reset	1	HR2015	PIV4258
WrkHrs_SupplyFan_4.WrkHrs_Thrsh	Supply Fan 4- Working hours threshold (1000hrs)	1	HR2016	PIV4259
WrkHrs_SupplyFan_4.WrkHrs_Res	Supply Fan 4- Working hours reset	1	HR2017	PIV4260
WrkHrs_ReturnFan_2.WrkHrs_Thrsh	Return Fan 2- Working hours threshold (1000hrs)	1	HR2018	PIV4261
WrkHrs_ReturnFan_2.WrkHrs_Res	Return Fan 2- Working hours reset	1	HR2019	PIV4262
WrkHrs_ReturnFan_3.WrkHrs_Thrsh	Return Fan 3- Working hours threshold (1000hrs)	1	HR2020	PIV4263
WrkHrs_ReturnFan_3.WrkHrs_Res	Return Fan 3- Working hours reset	1	HR2021	PIV4264
WrkHrs_ReturnFan_4.WrkHrs_Thrsh	Return Fan 4- Working hours threshold (1000hrs)	1	HR2022	PIV4265
WrkHrs_ReturnFan_4.WrkHrs_Res	Return Fan 4- Working hours reset	1	HR2023	PIV4266
FireSmokeMngTyp	Fire Smoke management (0=Stop fans - 1=Only supply fans - 2= Only return fans - 3=No stop)	1	HR2024	PIV4285
IOs.CstSerPrb_DevAddr[1]	Custom serial probe 1 - device address	2	HR2025	PIV4296
IOs.CstSerPrb_DevAddr[2]	Custom serial probe 2 - device address	2	HR2027	PIV4297
IOs.CstSerPrb_DevAddr[3]	Custom serial probe 3 - device address	2	HR2029	PIV4298
IOs.CstSerPrb_DevAddr[4]	Custom serial probe 4 - device address	2	HR2031	PIV4299
IOs.CstSerPrb_DevAddr[5]	Custom serial probe 5 - device address	2	HR2033	PIV4300
CstPrbCfg.Temp1Adr	Custom serial probe - Serial address - Temp1	1	HR2035	PIV4301
CstPrbCfg.Temp2Adr	Custom serial probe - Serial address – Temp2	1	HR2036	PIV4302
CstPrbCfg.Hum1Adr	Custom serial probe - Serial address - Hum1	1	HR2037	PIV4303
CstPrbCfg.Hum2Adr	Custom serial probe - Serial address – Hum2	1	HR2038	PIV4304
CstPrbCfg.Press1Adr	Custom serial probe - Serial address - Press1	1	HR2039	PIV4305
CstPrbCfg.Press2Adr	Custom serial probe - Serial address – Press2	1	HR2040	PIV4306
CstPrbCfg.Flow1Adr	Custom serial probe - Serial address - Flow1	1	HR2041	PIV4307
CstPrbCfg.Flow2Adr	Custom serial probe - Serial address – Flow2	1	HR2042	PIV4308
CstPrbCfg.Temp1Fact	Custom serial probe - Factor - Temp1	1	HR2043	IV4309
CstPrbCfg.Temp2Fact	Custom serial probe - Factor – Temp2	1	HR2044	IV4310
CstPrbCfg.Hum1Fact	Custom serial probe - Factor - Hum1	1	HR2045	IV4311
CstPrbCfg.Hum2Fact	Custom serial probe - Factor – Hum2	1	HR2046	IV4312
CstPrbCfg.Press1Fact	Custom serial probe - Factor - Press1	1	HR2047	IV4313
CstPrbCfg.Press2Fact	Custom serial probe - Factor – Press2	1	HR2048	IV4314
CstPrbCfg.Flow1Fact	Custom serial probe - Factor - Flow1	1	HR2049	IV4315
CstPrbCfg.Flow2Fact	Custom serial probe - Factor – Flow2	1	HR2050	IV4316
CstPrbCfg.TempAlmMin	Custom serial probe - Temp. minimum value limit for trigger alarm	2	HR2051	AV4317
CstPrbCfg.TempAlmMax	Custom serial probe - Temp. maximum value limit for trigger alarm	2	HR2053	AV4318
CstPrbCfg.HumAlmMin	Custom serial probe - Press. minimum value limit for trigger alarm	2	HR2055	AV4319
CstPrbCfg.HumAlmMax	Custom serial probe - Press. maximum value limit for trigger alarm	2	HR2057	AV4320
CstPrbCfg.PressAlmMin	Custom serial probe - Press. minimum value limit for trigger alarm	2	HR2059	AV4321
CstPrbCfg.PressAlmMax	Custom serial probe - Press. maximum value limit for trigger alar	2	HR2061	AV4322

Variable	Description	Dim	Modbus	BACnet
CstPrbCfg.FlowAlmMin	Custom serial probe - Flow minimum value limit for trigger alarm	2	HR2063	AV4323
CstPrbCfg.FlowAlmMax	Custom serial probe - Flow maximum value limit for trigger alarm	2	HR2065	AV4324
CstPrbCfg.Timeout	Custom serial probe - Modbus - Timeout	1	HR2067	PIV4325
CstPrbCfg.CmdDelay	Custom serial probe - Modbus - Cmd delay	1	HR2068	PIV4326
IAQ_PrbCfg.VOC_sensibility	IAQ configuration - VOC sensibility (0=disabled,1=low,2=medium,3=high)	1	HR2069	PIV4327
IAQ_PrbCfg.Timeout	IAQ configuration - Modbus - Timeout	1	HR2070	PIV4328
IAQ_PrbCfg.CmdDelay	IAQ configuration - Modbus - Cmd delay	1	HR2071	PIV4329
HumiSteamMng.DevAddr_UEY	HumiSteam - Device address	2	HR2072	PIV4339
HumiSteamMng.Timeout_UEY	HumiSteam - Modbus timeout for UEY	2	HR2074	PIV4340
HumiSteamMng.CmdDelay_UEY	HumiSteam - Modbus command delay for UEY	2	HR2076	PIV4341
SummerWinterDT	Summer/Winter mode change delay time	1	HR2078	PIV4352
SummerWinterSel	Summer/Winter selection type	1	HR2079	PIV4353
CoolHeat_Chg_Offset	Cooling/Heating change offset	2	HR2080	AV4354
MainCoilCoolHeat_Din.Board_RW	Main coil cool/heat - digital input - Board selected	1	HR2082	PIV4355
MainCoilCoolHeat_Din.Ch_Id_RW	Main coil cool/heat - digital input - Channel id selected	1	HR2083	PIV4356
UnitAutoModeCfg	Unit automatic mode configuration (0: Standard; 1: Energy saving)	1	HR2084	PIV4357
SummerEndDay	Summer season ending day	1	HR2085	PIV4358
SummerEndMonth	Summer season ending month	1	HR2086	PIV4359
SummerStartDay	Summer season starting day	1	HR2087	PIV4360
SummerStartMonth	Summer season starting month	1	HR2088	PIV4361
Fans_regulation.RetFan_PID_Params.DeadBand	Return fan - PID parameters - Dead band	2	HR2089	AV4374
Fans_regulation.RetFan_PID_Params.Kp	Return fan - PID parameters - Proportional gain	2	HR2091	AV4375
Fans_regulation.RetFan_PID_Params.Ti	Return fan - PID parameters - Integral time	1	HR2093	PIV4376
GenericAin1.Board_RW	Generic Ain1 - Board selected	1	HR2094	PIV4381
GenericAin1.Ch_Id_RW	Generic Ain1 - Channel id selected	1	HR2095	PIV4382
GenericAin1.Ch_Type_RW	Generic Ain1 - Type probe used	1	HR2096	PIV4383
GenericAin1.MinVal_RW	Generic Ain1 - Minimum value	1	HR2097	AV4384
GenericAin1.MaxVal_RW	Generic Ain1 - Maximum value	1	HR2098	AV4385
GenericAin1.Offset_RW	Generic Ain1 - Offset	1	HR2099	AV4386
GenericAin1.ChFilter_RW	Generic Ain1 - Filter channel	1	HR2100	PIV4387
GenericAin2.Board_RW	Generic Ain2 - Board selected	1	HR2101	PIV4395
GenericAin2.Ch_Id_RW	Generic Ain2 - Channel id selected	1	HR2102	PIV4396
GenericAin2.Ch_Type_RW	Generic Ain2 - Type probe used	1	HR2103	PIV4397
GenericAin2.MinVal_RW	Generic Ain2 - Minimum value	1	HR2104	AV4398
GenericAin2.MaxVal_RW	Generic Ain2 - Maximum value	1	HR2105	AV4399
GenericAin2.Offset_RW	Generic Ain2 - Offset	1	HR2106	AV4400
GenericAin2.ChFilter_RW	Generic Ain2 - Filter channel	1	HR2107	PIV4401
GenericAin3.Board_RW	Generic Ain3 - Board selected	1	HR2108	PIV4409
GenericAin3.Ch_Id_RW	Generic Ain3 - Channel id selected	1	HR2109	PIV4410
GenericAin3.Ch_Type_RW	Generic Ain3 - Type probe used	1	HR2110	PIV4411
GenericAin3.MinVal_RW	Generic Ain3 - Minimum value	1	HR2111	AV4412
GenericAin3.MaxVal_RW	Generic Ain3 - Maximum value	1	HR2112	AV4413
GenericAin3.Offset_RW	Generic Ain3 - Offset	1	HR2113	AV4414
GenericAin3.ChFilter_RW	Generic Ain3 - Filter channel	1	HR2114	PIV4415
GenericAin4.Board_RW	Generic Ain4 - Board selected	1	HR2115	PIV4423
GenericAin4.Ch_Id_RW	Generic Ain4 - Channel id selected	1	HR2116	PIV4424
GenericAin4.Ch_Type_RW	Generic Ain4 - Type probe used	1	HR2117	PIV4425
GenericAin4.MinVal_RW	Generic Ain4 - Minimum value	1	HR2118	AV4426
GenericAin4.MaxVal_RW	Generic Ain4 - Maximum value	1	HR2119	AV4427
GenericAin4.Offset_RW	Generic Ain4 - Offset	1	HR2120	AV4428
GenericAin4.ChFilter_RW	Generic Ain4 - Filter channel	1	HR2121	PIV4429
GenericAin5.Board_RW	Generic Ain5 - Board selected	1	HR2122	PIV4437
GenericAin5.Ch_Id_RW	Generic Ain5 - Channel id selected	1	HR2123	PIV4438
GenericAin5.Ch_Type_RW	Generic Ain5 - Type probe used	1	HR2124	PIV4439
GenericAin5.MinVal_RW	Generic Ain5 - Minimum value	1	HR2125	AV4440
GenericAin5.MaxVal_RW	Generic Ain5 - Maximum value	1	HR2126	AV4441
GenericAin5.Offset_RW	Generic Ain5 - Offset	1	HR2127	AV4442
GenericAin5.ChFilter_RW	Generic Ain5 - Filter channel	1	HR2128	PIV4443
GenericDin1.Board_RW	Generic Din1 - digital input - Board selected	1	HR2129	PIV4452
GenericDin1.Ch_Id_RW	Generic Din1 - digital input - Channel id selected	1	HR2130	PIV4453
GenericDin2.Board_RW	Generic Din2 - digital input - Board selected	1	HR2131	PIV4459
GenericDin2.Ch_Id_RW	Generic Din2 - digital input - Channel id selected	1	HR2132	PIV4460
GenericDin3.Board_RW	Generic Din3 - digital input - Board selected	1	HR2133	PIV4466
GenericDin3.Ch_Id_RW	Generic Din3 - digital input - Channel id selected	1	HR2134	PIV4467
GenericDin4.Board_RW	Generic Din4 - digital input - Board selected	1	HR2135	PIV4473
GenericDin4.Ch_Id_RW	Generic Din4 - digital input - Channel id selected	1	HR2136	PIV4474
GenericDin5.Board_RW	Generic Din5 - digital input - Board selected	1	HR2137	PIV4480
GenericDin5.Ch_Id_RW	Generic Din5 - digital input - Channel id selected	1	HR2138	PIV4481
GenericDin1_Alrm_MngTyp	Generic Ain1 - alarm management (0: Disabled; 1: Only Warning; 2: Alarm; 3: Alarm with timeout)	1	HR2139	PIV4482
GenericDin2_Alrm_MngTyp	Generic Ain2 - alarm management (0: Disabled; 1: Only Warning; 2: Alarm; 3: Alarm with timeout)	1	HR2140	PIV4483
GenericDin3_Alrm_MngTyp	Generic Ain3 - alarm management (0: Disabled; 1: Only Warning; 2: Alarm; 3: Alarm with timeout)	1	HR2141	PIV4484
GenericDin4_Alrm_MngTyp	Generic Ain4 - alarm management (0: Disabled; 1: Only Warning; 2: Alarm; 3: Alarm with timeout)	1	HR2142	PIV4485
GenericDin5_Alrm_MngTyp	Generic Ain5 - alarm management (0: Disabled; 1: Only Warning; 2: Alarm; 3: Alarm with timeout)	1	HR2143	PIV4486
Regulation.FC_ExtTempLimit	Free cooling external temperature	1	HR2144	AV4497
Regulation.FH_ExtTempLimit	Free heating external temperature limit	1	HR2145	AV4498
IEC_ManModeVal	IEC: manual mode value	1	HR2146	AV4500
Regulation.FanTempReg_Kp	Regulation fans speed: proportional gain	1	HR2147	AV4501
Regulation.FanTempReg_Td	Regulation fans speed: derivative time	1	HR2148	PIV4502
Fans _regulation.RetAirFlw_K_Factor	Return fan - K factor for air flow calculations	1	HR2149	AV4503
BMS_Reg_AnalogPrbMap[1]	BMS registers - Analog map - 1	1	HR2150	AV4509
BMS_Reg_AnalogPrbMap[2]	BMS registers - Analog map – 2	1	HR2151	AV4510
BMS_Reg_AnalogPrbMap[3]	BMS registers - Analog map – 3	1	HR2152	AV4511
BMS_Reg_AnalogPrbMap[4]	BMS registers - Analog map – 4	1	HR2153	AV4512
BMS_Reg_AnalogPrbMap[5]	BMS registers - Analog map – 5	1	HR2154	AV4513
OA_Vlv_Open.Board_RW	Outdoor air pre-treatment floating valve open - Board selected	1	HR2155	PIV4534
OA_Vlv_Open.Ch_Id_RW	Outdoor air pre-treatment floating valve open - Channel id selected	1	HR2156	PIV4535
OA_Vlv_Open.T_On_RW	Outdoor air pre-treatment floating valve open - Time on cycle relay	1	HR2157	PIV4536
OA_Vlv_Open.T_Off_RW	Outdoor air pre-treatment floating valve open - Time off cycle releay	1	HR2158	PIV4537
OA_Vlv_Open.Ch_Type_RW	Outdoor air pre-treatment floating valve open - Digital output type	1	HR2159	PIV4538
OA_Vlv_Close.Board_RW	Outdoor air pre-treatment floating valve close - Board selected	1	HR2160	PIV4539
OA_Vlv_Close.Ch_Id_RW	Outdoor air pre-treatment floating valve close - Channel id selected	1	HR2161	PIV4540
OA_Vlv_Close.T_On_RW	Outdoor air pre-treatment floating valve close - Time on cycle relay	1	HR2162	PIV4541
OA_Vlv_Close.T_Off_RW	Outdoor air pre-treatment floating valve close - Time off cycle releay	1	HR2163	PIV4542
OA_Vlv_Close.Ch_Type_RW	Outdoor air pre-treatment floating valve close - Digital output type	1	HR2164	PIV4543
OA_CoilManModeVal	Outdoor air pre-treatment coil manual mode value	1	HR2165	AV4544
OA_Coil_Typ	Outdoor air pre-treatment coil type	1	HR2166	PIV4545

Variable	Description	Dim	Modbus	BACnet
OA_CoilWarmUpReq	Outdoor air pre-treatment coil warm up request	1	HR2167	AV4546
RegPrbErrOA_CoilReq	Outdoor air pre-treatment coil request in case of regulation probe error	1	HR2168	AV4547
WrkHrs_OA_CoilAout.WrkHrs_Thrsh	Outdoor air pre-treatment coil analog output - Working hours threshold (1000hrs)	1	HR2169	PIV4548
WrkHrs_OA_CoilAout.WrkHrs_Res	Outdoor air pre-treatment coil analog output - Working hours reset	1	HR2170	PIV4549
WrkHrs_OA_CoilStep1.WrkHrs_Thrsh	Outdoor air pre-treatment coil step 1 - Working hours threshold (1000hrs)	1	HR2171	PIV4550
WrkHrs_OA_CoilStep1.WrkHrs_Res	Outdoor air pre-treatment coil step 1 - Working hours reset	1	HR2172	PIV4551
WrkHrs_OA_CoilStep2.WrkHrs_Thrsh	Outdoor air pre-treatment coil step 2 - Working hours threshold (1000hrs)	1	HR2173	PIV4552
WrkHrs_OA_CoilStep2.WrkHrs_Res	Outdoor air pre-treatment coil step 2 - Working hours reset	1	HR2174	PIV4553
WrkHrs_OA_CoilStep3.WrkHrs_Thrsh	Outdoor air pre-treatment coil step 3 - Working hours threshold (1000hrs)	1	HR2175	PIV4554
WrkHrs_OA_CoilStep3.WrkHrs_Res	Outdoor air pre-treatment coil step 3 - Working hours reset	1	HR2176	PIV4555
WrkHrs_OA_CoilStep4.WrkHrs_Thrsh	Outdoor air pre-treatment coil step 4 - Working hours threshold (1000hrs)	1	HR2177	PIV4556
WrkHrs_OA_CoilStep4.WrkHrs_Res	Outdoor air pre-treatment coil step 4 - Working hours reset	1	HR2178	PIV4557
OA_Coil_StpN	Outdoor air pre-treatment coil steps number	1	HR2179	PIV4558
OA_Coil_PID_Params.Kp	Outdoor air pre-treatment coil PID parameters - Proportional gain	1	HR2180	AV4559
OA_Coil_PID_Params.Ti	Outdoor air pre-treatment coil PID parameters - Integral time	1	HR2181	PIV4560
AFreezeOA_CoilReq	Outdoor air pre-treatment coil request during antifreeze off status	1	HR2182	PIV4561
OA_RegTyp	OA regulation type (0:OA probe;1: Supply only; 2:Return only; 3: External only; 4: Disabled)	1	HR2183	PIV4575
OA_CoilTempSetP	Outdoor air pre-treatment - temperature setpoint	1	HR2184	AV4576
OA_CoilActMode	Outdoor air pre-treatment coil - PID enable (0=Always,1=Only DX defrost)	1	HR2185	PI4577

Tab. 11.q

11.1.19 Input registers

Variable	Description	Dim	Modbus	BACnet
VDI_Conf[0].Month	Month before the required inspection	1	IR001	PIV3393
VDI_Conf[1].Month	Month before the required inspection	1	IR002	PIV3394
VDI_Conf[2].Month	Month before the required inspection	1	IR003	PIV3395
VDI_Conf[3].Month	Month before the required inspection	1	IR004	PIV3396
VDI_Conf[4].Month	Month before the required inspection	1	IR005	PIV3397
VDI_Conf[5].Month	Month before the required inspection	1	IR006	PIV3398
VDI_Conf[6].Month	Month before the required inspection	1	IR007	PIV3399
VDI_Conf[7].Month	Month before the required inspection	1	IR008	PIV3400
VDI_Conf[8].Month	Month before the required inspection	1	IR009	PIV3401
VDI_Conf[9].Month	Month before the required inspection	1	IR010	PIV3402
VDI_Conf[10].Month	Month before the required inspection	1	IR011	PIV3403
VDI_Conf[11].Month	Month before the required inspection	1	IR012	PIV3404
VDI_Conf[12].Month	Month before the required inspection	1	IR013	PIV3405
VDI_Conf[13].Month	Month before the required inspection	1	IR014	PIV3406
VDI_Conf[14].Month	Month before the required inspection	1	IR015	PIV3407
VDI_Conf[15].Month	Month before the required inspection	1	IR016	PIV3408
VDI_Conf[16].Month	Month before the required inspection	1	IR017	PIV3409
VDI_Conf[17].Month	Month before the required inspection	1	IR018	PIV3410
VDI_Conf[18].Month	Month before the required inspection	1	IR019	PIV3411
VDI_Conf[19].Month	Month before the required inspection	1	IR020	PIV3412
VDI_Conf[20].Month	Month before the required inspection	1	IR021	PIV3413
VDI_Conf[21].Month	Month before the required inspection	1	IR022	PIV3414
VDI_Conf[22].Month	Month before the required inspection	1	IR023	PIV3415
VDI_Conf[23].Month	Month before the required inspection	1	IR024	PIV3416
VDI_Conf[24].Month	Month before the required inspection	1	IR025	PIV3417
VDI_Conf[25].Month	Month before the required inspection	1	IR026	PIV3418
VDI_Conf[26].Month	Month before the required inspection	1	IR027	PIV3419
VDI_Conf[27].Month	Month before the required inspection	1	IR028	PIV3420
VDI_Conf[28].Month	Month before the required inspection	1	IR029	PIV3421
SupplyTemp.Uom_W	Supply temperature - Uom analog input	1	IR042	PIV3434
SupplyTemp.Val_Hw_R	Supply temperature - Value reads from board	1	IR043	AV3435
SupplyHum.Uom_W	Supply humidity - Uom analog input	1	IR045	PIV3437
SupplyHum.Val_Hw_R	Supply humidity - Value reads from board	1	IR046	AV3438
SupplyHum.Val_R	Supply humidity	1	IR047	AV3439
RetTemp.Uom_W	Return temperature - Uom analog input	1	IR048	PIV3440
RetTemp.Val_Hw_R	Return temperature - Value reads from board	1	IR049	AV3441
RetTemp.Val_R	Return temperature	1	IR050	AV3442
RetHum.Uom_W	Return humidity - Uom analog input	1	IR051	PIV3443
RetHum.Val_Hw_R	Return humidity - Value reads from board	1	IR052	AV3444
RetHum.Val_R	Return humidity	1	IR053	AV3445
RoomTemp.Uom_W	Room temperature - Uom analog input	1	IR054	PIV3446
RoomTemp.Val_Hw_R	Room temperature - Value reads from board	1	IR055	AV3447
RoomTemp.Val_R	Room temperature	1	IR056	AV3448
RoomHum.Uom_W	Room humidity - Uom analog input	1	IR057	PIV3449
RoomHum.Val_Hw_R	Room humidity - Value reads from board	1	IR058	AV3450
RoomHum.Val_R	Room humidity	1	IR059	AV3451
ExtTemp.Uom_W	Fresh air temperature - Uom analog input	1	IR060	PIV3452
ExtTemp.Val_Hw_R	Fresh air temperature - Value reads from board	1	IR061	AV3453
ExtHum.Uom_W	Fresh air humidity - Uom analog input	1	IR063	PIV3455
ExtHum.Val_Hw_R	Fresh air humidity - Value reads from board	1	IR064	AV3456
ExtHum.Val_R	Fresh air humidity	1	IR065	AV3457
ExhTemp.Uom_W	Exhaust temperature - Uom analog input	1	IR066	PIV3458
ExhTemp.Val_Hw_R	Exhaust temperature - Value reads from board	1	IR067	AV3459
ExhTemp.Val_R	Exhaust temperature	1	IR068	AV3460
ExhHum.Uom_W	Exhaust humidity - Uom analog input	1	IR069	PIV3461
ExhHum.Val_Hw_R	Exhaust humidity - Value reads from board	1	IR070	AV3462
ExhHum.Val_R	Exhaust humidity	1	IR071	AV3463
AFreezeTemp.Uom_W	Antifreeze temperature - Uom analog input	1	IR072	PIV3464
AFreezeTemp.Val_Hw_R	Antifreeze temperature - Value reads from board	1	IR073	AV3465
AFreezeTemp.Val_R	Antifreeze temperature	1	IR074	AV3466
SatTemp.Uom_W	Saturation temperature - Uom analog input	1	IR075	PIV3467
SatTemp.Val_Hw_R	Saturation temperature - Value reads from board	1	IR076	AV3468
SatHum.Uom_W	Saturation humidity - Uom analog input	1	IR078	PIV3470
SatHum.Val_Hw_R	Saturation humidity - Value reads from board	1	IR079	AV3471
SatHum.Val_R	Saturation humidity	1	IR080	AV3472
OA_Temp.Uom_W	Outdoor air pre-treatment temperature - Uom analog input	1	IR081	PIV3473
OA_Temp.Val_Hw_R	Outdoor air pre-treatment temperature - Value reads from board	1	IR082	AV3474
OA_Temp.Val_R	Outdoor air pre-treatment temperature	1	IR083	AV3475
SupplyAirP.Uom_W	Supply air pressure - Uom analog input	1	IR084	PIV3476

Variable	Description	Dim	Modbus	BACnet
SupplyAirP.Val_Hw_R	Supply air pressure - Value reads from board	1	IR085	AV3477
RetAirP.Uom_W	Return air pressure - Uom analog input	1	IR087	PIV3479
RetAirP.Val_Hw_R	Return air pressure - Value reads from board	1	IR088	AV3480
AirQuality_CO2.Uom_W	CO2 sensor - Uom analog input	1	IR090	PIV3482
AirQuality_CO2.Val_Hw_R	CO2 sensor - Value reads from board	1	IR091	AV3483
AirQuality_VOC.Uom_W	VOC sensor - Uom analog input	1	IR093	PIV3485
AirQuality_VOC.Val_Hw_R	VOC sensor - Value reads from board	1	IR094	AV3486
AirQuality_VOC.Val_R	VOC sensor	1	IR095	AV3487
DscgP.Uom_W	Discharge pressure - Uom analog input	1	IR096	PIV3488
DscgP.Val_Hw_R	Discharge pressure - Value reads from board	1	IR097	AV3489
DscgT.Uom_W	Discharge temperature - Uom analog input	1	IR099	PIV3491
DscgT.Val_Hw_R	Discharge temperature - Value reads from board	1	IR100	AV3492
SuctP.Uom_W	Suction pressure - Uom analog input	1	IR102	PIV3494
SuctP.Val_Hw_R	Suction pressure - Value reads from board	1	IR103	AV3495
SuctT.Uom_W	Suction temperature - Uom analog input	1	IR105	PIV3497
SuctT.Val_Hw_R	Suction temperature - Value reads from board	1	IR106	AV3498
OA_CoilWaterTemp.Uom_W	Outdoor air pre-treatment coil water temperature - Uom analog input	1	IR108	PIV3500
OA_CoilWaterTemp.Val_Hw_R	Outdoor air pre-treatment coil water temperature - Value reads from board	1	IR109	AV3501
OA_CoilWaterTemp.Val_R	Outdoor air pre-treatment coil water temperature	1	IR110	AV3502
PreHeatCoilWaterTemp.Uom_W	Preheat coil water temperature - Uom analog input	1	IR111	PIV3503
PreHeatCoilWaterTemp.Val_Hw_R	Preheat coil water temperature - Value reads from board	1	IR112	AV3504
PreHeatCoilWaterTemp.Val_R	Preheat coil water temperature	1	IR113	AV3505
MainCoilWaterTemp.Uom_W	Main coil water temperature - Uom analog input	1	IR114	PIV3506
MainCoilWaterTemp.Val_Hw_R	Main coil water temperature - Value reads from board	1	IR115	AV3507
MainCoilWaterTemp.Val_R	Main coil water temperature	1	IR116	AV3508
ReHeatCoilWaterTemp.Uom_W	Postheat coil water temperature - Uom analog input	1	IR117	PIV3509
	Postheat coil water temperature - Value reads from board	1	IR118	AV3510
	Postheat coil water temperature	1	IR119	AV3511
Variable	Description	Dim	Modbus	BACnet
ReHeatCoilWaterTemp.Val_Hw_R	Postheat coil water temperature - Value reads from board	1	IR118	AV3510
ReHeatCoilWaterTemp.Val_R	Postheat coil water temperature	1	IR119	AV3511
AuxPrb_1.Uom_W	Auxiliary probe 1 - Uom analog input	1	IR120	PIV3512
AuxPrb_1.Val_Hw_R	Auxiliary probe 1 - Value reads from board	1	IR121	AV3513
AuxPrb_1.Val_R	Auxiliary probe 1	1	IR122	AV3514
AuxPrb_2.Uom_W	Auxiliary probe 2 - Uom analog input	1	IR123	PIV3515
AuxPrb_2.Val_Hw_R	Auxiliary probe 2 - Value reads from board	1	IR124	AV3516
AuxPrb_2.Val_R	Auxiliary probe 2	1	IR125	AV3517
AuxPrb_3.Uom_W	Auxiliary probe 3 - Uom analog input	1	IR126	PIV3518
AuxPrb_3.Val_Hw_R	Auxiliary probe 3 - Value reads from board	1	IR127	AV3519
AuxPrb_3.Val_R	Auxiliary probe 3	1	IR128	AV3520
AuxPrb_4.Uom_W	Auxiliary probe 4 - Uom analog input	1	IR129	PIV3521
AuxPrb_4.Val_Hw_R	Auxiliary probe 4 - Value reads from board	1	IR130	AV3522
AuxPrb_4.Val_R	Auxiliary probe 4	1	IR131	AV3523
Ain_SetP.Uom_W	Setpoint by AIN - Uom analog input	1	IR132	PIV3524
Ain_SetP.Val_Hw_R	Setpoint by AIN - Value reads from board	1	IR133	AV3525
Ain_SetP.Val_R	Setpoint by AIN	1	IR134	AV3526
SupplyRecoveryTemp.Uom_W	Supply recovery temperature - Uom analog input	1	IR135	PIV3527
SupplyRecoveryTemp.Val_Hw_R	Supply recovery temperature - Value reads from board	1	IR136	AV3528
SupplyRecoveryTemp.Val_R	Supply recovery temperature	1	IR137	AV3529
RetRecoveryTemp.Uom_W	Return recovery temperature - Uom analog input	1	IR138	PIV3530
RetRecoveryTemp.Val_Hw_R	Return recovery temperature - Value reads from board	1	IR139	AV3531
RetRecoveryTemp.Val_R	Return recovery temperature	1	IR140	AV3532
HepaFilt_1.Uom_W	Hepa filter 1 - Uom analog input	1	IR141	PIV3533
HepaFilt_1.Val_Hw_R	Hepa filter 1 - Value reads from board	1	IR142	AV3534
HepaFilt_1.Val_R	Hepa filter 1	1	IR143	AV3535
HepaFilt_2.Uom_W	Hepa filter 2 - Uom analog input	1	IR144	PIV3536
HepaFilt_2.Val_Hw_R	Hepa filter 2 - Value reads from board	1	IR145	AV3537
HepaFilt_2.Val_R	Hepa filter 2	1	IR146	AV3538
SupplyFan_Aout.Val_Hw_R	Supply fan - Hardware value writes from board	1	IR148	AV3540
RetFan_Aout.Val_Hw_R	Return fan - Hardware value writes from board	1	IR150	AV3542
BypassDamp_Aout.Val_Hw_R	Bypass damper - Hardware value writes from board	1	IR152	AV3544
MixingDamp_Aout.Val_Hw_R	Mixing damper - Hardware value writes from board	1	IR154	AV3546
FreshAirDamp_Aout.Val_Hw_R	Fresh air damper - Hardware value writes from board	1	IR156	AV3548
ReHeatCoil_Aout.Val_W	Reheat heater	1	IR157	AV3549
ReHeatCoil_Aout.Val_Hw_R	Reheat heater - Hardware value writes from board	1	IR158	AV3550
PreHeatCoil_Aout.Val_W	Pre-Heating heater	1	IR159	AV3551
PreHeatCoil_Aout.Val_Hw_R	Pre-Heating heater - Hardware value writes from board	1	IR160	AV3552
OA_Coil_Aout.Val_W	Outdoor air pre-treatment heater	1	IR161	AV3553
OA_Coil_Aout.Val_Hw_R	Outdoor air pre-treatment heater - Hardware value writes from board	1	IR162	AV3554
MainCoil_Aout.Val_W	Main coil valve	1	IR163	AV3555
MainCoil_Aout.Val_Hw_R	Main coil valve - Hardware value writes from board	1	IR164	AV3556
ThrmlWheel_Aout.Val_Hw_R	Thermal wheel - Hardware value writes from board	1	IR166	AV3558
Humidifier_Aout.Val_W	Humidifier	1	IR167	AV3559
Humidifier_Aout.Val_Hw_R	Humidifier - Hardware value writes from board	1	IR168	AV3560
ExhAirDamp_Aout.Val_Hw_R	Exhaust air damper - Hardware value writes from board	1	IR170	AV3562
AuxAout_1.Val_Hw_R	Auxiliary output 1 - Hardware value writes from board	1	IR172	AV3564
AuxAout_2.Val_Hw_R	Auxiliary output 2 - Hardware value writes from board	1	IR174	AV3566
AuxAout_3.Val_Hw_R	Auxiliary output 3 - Hardware value writes from board	1	IR176	AV3568
AuxAout_4.Val_Hw_R	Auxiliary output 4 - Hardware value writes from board	1	IR178	AV3570
IEC_Aout.Val_W	IEC	1	IR179	AV3571
IEC_Aout.Val_Hw_R	IEC - Hardware value writes from board	1	IR180	AV3572
Recovery_Aout.Val_W	Recovery pump	1	IR181	AV3573
Recovery_Aout.Val_Hw_R	Recovery pump - Hardware value writes from board	1	IR182	AV3574
SupplyAirDamp_Aout.Val_W	Supply air damper	1	IR183	AV3575
SupplyAirDamp_Aout.Val_Hw_R	Supply air damper - Hardware value writes from board	1	IR184	AV3576
RetAirDamp_Aout.Val_W	Return air damper	1	IR185	AV3577
RetAirDamp_Aout.Val_Hw_R	Return air damper - Hardware value writes from board	1	IR186	AV3578
AlarmsMng.AlrmHour	Alarm timestamp to which alarm index refers, hour	1	IR187	PIV3579
AlarmsMng.AlrmMinute	Alarm timestamp to which alarm index refers, minute	1	IR188	PIV3580
AlarmsMng.AlrmDay	Alarm timestamp to which alarm index refers, day	1	IR189	PIV3581
AlarmsMng.AlrmMonth	Alarm timestamp to which alarm index refers, month	1	IR190	PIV3582
AlarmsMng.AlrmYear	Alarm timestamp to which alarm index refers, year	1	IR191	PIV3583
AlarmsMng.AlrmLogHour	Alarm log. timestamp to which alarm log. index refers, hour	1	IR192	PIV3584
AlarmsMng.AlrmLogMinute	Alarm log. timestamp to which alarm log. index refers, minute	1	IR193	PIV3585
AlarmsMng.AlrmLogDay	Alarm log. timestamp to which alarm log. index refers, day	1	IR194	PIV3586
AlarmsMng.AlrmLogMonth	Alarm log. timestamp to which alarm log. index refers, month	1	IR195	PIV3587
AlarmsMng.AlrmLogYear	Alarm log. timestamp to which alarm log. index refers, year	1	IR196	PIV3588

Variable	Description	Dim	Modbus	BACnet
AlarmsMng.ErrParamExpAlrms	-	2	IR197	IV3589
Scheduler_OnOffUnit.OnOffByKeb_SecLeft	Seconds left before switching on/ff by keyboard	1	IR199	IV3590
Scheduler_OnOffUnit.PartyMode_CntDwn	Party mode countdown	2	IR200	PIV3591
Dampers.DampersStatus	0: Off; 1: Startup; 2: On; 3: Shutdown;	1	IR202	PIV3592
MaskMng.HeatExchgReq	-	1	IR203	AV3593
MaskMng.HeatExchgStatusSyn	Heat exchanger status (0: recovery; 1: freecooling; 2: freeheating; 3: defrost; 4: bypass)	1	IR204	PIV3594
HeatExchanger.HeatExchgEfficiency	Heat exchanger efficiency (see comment on the algorithm for the formula)	1	IR205	AV3595
RetAirFlwVal	Return air flw value	1	IR206	AV3596
AirFlwVal	Input probe air flow	1	IR207	AV3597
SupplyFanReq	Supply fan request	1	IR208	AV3598
ComStatus_Supply_EBM_1	Communication status of supply ebm fan (0:Online; 1:Offline; 2:Invalid packet; 3:Exception; 4:Connecting;)	1	IR209	PIV3599
SupplyFanAct	Percentage of activation of ebmpapst supply fan	1	IR210	PIV3600
RetFanReq	Return fan request	1	IR211	AV3601
ComStatus_Return_EBM_1	Communication status of return ebm fan (0:Online; 1:Offline; 2:Invalid packet; 3:Exception; 4:Connecting;)	1	IR212	PIV3602
RetFanAct	Percentage of activation of ebmpapst return fan	1	IR213	PIV3603
Fans_regulation.RetFan_AirQuality_SetPOffs	Return fan - Air quality setpoint offset	1	IR214	AV3604
Fans_regulation.SupplyFan_AirQuality_SetPOffs	Supply fan - Air quality setpoint offset	1	IR215	AV3605
AirQuality_Damps_RegReq	Air Quality - Dampers regulation request	1	IR216	AV3606
AirQuality_Fans_RegReq	Air Quality - Fans regulation request	1	IR217	AV3607
SupplyTempRegSetP	Supply temperature regulation set point	1	IR218	AV3608
PreHeatCoilRegReq	Pre-heating request from PID Seq	1	IR219	AV3609
PreHeatCoilReq	Pre-heating request	1	IR220	AV3610
Coils.ModulMainCoilReq	Cooling/Heating coil request	1	IR221	AV3611
ReHeatCoilRegReq	Post-heating request from PID Seq	1	IR222	AV3612
ReHeatCoilReq	Post-heating request	1	IR223	AV3613
CondTemp	Condensing temperature	1	IR224	AV3614
MaskMng.CompStatusMsk	-	1	IR225	IV3615
MaskMng.CompOnOffCntDwn	OnOff compressor countdown	2	IR226	IV3616
CompReq	Compressor request	1	IR228	AV3617
Data_EVD_Emb_1.EVD.Variables.SH_EvapTemp.Val	EVD parameters - Status variables - Evaporation temperature	1	IR229	AV3618
Data_EVD_Emb_1.EVD.Variables.CondTemp.Val	EVD parameters - Status variables - Condensing temperature	1	IR230	AV3619
MaskMng.BLDC_CompStatus	For mask usage	1	IR231	IV3620
MaskMng.BLDC_CompCntDwn	For mask usage	2	IR232	IV3621
BLDC_PwrReq	BLDC power request	1	IR234	AV3622
MaskMng.BLDC_CompPerc_Scaled	BLDC Compressore run request scaled with the custom maximum limit	1	IR235	AV3623
BLDC_compressor.EnvZone	0=Null;1=OK;2=Max.comp.rat;3=Max.dsc.P.;4=Curr.limit;5=Max. suct.P.;6=Min.comp.rat;7=Min.DeltaP;8=Min.dsc.P.;9=Min.suct.P.	1	IR236	IV3624
BLDCtoEVD.RegSubTyp	BLDC to EVD parameters - EVD regulation subtype	1	IR237	IV3625
MaskMng.EEV_Status	For mask usage	1	IR238	IV3626
Data_EVD_Emb_1.EVD.Variables.SH.Val	EVD parameters - Status variables - Superheat	1	IR239	AV3627
BLDC_compressor.Info_PWRP1.Info_RotorSpeed_rps	Inverter Power Plus Info - Current rotor speed [rps]	1	IR240	AV3628
Data_EVD_Emb_1.EVD.Variables.EEV_PosPercent.Val	EVD parameters - Status variables - Valve opening	1	IR241	AV3629
MaskMng.CompEnvCntDwn	-	1	IR242	IV3630
Data_EVD_Emb_1.EVD.Variables.EEV_PosSteps.Val	EVD parameters - Status variables - Valve position	1	IR243	IV3631
MaskMng.EEVSet	For mask usage	1	IR244	AV3632
Data_EVD_Emb_1.EVD.Variables.DscgSH.Val	EVD parameters - Status variables - Discharge superheat	1	IR245	AV3633
HumDehumReg.HumDehum_RegHum_Rel	Humidification/Dehumidification: Relative humidity variable	1	IR246	AV3634
HumDehumReg.HumDehum_RegHum_Abs	Humidification/Dehumidification: Absolute humidity variable	1	IR247	AV3635
HumDehumReg.HumDehum_SetP_Abs	Humidification/Dehumidification: Absolute setpoint	1	IR248	AV3636
HumRegReq	Humidification request from PID Seq	1	IR249	AV3637
DehumRegReq	Dehumidification request	1	IR250	AV3638
Dehum_DewPointSetP	Dew point set point for dehumidification	1	IR251	AV3639
AuxiliaryRegulation.AuxReg1_Info.RegVal	Auxiliary regulation 1: Informations - Regulation value	1	IR252	AV3640
AuxiliaryRegulation.AuxReg2_Info.RegVal	Auxiliary regulation 2: Informations - Regulation value	1	IR253	AV3641
AuxiliaryRegulation.AuxReg3_Info.RegVal	Auxiliary regulation 3: Informations - Regulation value	1	IR254	AV3642
AuxiliaryRegulation.AuxReg4_Info.RegVal	Auxiliary regulation 4: Informations - Regulation value	1	IR255	AV3643
Scheduler_OnOffUnit.SchedSrc	Scheduler source (DIN, Party mode, SPV, cpCO, thTune)	1	IR256	PIV3644
SchedStatus	Unit status currently active: 0=Off; 1=Economy; 2=Pre-comfort; 3=Comfort	1	IR257	PIV3645
KWater_MB.HR18_ExtT	KWater modbus variables - External temperature	1	IR258	AV3646
KWater_MB.HR21_TCircKAir	KWater modbus variables - KAir circuit temperature	1	IR259	AV3647
kWater_UnitStatus	Unit status kwater	1	IR260	PIV3648
HumifogMng.HUMFOG_PwrReq	Power request	1	IR261	AV3649
HumifogMng.HUMFOG_ActualProd	Actual production of rack (kg/h-lb/h)	1	IR262	AV3650
HumifogMng.HUMFOG_HoursWorsk	Pump running hour humifog	2	IR263	PIV3651
HumifogMng.HUMFOG_UnitStatus	Machine status	1	IR265	IV3652
IEC_Req	IEC: request	1	IR266	AV3653
IEC.IEC_HUMFOG_ActualProd	Actual production of rack (kg/h-lb/h)	1	IR267	AV3654
IEC.IEC_HUMFOG_HoursWorks	Pump running hour humifog	2	IR268	PIV3655
IEC.IEC_HUMFOG_UnitStatus	Machine status	1	IR270	IV3656
uChiller_mng.Info_uCh.BLDC_rps_Circ1	Split an int value into digits - rps bldc circ1 rotor speed coming from inverter	1	IR271	AV3657
uChiller_mng.Info_uCh.EEV_PosPerc_Circ1	Split an int value into digits - Opn1 - EEV position of circ.1	1	IR272	IV3658
uChiller_mng.Info_uCh.DscgPCirc1	Split an int value into digits - dSP1-Discharge press. probe of circ.1	1	IR273	AV3659
uChiller_mng.Info_uCh.SuctPCirc1	Split an int value into digits - ScP1-Suction press. of circ.1	1	IR274	AV3660
uChiller_mng.UnitStatus_uCh	Unitstatus(0=OffByDI;1=OffByKeyb;2=OffBySched;3=OffByBMS;4=OffByChgOvr;5=OffByAl;6=Dfr;7=StdBy;14=FCOn;15=CoolOn;16=HeatOn;20=Offline)	1	IR275	IV3661
uChiller_mng.Info_uCh.BLDC_rps_Circ2	Split an int value into digits - rps bldc circ2 rotor speed coming from inverter	1	IR276	AV3662
GeneralMng.CurrVer.X	Current version of the application according to standard - X version of the application	1	IR277	PIV3663
GeneralMng.CurrVer.Y	Current version of the application according to standard - Y version of the application	1	IR278	PIV3664
GeneralMng.CurrVer.Z	Current version of the application according to standard - Z version of the application	1	IR279	PIV3665
GeneralMng.CurrVer.D	Current version of the application according to standard - D version of the application	1	IR280	PIV3666
GeneralMng.OsVersion[1]	Application version	2	IR281	PIV3667
GeneralMng.OsVersion[2]	Application version	2	IR283	PIV3668
GeneralMng.OsVersion[3]	Application version	2	IR285	PIV3669

Variable	Description	Dim	Modbus	BACnet
GeneralMng.BoardTyp[1]	Type of board (12 = c.pCO, 13 = uPC, 14 = c.pCO mini) and size (10 = Large, 11 = Medium, 12 = Small, 13 = XL, 20 = Basic, 21 = Enhanced, 22 = High End)	2	IR287	PIV3670
GeneralMng.BoardTyp[2]	Type of board (12 = c.pCO, 13 = uPC, 14 = c.pCO mini) and size (10 = Large, 11 = Medium, 12 = Small, 13 = XL, 20 = Basic, 21 = Enhanced, 22 = High End)	2	IR289	PIV3671
VarToShow.IdxChName	-	1	IR291	PIV3672
VarToShow.Board	-	1	IR292	PIV3673
VarToShow.Ch_Id	-	1	IR293	PIV3674
ObjMsk.ValStaticPress	High/low limit alarm with hysteresis - Value static pressure	1	IR294	AV3675
ObjMsk.ValAirQual	High/low limit alarm with hysteresis - Value air quality	1	IR295	AV3676
ObjMsk.ValRfrgPress	High/low limit alarm with hysteresis - Value refrigerant pressure	1	IR296	AV3677
ObjMsk.ValFlowRate	High/low limit alarm with hysteresis - Value flow rate	1	IR297	AV3678
ObjMsk.ValAirFlow	High/low limit alarm with hysteresis - Value air flow	1	IR298	AV3679
ObjMsk.ValTemp	High/low limit alarm with hysteresis - Value temperature	1	IR299	AV3680
ObjMsk.ValHum	High/low limit alarm with hysteresis - Value humidity	1	IR300	AV3681
ObjMsk.ValAout	High/low limit alarm with hysteresis - Value analog output	1	IR301	AV3682
ObjMsk.ValGeneric	High/low limit alarm with hysteresis - Value generic probe	1	IR302	AV3683
ObjMsk.ValPercent	High/low limit alarm with hysteresis - Value percent probe	1	IR303	AV3684
SupplyFan_MainMask	Used only for main mask	1	IR304	PIV3685
MaskMng.RetFan_MainMask	Used only for main mask	1	IR305	PIV3686
Hour	Actual hour	1	IR306	PIV3687
Minute	Actual minute	1	IR307	PIV3688
Scheduler_OnOffUnit.UnitStatus	Unit status	1	IR308	PIV3689
Ebmpapst_SupplyFan.InfoSpeed_EBM_1.CurrSpeed	Automatically generated - Current speed in [rpm] of the fan for Ebmpapst fan	1	IR309	PIV3690
Ebmpapst_SupplyFan.ElectrInfo_EBM_1.DC_Link_V	Automatically generated - DC link voltage for Ebmpapst fan	1	IR310	PIV3691
Ebmpapst_SupplyFan.ElectrInfo_EBM_1.DC_Link_A	Automatically generated - DC link current for Ebmpapst fan	1	IR311	PIV3692
Ebmpapst_SupplyFan.ElectrInfo_EBM_1.CurrPower	Automatically generated - Current power in [W] for Ebmpapst fan	1	IR312	PIV3693
Ebmpapst_SupplyFan.ElectrInfo_EBM_1.ElectrTemp	Automatically generated - Internal circuit temperature for Ebmpapst fan	1	IR313	PIV3694
Ebmpapst_SupplyFan.MotStatus_EBM_1.IR_MotStatus	Automatically generated - Motor status input register	1	IR314	PIV3695
Ebmpapst_SupplyFan.Warn_EBM_1.IR_Warn	Automatically generated - Warining input register (Bitfield)	1	IR315	PIV3696
Ebmpapst_SupplyFan.InfoSpeed_EBM_1.MaxSpeed	Automatically generated - Maximum admissible speed: all read or speed in [rpm] settings are limited to this value for Ebmpapst fan	1	IR316	PIV3697
Ebmpapst_SupplyFan.CntWorkHrsBkp_EBM_1	Working hour counter for Ebmpapst fan	1	IR317	PIV3698
Ebmpapst_ReturnFan.InfoSpeed_EBM_1.CurrSpeed	Automatically generated - Current speed in [rpm] of the fan for Ebmpapst fan	1	IR318	PIV3699
Ebmpapst_ReturnFan.ElectrInfo_EBM_1.DC_Link_V	Automatically generated - DC link voltage for Ebmpapst fan	1	IR319	PIV3700
Ebmpapst_ReturnFan.ElectrInfo_EBM_1.DC_Link_A	Automatically generated - DC link current for Ebmpapst fan	1	IR320	PIV3701
Ebmpapst_ReturnFan.ElectrInfo_EBM_1.CurrPower	Automatically generated - Current power in [W] for Ebmpapst fan	1	IR321	PIV3702
Ebmpapst_ReturnFan.ElectrInfo_EBM_1.ElectrTemp	Automatically generated - Internal circuit temperature for Ebmpapst fan	1	IR322	PIV3703
Ebmpapst_ReturnFan.MotStatus_EBM_1.IR_MotStatus	Automatically generated - Motor status input register	1	IR323	PIV3704
Ebmpapst_ReturnFan.Warn_EBM_1.IR_Warn	Automatically generated - Warining input register (Bitfield)	1	IR324	PIV3705
Ebmpapst_ReturnFan.InfoSpeed_EBM_1.MaxSpeed	Automatically generated - Maximum admissible speed: all read or speed in [rpm] settings are limited to this value for Ebmpapst fan	1	IR325	PIV3706
Ebmpapst_ReturnFan.CntWorkHrsBkp_EBM_1	Working hour counter for Ebmpapst fan	1	IR326	PIV3707
ZiehlAbegg_SupplyFan.FanSpeedInfo_ZA_1.CurrSpeed_rpm	Fan speed informations - Actual speed [rpm] of the Zhiel-Abegg fan	1	IR327	PIV3708
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_1.DC_LinkV	Fan electrical informations - DC link voltage (V)	1	IR328	PIV3709
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_1.LineV	Fan electrical informations - Supply voltage (peak voltage)	1	IR329	PIV3710
ZiehlAbegg_SupplyFan.FanSpeedInfo_ZA_1.MaxSpeed_rpm	Fan speed informations - Maximum set speed	1	IR330	PIV3711
ZiehlAbegg_SupplyFan.FanSpeedInfo_ZA_1.MinSpeed_rpm	Fan speed informations - Minimum set speed	1	IR331	PIV3712
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_1.MotPwr	Fan electrical informations - Motor input power (W)	1	IR332	PIV3713
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_1.ElectronicTemp	Fan electrical informations - Electronics temperature (°C)	1	IR333	AV3714
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_1.IGBT_temp	Fan electrical informations - IGBT temperature (°C)	1	IR334	AV3715
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_1.MCU_Temp	Fan electrical informations - MCU temperature	1	IR335	AV3716
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_1.MotTemp	Fan electrical informations - Motr temperature (°C)	1	IR336	AV3717
FanAlrm_ZA_SupplyFan.ErrStatus	Fan alarms - Error status defines errors currently detected	1	IR337	PIV3718
ZiehlAbegg_SupplyFan.FanStatus_ZA_1.WorkingStatus	Fan status (working mode, errors) - Working status defines current working conditions	1	IR338	PIV3719
ZiehlAbegg_SupplyFan.FanStatus_ZA_1.WorkStatusCode	Fan status (working mode, errors) - Working status code	1	IR339	PIV3720
ZiehlAbegg_ReturnFan.FanSpeedInfo_ZA_1.CurrSpeed_rpm	Fan speed informations - Actual speed [rpm] of the Zhiel-Abegg fan	1	IR340	PIV3721
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_1.DC_LinkV	Fan electrical informations - DC link voltage (V)	1	IR341	PIV3722
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_1.LineV	Fan electrical informations - Supply voltage (peak voltage)	1	IR342	PIV3723
ZiehlAbegg_ReturnFan.FanSpeedInfo_ZA_1.MaxSpeed_rpm	Fan speed informations - Maximum set speed	1	IR343	PIV3724
ZiehlAbegg_ReturnFan.FanSpeedInfo_ZA_1.MinSpeed_rpm	Fan speed informations - Minimum set speed	1	IR344	PIV3725
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_1.MotPwr	Fan electrical informations - Motor input power (W)	1	IR345	PIV3726
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_1.ElectronicTemp	Fan electrical informations - Electronics temperature (°C)	1	IR346	AV3727
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_1.IGBT_temp	Fan electrical informations - IGBT temperature (°C)	1	IR347	AV3728
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_1.MCU_Temp	Fan electrical informations - MCU temperature	1	IR348	AV3729
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_1.MotTemp	Fan electrical informations - Motr temperature (°C)	1	IR349	AV3730
FanAlrm_ZA_RetFan.ErrStatus	Fan alarms - Error status defines errors currently detected	1	IR350	PIV3731
ZiehlAbegg_ReturnFan.FanStatus_ZA_1.WorkingStatus	Fan status (working mode, errors) - Working status defines current working conditions	1	IR351	PIV3732
ZiehlAbegg_ReturnFan.FanStatus_ZA_1.WorkStatusCode	Fan status (working mode, errors) - Working status code	1	IR352	PIV3733
Humisonic.DevInfo_HUMS.FwRel_H	Device info - Firmware release (high part)	1	IR353	PIV3734
Humisonic.DevInfo_HUMS.FwRel_L	Device info - Firmware release (low part)	1	IR354	PIV3735
Humisonic.DevInfo_HUMS.UnitHrsCount	Device info - Working hours of the unit	1	IR355	IV3736
Humisonic.Humisonic_2_1.FwVars.CtrlState	Lists of variables of the device not managed by default	1	IR356	IV3737
Humisonic.AlrmCode_HUMS	Alarm code read from device	1	IR357	PIV3738
GeneralMng.Day	Actual day	1	IR358	PIV3739
GeneralMng.Month	Actual month	1	IR359	PIV3740
GeneralMng.Year	Actual year	1	IR360	PIV3741
GeneralMng.RTC.Hour	cpCO real time clock	1	IR361	PIV3742
GeneralMng.RTC.Minute	cpCO real time clock	1	IR362	PIV3743
GeneralMng.RTC.Second	cpCO real time clock	1	IR363	PIV3744
GeneralMng.LastOnDay	Saving of last day before blackout	1	IR364	PIV3745
GeneralMng.LastOnMonth	Saving of last month before blackout	1	IR365	PIV3746
GeneralMng.LastOnYear	Saving of last year before blackout	1	IR366	PIV3747
GeneralMng.LastOnHour	Saving of last hour before blackout	1	IR367	PIV3748
GeneralMng.LastOnMinute	Saving of last minute before blackout	1	IR368	PIV3749
GeneralMng.LastOnSecond	Saving of last second before blackout	1	IR369	PIV3750

Variable	Description	Dim	Modbus	BACnet
GeneralMng.OffDays	Number of days since the last blackout	1	IR370	PIV3751
GeneralMng.OffHours	Number of hours since the last blackout	1	IR371	PIV3752
GeneralMng.OffMinutes	Numbers of minutes since the last blackout	1	IR372	PIV3753
GeneralMng.FB_PollT	Last polling loop time (ms)	2	IR373	PIV3754
GeneralMng.FB_PollLoopNo	Number of Polling loops	2	IR375	PIV3755
MemWritingsNo	Absolute number of writings in retain memory during the entire device life	2	IR377	PIV3756
GeneralMng.PrgCycleMs	Program speed in ms	1	IR379	PIV3757
GeneralMng.CyclesPerSecond	Program speed in CyclePerSecond	1	IR380	AV3758
GeneralMng.ErrParamWizard	Error communication for Import/Export blocks	2	IR381	IV3759
GeneralMng.DayOfWeek	Day of week	1	IR383	PIV3760
Scheduler_OnOffUnit.FB_SchedulerMskMng_1.PrgsSchedMsg	-	1	IR384	PIV3761
WrkHrs_Unit.WrkHrs	Unit - Working hours	2	IR385	PIV3762
WrkHrs_Unit.WrkHrs_Left	Unit - Working hours left to the maintenance	2	IR387	PIV3763
WrkHrs_SupplyFan.WrkHrs	Supply Fan - Working hours	2	IR389	PIV3764
WrkHrs_SupplyFan.WrkHrs_Left	Supply Fan - Working hours left to the maintenance	2	IR391	PIV3765
WrkHrs_ReturnFan.WrkHrs	Return Fan - Working hours	2	IR393	PIV3766
WrkHrs_ReturnFan.WrkHrs_Left	Return Fan - Working hours left to the maintenance	2	IR395	PIV3767
WrkHrs_DirtyFilt.WrkHrs	Dirty filters - Working hours	2	IR397	PIV3768
WrkHrs_DirtyFilt.WrkHrs_Left	Dirty filters - Working hours left to the maintenance	2	IR399	PIV3769
WrkHrs_ThrmlWheel.WrkHrs	Thermal wheel - Working hours	2	IR401	PIV3770
WrkHrs_ThrmlWheel.WrkHrs_Left	Thermal wheel - Working hours left to the maintenance	2	IR403	PIV3771
WrkHrs_Comp.WrkHrs	Compressor - Working hours	2	IR405	PIV3772
WrkHrs_Comp.WrkHrs_Left	Compressor - Working hours left to the maintenance	2	IR407	PIV3773
WrkHrs_IEC.WrkHrs	IEC - Working hours	2	IR409	PIV3774
WrkHrs_IEC.WrkHrs_Left	IEC - Working hours left to the maintenance	2	IR411	PIV3775
WrkHrs_Humidifier.WrkHrs	Humidifier - Working hours	2	IR413	PIV3776
WrkHrs_Humidifier.WrkHrs_Left	Humidifier - Working hours left to the maintenance	2	IR415	PIV3777
WrkHrs_AuxDout.WrkHrs	Auxiliary digital output - Working hours	2	IR417	PIV3778
WrkHrs_AuxDout.WrkHrs_Left	Auxiliary digital output - Working hours left to the maintenance	2	IR419	PIV3779
WrkHrs_AuxAout.WrkHrs	Auxiliary analogue output - Working hours	2	IR421	PIV3780
WrkHrs_AuxAout.WrkHrs_Left	Auxiliary analogue output - Working hours left to the maintenance	2	IR423	PIV3781
WrkHrs_MainCoilPmp1.WrkHrs	Main coil pump 1 - Working hours	2	IR425	PIV3782
WrkHrs_MainCoilPmp1.WrkHrs_Left	Main coil pump 1 - Working hours left to the maintenance	2	IR427	PIV3783
WrkHrs_MainCoilPmp2.WrkHrs	Main coil pump 2 - Working hours	2	IR429	PIV3784
WrkHrs_MainCoilPmp2.WrkHrs_Left	Main coil pump 2 - Working hours left to the maintenance	2	IR431	PIV3785
WrkHrs_MainCoilAout.WrkHrs	Main coil analog output - Working hours	2	IR433	PIV3786
WrkHrs_MainCoilAout.WrkHrs_Left	Main coil analog output - Working hours left to the maintenance	2	IR435	PIV3787
WrkHrs_MainCoilStep1.WrkHrs	Main coil step 1 - Working hours	2	IR437	PIV3788
WrkHrs_MainCoilStep1.WrkHrs_Left	Main coil step 1 - Working hours left to the maintenance	2	IR439	PIV3789
WrkHrs_MainCoilStep2.WrkHrs	Main coil step 2 - Working hours	2	IR441	PIV3790
WrkHrs_MainCoilStep2.WrkHrs_Left	Main coil step 2 - Working hours left to the maintenance	2	IR443	PIV3791
WrkHrs_MainCoilStep3.WrkHrs	Main coil step 3 - Working hours	2	IR445	PIV3792
WrkHrs_MainCoilStep3.WrkHrs_Left	Main coil step 3 - Working hours left to the maintenance	2	IR447	PIV3793
WrkHrs_MainCoilStep4.WrkHrs	Main coil step 4 - Working hours	2	IR449	PIV3794
WrkHrs_MainCoilStep4.WrkHrs_Left	Main coil step 4 - Working hours left to the maintenance	2	IR451	PIV3795
WrkHrs_PreHeatCoilPmp1.WrkHrs	Pre-heat coil pump 1 - Working hours	2	IR453	PIV3796
WrkHrs_PreHeatCoilPmp1.WrkHrs_Left	Pre-heat coil pump 1 - Working hours left to the maintenance	2	IR455	PIV3797
WrkHrs_PreHeatCoilPmp2.WrkHrs	Pre-heat coil pump 2 - Working hours	2	IR457	PIV3798
WrkHrs_PreHeatCoilPmp2.WrkHrs_Left	Pre-heat coil pump 2 - Working hours left to the maintenance	2	IR459	PIV3799
WrkHrs_PreHeatCoilAout.WrkHrs	Pre-heat coil analog output - Working hours	2	IR461	PIV3800
WrkHrs_PreHeatCoilAout.WrkHrs_Left	Pre-heat coil analog output - Working hours left to the maintenance	2	IR463	PIV3801
WrkHrs_PreHeatCoilStep1.WrkHrs	Pre-heat coil step 1 - Working hours	2	IR465	PIV3802
WrkHrs_PreHeatCoilStep1.WrkHrs_Left	Pre-heat coil step 1 - Working hours left to the maintenance	2	IR467	PIV3803
WrkHrs_PreHeatCoilStep2.WrkHrs	Pre-heat coil step 2 - Working hours	2	IR469	PIV3804
WrkHrs_PreHeatCoilStep2.WrkHrs_Left	Pre-heat coil step 2 - Working hours left to the maintenance	2	IR471	PIV3805
WrkHrs_PreHeatCoilStep3.WrkHrs	Pre-heat coil step 3 - Working hours	2	IR473	PIV3806
WrkHrs_PreHeatCoilStep3.WrkHrs_Left	Pre-heat coil step 3 - Working hours left to the maintenance	2	IR475	PIV3807
WrkHrs_PreHeatCoilStep4.WrkHrs	Pre-heat coil step 4 - Working hours	2	IR477	PIV3808
WrkHrs_PreHeatCoilStep4.WrkHrs_Left	Pre-heat coil step 4 - Working hours left to the maintenance	2	IR479	PIV3809
WrkHrs_ReHeatCoilPmp1.WrkHrs	Re-heat coil pump 1 - Working hours	2	IR481	PIV3810
WrkHrs_ReHeatCoilPmp1.WrkHrs_Left	Re-heat coil pump 1 - Working hours left to the maintenance	2	IR483	PIV3811
WrkHrs_ReHeatCoilPmp2.WrkHrs	Re-heat coil pump 2 - Working hours	2	IR485	PIV3812
WrkHrs_ReHeatCoilPmp2.WrkHrs_Left	Re-heat coil pump 2 - Working hours left to the maintenance	2	IR487	PIV3813
WrkHrs_ReHeatCoilAout.WrkHrs	Re-heat coil analog output - Working hours	2	IR489	PIV3814
WrkHrs_ReHeatCoilAout.WrkHrs_Left	Re-heat coil analog output - Working hours left to the maintenance	2	IR491	PIV3815
WrkHrs_ReHeatCoilStep1.WrkHrs	Re-heat coil step 1 - Working hours	2	IR493	PIV3816
WrkHrs_ReHeatCoilStep1.WrkHrs_Left	Re-heat coil step 1 - Working hours left to the maintenance	2	IR495	PIV3817
WrkHrs_ReHeatCoilStep2.WrkHrs	Re-heat coil step 2 - Working hours	2	IR497	PIV3818
WrkHrs_ReHeatCoilStep2.WrkHrs_Left	Re-heat coil step 2 - Working hours left to the maintenance	2	IR499	PIV3819
WrkHrs_ReHeatCoilStep3.WrkHrs	Re-heat coil step 3 - Working hours	2	IR501	PIV3820
WrkHrs_ReHeatCoilStep3.WrkHrs_Left	Re-heat coil step 3 - Working hours left to the maintenance	2	IR503	PIV3821
WrkHrs_ReHeatCoilStep4.WrkHrs	Re-heat coil step 4 - Working hours	2	IR505	PIV3822
WrkHrs_ReHeatCoilStep4.WrkHrs_Left	Re-heat coil step 4 - Working hours left to the maintenance	2	IR507	PIV3823
GeneralMng.ErrParamImpExp	Error communication for Import/Export blocks	2	IR509	IV3824
Ebmpapst_ReturnFan.ParamsChgComStatus_EBM_1.StatusNewAddrProc	Automatically generated - 0:Check condition;1: Write new addr.; 2: Reboot fan firmware; 3: Wait offline; 4: Reset communication and wait online status;5:Reset procedure;	1	IR511	PIV3825
Ebmpapst_ReturnFan.ParamsChgComStatus_EBM_1.CommChangeStatus	Automatically generated - 0:Idle; 1: Write password; 2:Write parameters; 3:Send adopt parameters; 4:Wait offline; 5:Reset procedure;	1	IR512	PIV3826
ZiehlAbegg_ReturnFan.FanStatus_ZA_1.CommChangeStatus	Fan status (working mode, errors) - Status of the COM parameter changing procedure	1	IR513	PIV3827
Humisonic.HumCylinderWorkHrsLeft	Number of working hours left before check the humidifier cylinder	1	IR514	PIV3828
Ebmpapst_SupplyFan.ParamsChgComStatus_EBM_1.StatusNewAddrProc	Automatically generated - 0:Check condition;1: Write new addr.; 2: Reboot fan firmware; 3: Wait offline; 4: Reset communication and wait online status;5:Reset procedure;	1	IR515	PIV3829
Ebmpapst_SupplyFan.ParamsChgComStatus_EBM_1.CommChangeStatus	Automatically generated - 0:Idle; 1: Write password; 2:Write parameters; 3:Send adopt parameters; 4:Wait offline; 5:Reset procedure;	1	IR516	PIV3830
ZiehlAbegg_SupplyFan.FanStatus_ZA_1.CommChangeStatus	Fan status (working mode, errors) - Status of the COM parameter changing procedure	1	IR517	PIV3831
VDI_Conf[0].CntDwn	Countdown before the next inspection	1	IR518	PIV3832
VDI_Conf[1].CntDwn	Countdown before the next inspection	1	IR519	PIV3833
VDI_Conf[2].CntDwn	Countdown before the next inspection	1	IR520	PIV3834
VDI_Conf[3].CntDwn	Countdown before the next inspection	1	IR521	PIV3835

Variable	Description	Dim	Modbus	BACnet
VDI_Conf[4].CntDwn	Countdown before the next inspection	1	IR522	PIV3836
VDI_Conf[5].CntDwn	Countdown before the next inspection	1	IR523	PIV3837
VDI_Conf[6].CntDwn	Countdown before the next inspection	1	IR524	PIV3838
VDI_Conf[7].CntDwn	Countdown before the next inspection	1	IR525	PIV3839
VDI_Conf[8].CntDwn	Countdown before the next inspection	1	IR526	PIV3840
VDI_Conf[9].CntDwn	Countdown before the next inspection	1	IR527	PIV3841
VDI_Conf[10].CntDwn	Countdown before the next inspection	1	IR528	PIV3842
VDI_Conf[11].CntDwn	Countdown before the next inspection	1	IR529	PIV3843
VDI_Conf[12].CntDwn	Countdown before the next inspection	1	IR530	PIV3844
VDI_Conf[13].CntDwn	Countdown before the next inspection	1	IR531	PIV3845
VDI_Conf[14].CntDwn	Countdown before the next inspection	1	IR532	PIV3846
VDI_Conf[15].CntDwn	Countdown before the next inspection	1	IR533	PIV3847
VDI_Conf[16].CntDwn	Countdown before the next inspection	1	IR534	PIV3848
VDI_Conf[17].CntDwn	Countdown before the next inspection	1	IR535	PIV3849
VDI_Conf[18].CntDwn	Countdown before the next inspection	1	IR536	PIV3850
VDI_Conf[19].CntDwn	Countdown before the next inspection	1	IR537	PIV3851
VDI_Conf[20].CntDwn	Countdown before the next inspection	1	IR538	PIV3852
VDI_Conf[21].CntDwn	Countdown before the next inspection	1	IR539	PIV3853
VDI_Conf[22].CntDwn	Countdown before the next inspection	1	IR540	PIV3854
VDI_Conf[23].CntDwn	Countdown before the next inspection	1	IR541	PIV3855
VDI_Conf[24].CntDwn	Countdown before the next inspection	1	IR542	PIV3856
VDI_Conf[25].CntDwn	Countdown before the next inspection	1	IR543	PIV3857
VDI_Conf[26].CntDwn	Countdown before the next inspection	1	IR544	PIV3858
VDI_Conf[27].CntDwn	Countdown before the next inspection	1	IR545	PIV3859
VDI_Conf[28].CntDwn	Countdown before the next inspection	1	IR546	PIV3860
GeneralMng.RTC_BMS.Second	BMS real time clock	1	IR547	PIV3861
GeneralMng.Zone_Read	Index of the zone read	1	IR548	PIV3862
GeneralMng.SPV_Error	BMS error	1	IR549	IV3863
GeneralMng.IP_Byte4	Automatically generated	1	IR550	PIV3864
GeneralMng.IP_Byte3	Automatically generated	1	IR551	PIV3865
GeneralMng.IP_Byte2	Automatically generated	1	IR552	PIV3866
GeneralMng.IP_Byte1	Automatically generated	1	IR553	PIV3867
GeneralMng.GW_Byte4	Automatically generated	1	IR554	PIV3868
GeneralMng.GW_Byte3	Automatically generated	1	IR555	PIV3869
GeneralMng.GW_Byte2	Automatically generated	1	IR556	PIV3870
GeneralMng.GW_Byte1	Automatically generated	1	IR557	PIV3871
GeneralMng.NMSK_Byte4	Automatically generated	1	IR558	PIV3872
GeneralMng.NMSK_Byte3	Automatically generated	1	IR559	PIV3873
GeneralMng.NMSK_Byte2	Automatically generated	1	IR560	PIV3874
GeneralMng.NMSK_Byte1	Automatically generated	1	IR561	PIV3875
GeneralMng.DNS_Byte4	Automatically generated	1	IR562	PIV3876
GeneralMng.DNS_Byte3	Automatically generated	1	IR563	PIV3877
GeneralMng.DNS_Byte2	Automatically generated	1	IR564	PIV3878
GeneralMng.DNS_Byte1	Automatically generated	1	IR565	PIV3879
Data_EVD_Emb_1.Superparameters.MainRegulation.Val	Superparameters - Main regulation	1	IR566	IV3880
Data_EVD_Emb_1.Inputs.S1.Val	Probes data - Probe S1 - Value	1	IR567	AV3881
Data_EVD_Emb_1.Inputs.S2.Val	Probes data - Probe S2 - Value	1	IR568	AV3882
Data_EVD_Emb_1.Inputs.S3.Val	Probes data - Probe S3 - Value	1	IR569	AV3883
Data_EVD_Emb_1.Inputs.S4.Val	Probes data - Probe S4 - Value	1	IR570	AV3884
BLDC_compressor.IRparam_PWRP1.IR104_DriveStatus	Automatically generated - 0: Stop; 1: Run; 2: Alarm; 3: Crankcase heating; 4:DCbus ready)	1	IR571	PIV3885
BLDC_compressor.Info_PWRP1.Info_DriveTemp	Inverter Power Plus Info - Drive temperature	1	IR572	AV3886
BLDC_compressor.IRparam_PWRP1.IR105_AlrmCode	Automatically generated - see doc	1	IR573	PIV3887
BLDC_compressor.Info_PWRP1.Info_FreqSetP	Inverter Power Plus Info - Speed reference [Hz/rps]	1	IR574	AV3888
BLDC_compressor.Info_PWRP1.Info_RotorSpeed_Hz	Inverter Power Plus Info - Current rotor speed [Hz]	1	IR575	AV3889
BLDC_compressor.Info_PWRP1.Info_RotorSpeed_rpm	Inverter Power Plus Info - Current rotorspeed [rpm]	1	IR576	PIV3890
BLDC_compressor.Info_PWRP1.Info_MotA	Inverter Power Plus Info - Current motor current [A]	1	IR577	AV3891
BLDC_compressor.Info_PWRP1.Info_MotV	Inverter Power Plus Info - Current motor voltage [V]	1	IR578	PIV3892
BLDC_compressor.Info_PWRP1.Info_MotPwr	Inverter Power Plus Info - Current motor consumption [W]	1	IR579	AV3893
BLDC_compressor.IRparam_PWRP1.IR113_DCBusVoltage	Automatically generated - DC bus voltage	1	IR580	PIV3894
BLDC_compressor.IRparam_PWRP1.IR134_DCBusRipple	Automatically generated - DC bus ripple	1	IR581	PIV3895
BLDC_compressor.IRparam_PWRP1.IR124_OperatingSwitchingFreq	Automatically generated - PWM switching frequency (0: 4kHz, 1: 6kHz, 2: 8kHz)	1	IR582	PIV3896
BLDC_compressor.IRparam_PWRP1.IR125_PreRampOutput_SpeedRef	Automatically generated - Pre-ramp output frequency reference	1	IR583	AV3897
BLDC_compressor.IRparam_PWRP1.IR153_OvldMot_accumulator	Automatically generated - Motor Overload Accumulator	1	IR584	AV3898
BLDC_compressor.IRparam_PWRP1.IR154_OvldDrive_accumulator	Automatically generated - Drive Overload Accumulator	1	IR585	AV3899
BLDC_compressor.Info_PWRP1.Info_PSD_AAa	Inverter Power Plus Info - Device rated current [AA.a]	1	IR586	AV3900
BLDC_compressor.Info_PWRP1.Mng_MotSelect_AAa	Inverter Power Plus Info - Rated current of compressor	1	IR587	PIV3901
BLDC_compressor.Info_PWRP1.UI_RatedStartingA	Inverter Power Plus Info - Rated starting current	1	IR588	AV3902
BLDC_compressor.Info_PWRP1.UI_RatedCrankCaseHeatA	Inverter Power Plus Info - Rated crankcase heating current	1	IR589	AV3903
BLDC_compressor.Info_PWRP1.UI_RatedInductsatReductA	Inverter Power Plus Info - Inductance saturation reduction (percentage at rated current)	1	IR590	AV3904
BLDC_compressor.Info_PWRP1.Dbg_FBVersion_X	Inverter Power Plus Info - FB version x	1	IR591	PIV3905
BLDC_compressor.Info_PWRP1.Dbg_FBVersion_Y	Inverter Power Plus Info - FB version y	1	IR592	PIV3906
BLDC_compressor.Info_PWRP1.Dbg_FBVersion_Z	Inverter Power Plus Info - FB version zzz	1	IR593	PIV3907
BLDC_compressor.Info_PWRP1.Dbg_FBVersion_Beta	Inverter Power Plus Info - FB version beta	1	IR594	PIV3908
BLDC_compressor.IRparam_PWRP1.IR141_BootLoaderRelease	Automatically generated - Bootloader version	1	IR595	PIV3909
BLDC_compressor.IRparam_PWRP1.IR142_FirmwareRelease	Automatically generated - Firmware version	1	IR596	PIV3910
BLDC_compressor.IRparam_PWRP1.IR143_FirmwareCRC	Automatically generated - Firmware checksum	1	IR597	PIV3911
BLDC_compressor.IRparam_PWRP1.IR144_MotCtrlRelease	Automatically generated - Motor control version	1	IR598	PIV3912
BLDC_compressor.IRparam_PWRP1.IR149_Hardwareldentification	Automatically generated - Hardware identification	1	IR599	PIV3913
Info_BLDC1.Info_CompRequest	BLDC informations - Compressor power request [%]	1	IR600	AV3914
Info_BLDC1.Info_ReqSpeedToPWRP	BLDC informations - Required speed to PowerPlus [%]	1	IR601	AV3915
Info_BLDC1.Press_DscgP_Bar	BLDC informations - Discharge pressure relative [bar]	1	IR602	AV3916
Info_BLDC1.Press_SuctP_Bar	BLDC informations - Suction pressure relative [bar]	1	IR603	AV3917
Info_BLDC1.Info_EnvZone	BLDC informations - Current envelope zone	1	IR604	IV3918
Info_BLDC1.Time_CntDwnOutEnv	BLDC informations - Out of envelop timing countdown	1	IR605	IV3919
Info_BLDC1.Press_DeltaP	BLDC informations - Current delta pressure	1	IR606	AV3920
Info_BLDC1.Press_RatioP	BLDC informations - Current pressure ratio	1	IR607	AV3921
Info_BLDC1.Time_CntDwnDeltaPAlrm	BLDC informations - Low pressure difference alarm timing countdown	1	IR608	IV3922
Info_BLDC1.Info_DscgTemp	BLDC informations - Current discharge temperature	1	IR609	AV3923

Variable	Description	Dim	Modbus	BACnet
Info_BLDC1.Info_HTZone	BLDC informations - High discharge temperature zone	1	IR610	IV3924
Info_BLDC1.Info_ActiveDscgHTLim	BLDC informations - Show active value of discharge temp. alarm limit (depending on working zone)	1	IR611	AV3925
Info_BLDC1.Info_DscgSH	BLDC informations - Current discharge superheat	1	IR612	AV3926
Info_BLDC1.Dbg_FBVersion_X	BLDC informations - Debug: FB version x	1	IR613	PIV3927
Info_BLDC1.Dbg_FBVersion_Y	BLDC informations - Debug: FB version y	1	IR614	PIV3928
Info_BLDC1.Dbg_FBVersion_Z	BLDC informations - Debug: FB version z	1	IR615	PIV3929
Info_BLDC1.Dbg_FBVersion_Beta	BLDC informations - Debug: FB version beta	1	IR616	PIV3930
GeneralMng.BACnet_ID_Max	BACnet maximum ID (MSTP: 127; IP: 4194303)	2	IR617	PIV3931
MainVlv_Perc	Main coil floating valve: Estimating position valve	1	IR619	AV3947
PreHeatVlv_Perc	PreHeat coil floating valve: Estimating position valve	1	IR620	AV3948
ReHeatVlv_Perc	ReHeat coil floating valve: Estimating position valve	1	IR621	AV3949
SupplyTempRegSetP	Temperature compensated setpoint	1	IR622	AV4033
TempReg	Temperature regulation	1	IR623	AV4034
AirQuality_PM10.Uom_W	Air quality: PM 10 - Uom	1	IR624	PIV3987
AirQuality_PM10.Val_Hw_R	Air quality: PM 10 - Value reads from board	1	IR625	AV3988
AirQuality_PM10.Val_R	Air quality: PM 10	1	IR626	AV3989
AirQuality_PM25.Uom_W	Air quality: PM 2.5 - Uom	1	IR627	PIV4001
AirQuality_PM25.Val_Hw_R	Air quality: PM 2.5 - Value reads from board	1	IR628	AV4002
AirQuality_PM25.Val_R	Air quality: PM 2.5	1	IR629	AV4003
WrkHrs_SanificationDevice.WrkHrs	Sanification device - Working hours	2	IR630	PIV3964
WrkHrs_SanificationDevice.WrkHrs_Left	Sanification device - Working hours left to the maintenance	2	IR632	PIV3966
AirQuality_PM10.Val_R	Air quality: PM 10	1	IR626	AV3989
AirQuality_PM25.Uom_W	Air quality: PM 2.5 - Uom	1	IR627	PIV4001
AirQuality_PM25.Val_Hw_R	Air quality: PM 2.5 - Value reads from board	1	IR628	AV4002
AirQuality_PM25.Val_R	Air quality: PM 2.5	1	IR629	AV4003
WrkHrs_SanificationDevice.WrkHrs	Sanification device - Working hours	2	IR630	PIV3964
WrkHrs_SanificationDevice.WrkHrs_Left	Sanification device - Working hours left to the maintenance	2	IR632	PIV3966
EBM_AlrmCode_SupplyFan1	EBM alarms code number - Fan Supply 1	1	IR634	IV4077
Ebmpapst_SupplyFan.SenVal_EBM_1.AnemometerSpeed	EBM1 Supply - Ebmpapst sensors values - Anemometer speed (only RadiCal)	1	IR635	PIV4078
Ebmpapst_SupplyFan.SenVal_EBM_1.AirFlow	EBM1 Supply - Ebmpapst sensors values - Air flow (only RadiCal)	1	IR636	PIV4079
Ebmpapst_SupplyFan.SenVal_EBM_1.MassFlow	EBM1 Supply - Ebmpapst sensors values - Mass flow (only RadiCal)	1	IR637	PIV4080
EBM_AlrmCode_ReturnFan1	EBM alarms code number - Fan Return 1	1	IR638	IV4081
Ebmpapst_ReturnFan.SenVal_EBM_1.AnemometerSpeed	EBM1 Return - Ebmpapst sensors values - Anemometer speed (only RadiCal)	1	IR639	PIV4082
Ebmpapst_ReturnFan.SenVal_EBM_1.AirFlow	EBM1 Return - Ebmpapst sensors values - Air flow (only RadiCal)	1	IR640	PIV4083
Ebmpapst_ReturnFan.SenVal_EBM_1.MassFlow	EBM1 Return - Ebmpapst sensors values - Mass flow (only RadiCal)	1	IR641	PIV4084
Ebmpapst_SupplyFan.InfoSpeed_EBM_2.CurrSpeed	EBM2 Supply - Speed info of the Ebmpapst fan - Current speed in [rpm] of the fan for Ebmpapst fan	1	IR642	PIV4085
Ebmpapst_SupplyFan.ElectrInfo_EBM_2.DC_Link_V	EBM2 Supply - Electrical info - DC link voltage for Ebmpapst fan	1	IR643	PIV4086
Ebmpapst_SupplyFan.ElectrInfo_EBM_2.DC_Link_A	EBM2 Supply - Electrical info - DC link current for Ebmpapst fan	1	IR644	PIV4087
Ebmpapst_SupplyFan.ElectrInfo_EBM_2.CurrPower	EBM2 Supply - Electrical info - Current power in [W] for Ebmpapst fan	1	IR645	PIV4088
Ebmpapst_SupplyFan.ElectrInfo_EBM_2.ElectrTemp	EBM2 Supply - Electrical info - Internal circuit temperature for Ebmpapst fan	1	IR646	PIV4089
Ebmpapst_SupplyFan.MotStatus_EBM_2.IR_MotStatus	EBM2 Supply - Motor status defines errors currently detected for Ebmpapst fan - Motor status input register	1	IR647	PIV4090
Ebmpapst_SupplyFan.Warn_EBM_2.IR_Warn	EBM2 Supply - Warning bitfield variable for Ebmpast fan - Warining input register (Bitfield)	1	IR648	PIV4091
Ebmpapst_SupplyFan.InfoSpeed_EBM_2.MaxSpeed	EBM2 Supply - Speed info of the Ebmpapst fan - Maximum admissible speed: all read or speed in [rpm] settings are limited to this value for Ebmpapst fan	1	IR649	PIV4092
Ebmpapst_SupplyFan.CntWorkHrsBkp_EBM_2	EBM2 Supply - Working hour counter for Ebmpapst fan	1	IR650	PIV4093
Ebmpapst_SupplyFan.SenVal_EBM_2.AnemometerSpeed	EBM2 Supply - Ebmpapst sensors values - Anemometer speed (only RadiCal)	1	IR651	PIV4094
Ebmpapst_SupplyFan.SenVal_EBM_2.AirFlow	EBM2 Supply - Ebmpapst sensors values - Air flow (only RadiCal)	1	IR652	PIV4095
Ebmpapst_SupplyFan.SenVal_EBM_2.MassFlow	EBM2 Supply - Ebmpapst sensors values - Mass flow (only RadiCal)	1	IR653	PIV4096
ComStatus_Supply_EBM_2	EBM2 Supply - Communication status of supply ebm fan (0:Online; 1:Offline; 2:Invalid packet; 3:Exception; 4:Connecting;)	1	IR654	PIV4097
EBM_AlrmCode_SupplyFan2	EBM alarms code number - Fan Supply 2	1	IR655	IV4098
Ebmpapst_SupplyFan.InfoSpeed_EBM_3.CurrSpeed	EBM3 Supply - Speed info of the Ebmpapst fan - Current speed in [rpm] of the fan for Ebmpapst fan	1	IR656	PIV4099
Ebmpapst_SupplyFan.ElectrInfo_EBM_3.DC_Link_V	EBM3 Supply - Electrical info - DC link voltage for Ebmpapst fan	1	IR657	PIV4100
Ebmpapst_SupplyFan.ElectrInfo_EBM_3.DC_Link_A	EBM3 Supply - Electrical info - DC link current for Ebmpapst fan	1	IR658	PIV4101
Ebmpapst_SupplyFan.ElectrInfo_EBM_3.CurrPower	EBM3 Supply - Electrical info - Current power in [W] for Ebmpapst fan	1	IR659	PIV4102
Ebmpapst_SupplyFan.ElectrInfo_EBM_3.ElectrTemp	EBM3 Supply - Electrical info - Internal circuit temperature for Ebmpapst fan	1	IR660	PIV4103
Ebmpapst_SupplyFan.MotStatus_EBM_3.IR_MotStatus	EBM3 Supply - Motor status defines errors currently detected for Ebmpapst fan - Motor status input register	1	IR661	PIV4104
Ebmpapst_SupplyFan.Warn_EBM_3.IR_Warn	EBM3 Supply - Warning bitfield variable for Ebmpast fan - Warining input register (Bitfield)	1	IR662	PIV4105
Ebmpapst_SupplyFan.InfoSpeed_EBM_3.MaxSpeed	EBM3 Supply - Speed info of the Ebmpapst fan - Maximum admissible speed: all read or speed in [rpm] settings are limited to this value for Ebmpapst fan	1	IR663	PIV4106
Ebmpapst_SupplyFan.CntWorkHrsBkp_EBM_3	EBM3 Supply - Working hour counter for Ebmpapst fan	1	IR664	PIV4107
Ebmpapst_SupplyFan.SenVal_EBM_3.AnemometerSpeed	EBM3 Supply - Ebmpapst sensors values - Anemometer speed (only RadiCal)	1	IR665	PIV4108
Ebmpapst_SupplyFan.SenVal_EBM_3.AirFlow	EBM3 Supply - Ebmpapst sensors values - Air flow (only RadiCal)	1	IR666	PIV4109
Ebmpapst_SupplyFan.SenVal_EBM_3.MassFlow	EBM3 Supply - Ebmpapst sensors values - Mass flow (only RadiCal)	1	IR667	PIV4110
ComStatus_Supply_EBM_3	EBM3 Supply - Communication status of supply ebm fan (0:Online; 1:Offline; 2:Invalid packet; 3:Exception; 4:Connecting;)	1	IR668	PIV4111
EBM_AlrmCode_SupplyFan3	EBM alarms code number - Fan Supply 3	1	IR669	IV4112
Ebmpapst_SupplyFan.InfoSpeed_EBM_4.CurrSpeed	EBM4 Supply - Speed info of the Ebmpapst fan - Current speed in [rpm] of the fan for Ebmpapst fan	1	IR670	PIV4113
Ebmpapst_SupplyFan.ElectrInfo_EBM_4.DC_Link_V	EBM4 Supply - Electrical info - DC link voltage for Ebmpapst fan	1	IR671	PIV4114
Ebmpapst_SupplyFan.ElectrInfo_EBM_4.DC_Link_A	EBM4 Supply - Electrical info - DC link current for Ebmpapst fan	1	IR672	PIV4115
Ebmpapst_SupplyFan.ElectrInfo_EBM_4.CurrPower	EBM4 Supply - Electrical info - Current power in [W] for Ebmpapst fan	1	IR673	PIV4116
Ebmpapst_SupplyFan.ElectrInfo_EBM_4.ElectrTemp	EBM4 Supply - Electrical info - Internal circuit temperature for Ebmpapst fan	1	IR674	PIV4117
Ebmpapst_SupplyFan.MotStatus_EBM_4.IR_MotStatus	EBM4 Supply - Motor status defines errors currently detected for Ebmpapst fan - Motor status input register	1	IR675	PIV4118
Ebmpapst_SupplyFan.Warn_EBM_4.IR_Warn	EBM4 Supply - Warning bitfield variable for Ebmpast fan - Warining input register (Bitfield)	1	IR676	PIV4119

Variable	Description	Dim	Modbus	BACnet
Ebmpapst_SupplyFan.InfoSpeed_EBM_4.MaxSpeed	EBM4 Supply - Speed info of the Ebmpapst fan - Maximum admissible speed: all read or speed in [rpm] settings are limited to this value for Ebmpapst fan	1	IR677	PIV4120
Ebmpapst_SupplyFan.CntWorkHrsBkp_EBM_4	EBM4 Supply - Working hour counter for Ebmpapst fan	1	IR678	PIV4121
Ebmpapst_SupplyFan.SenVal_EBM_4.AnemometerSpeed	EBM4 Supply - Ebmpapst sensors values - Anemometer speed (only RadiCal)	1	IR679	PIV4122
Ebmpapst_SupplyFan.SenVal_EBM_4.AirFlow	EBM4 Supply - Ebmpapst sensors values - Air flow (only RadiCal)	1	IR680	PIV4123
Ebmpapst_SupplyFan.SenVal_EBM_4.MassFlow	EBM4 Supply - Ebmpapst sensors values - Mass flow (only RadiCal)	1	IR681	PIV4124
ComStatus_Supply_EBM_4	EBM4 Supply - Communication status of supply ebm fan (0:Online; 1:Offline; 2:Invalid packet; 3:Exception; 4:Connecting;)	1	IR682	PIV4125
EBM_AlrmCode_SupplyFan4	EBM alarms code number - Fan Supply 4	1	IR683	IV4126
Ebmpapst_ReturnFan.InfoSpeed_EBM_2.CurrSpeed	EBM2 Return - Speed info of the Ebmpapst fan - Current speed in [rpm] of the fan for Ebmpapst fan	1	IR684	PIV4127
Ebmpapst_ReturnFan.ElectrInfo_EBM_2.DC_Link_V	EBM2 Return - Electrical info - DC link voltage for Ebmpapst fan	1	IR685	PIV4128
Ebmpapst_ReturnFan.ElectrInfo_EBM_2.DC_Link_A	EBM2 Return - Electrical info - DC link current for Ebmpapst fan	1	IR686	PIV4129
Ebmpapst_ReturnFan.ElectrInfo_EBM_2.CurrPower	EBM2 Return - Electrical info - Current power in [W] for Ebmpapst fan	1	IR687	PIV4130
Ebmpapst_ReturnFan.ElectrInfo_EBM_2.ElectrTemp	EBM2 Return - Electrical info - Internal circuit temperature for Ebmpapst fan	1	IR688	PIV4131
Ebmpapst_ReturnFan.MotStatus_EBM_2.IR_MotStatus	EBM2 Return - Motor status defines errors currently detected for Ebmpapst fan - Motor status input register	1	IR689	PIV4132
Ebmpapst_ReturnFan.Warn_EBM_2.IR_Warn	EBM2 Return - Warning bitfield variable for Ebmpast fan - Warining input register (Bitfield)	1	IR690	PIV4133
Ebmpapst_ReturnFan.InfoSpeed_EBM_2.MaxSpeed	EBM2 Return - Speed info of the Ebmpapst fan - Maximum admissible speed: all read or speed in [rpm] settings are limited to this value for Ebmpapst fan	1	IR691	PIV4134
Ebmpapst_ReturnFan.CntWorkHrsBkp_EBM_2	EBM2 Return - Working hour counter for Ebmpapst fan	1	IR692	PIV4135
Ebmpapst_ReturnFan.SenVal_EBM_2.AnemometerSpeed	EBM2 Return - Ebmpapst sensors values - Anemometer speed (only RadiCal)	1	IR693	PIV4136
Ebmpapst_ReturnFan.SenVal_EBM_2.AirFlow	EBM2 Return - Ebmpapst sensors values - Air flow (only RadiCal)	1	IR694	PIV4137
Ebmpapst_ReturnFan.SenVal_EBM_2.MassFlow	EBM2 Return - Ebmpapst sensors values - Mass flow (only RadiCal)	1	IR695	PIV4138
ComStatus_Return_EBM_2	EBM2 Return - Communication status of return ebm fan (0:Online; 1:Offline; 2:Invalid packet; 3:Exception; 4:Connecting;)	1	IR696	PIV4139
EBM_AlrmCode_ReturnFan2	EBM alarms code number - Fan Return 2	1	IR697	IV4140
Ebmpapst_ReturnFan.InfoSpeed_EBM_3.CurrSpeed	EBM3 Return - Speed info of the Ebmpapst fan - Current speed in [rpm] of the fan for Ebmpapst fan	1	IR698	PIV4141
Ebmpapst_ReturnFan.ElectrInfo_EBM_3.DC_Link_V	EBM3 Return - Electrical info - DC link voltage for Ebmpapst fan	1	IR699	PIV4142
Ebmpapst_ReturnFan.ElectrInfo_EBM_3.DC_Link_A	EBM3 Return - Electrical info - DC link current for Ebmpapst fan	1	IR700	PIV4143
Ebmpapst_ReturnFan.ElectrInfo_EBM_3.CurrPower	EBM3 Return - Electrical info - Current power in [W] for Ebmpapst fan	1	IR701	PIV4144
Ebmpapst_ReturnFan.ElectrInfo_EBM_3.ElectrTemp	EBM3 Return - Electrical info - Internal circuit temperature for Ebmpapst fan	1	IR702	PIV4145
Ebmpapst_ReturnFan.MotStatus_EBM_3.IR_MotStatus	EBM3 Return - Motor status defines errors currently detected for Ebmpapst fan - Motor status input register	1	IR703	PIV4146
Ebmpapst_ReturnFan.Warn_EBM_3.IR_Warn	EBM3 Return - Warning bitfield variable for Ebmpast fan - Warining input register (Bitfield)	1	IR704	PIV4147
Ebmpapst_ReturnFan.InfoSpeed_EBM_3.MaxSpeed	EBM3 Return - Speed info of the Ebmpapst fan - Maximum admissible speed: all read or speed in [rpm] settings are limited to this value for Ebmpapst fan	1	IR705	PIV4148
Ebmpapst_ReturnFan.CntWorkHrsBkp_EBM_3	EBM3 Return - Working hour counter for Ebmpapst fan	1	IR706	PIV4149
Ebmpapst_ReturnFan.SenVal_EBM_3.AnemometerSpeed	EBM3 Return - Ebmpapst sensors values - Anemometer speed (only RadiCal)	1	IR707	PIV4150
Ebmpapst_ReturnFan.SenVal_EBM_3.AirFlow	EBM3 Return - Ebmpapst sensors values - Air flow (only RadiCal)	1	IR708	PIV4151
Ebmpapst_ReturnFan.SenVal_EBM_3.MassFlow	EBM3 Return - Ebmpapst sensors values - Mass flow (only RadiCal)	1	IR709	PIV4152
ComStatus_Return_EBM_3	EBM3 Return - Communication status of return ebm fan (0:Online; 1:Offline; 2:Invalid packet; 3:Exception; 4:Connecting;)	1	IR710	PIV4153
EBM_AlrmCode_ReturnFan3	EBM alarms code number - Fan Return 3	1	IR711	IV4154
Ebmpapst_ReturnFan.InfoSpeed_EBM_4.CurrSpeed	EBM4 Return - Speed info of the Ebmpapst fan - Current speed in [rpm] of the fan for Ebmpapst fan	1	IR712	PIV4155
Ebmpapst_ReturnFan.ElectrInfo_EBM_4.DC_Link_V	EBM4 Return - Electrical info - DC link voltage for Ebmpapst fan	1	IR713	PIV4156
Ebmpapst_ReturnFan.ElectrInfo_EBM_4.DC_Link_A	EBM4 Return - Electrical info - DC link current for Ebmpapst fan	1	IR714	PIV4157
Ebmpapst_ReturnFan.ElectrInfo_EBM_4.CurrPower	EBM4 Return - Electrical info - Current power in [W] for Ebmpapst fan	1	IR715	PIV4158
Ebmpapst_ReturnFan.ElectrInfo_EBM_4.ElectrTemp	EBM4 Return - Electrical info - Internal circuit temperature for Ebmpapst fan	1	IR716	PIV4159
Ebmpapst_ReturnFan.MotStatus_EBM_4.IR_MotStatus	EBM4 Return - Motor status defines errors currently detected for Ebmpapst fan - Motor status input register	1	IR717	PIV4160
Ebmpapst_ReturnFan.Warn_EBM_4.IR_Warn	EBM4 Return - Warning bitfield variable for Ebmpast fan - Warining input register (Bitfield)	1	IR718	PIV4161
Ebmpapst_ReturnFan.InfoSpeed_EBM_4.MaxSpeed	EBM4 Return - Speed info of the Ebmpapst fan - Maximum admissible speed: all read or speed in [rpm] settings are limited to this value for Ebmpapst fan	1	IR719	PIV4162
Ebmpapst_ReturnFan.CntWorkHrsBkp_EBM_4	EBM4 Return - Working hour counter for Ebmpapst fan	1	IR720	PIV4163
Ebmpapst_ReturnFan.SenVal_EBM_4.AnemometerSpeed	EBM4 Return - Ebmpapst sensors values - Anemometer speed (only RadiCal)	1	IR721	PIV4164
Ebmpapst_ReturnFan.SenVal_EBM_4.AirFlow	EBM4 Return - Ebmpapst sensors values - Air flow (only RadiCal)	1	IR722	PIV4165
Ebmpapst_ReturnFan.SenVal_EBM_4.MassFlow	EBM4 Return - Ebmpapst sensors values - Mass flow (only RadiCal)	1	IR723	PIV4166
ComStatus_Return_EBM_4	EBM4 Return - Communication status of return ebm fan (0:Online; 1:Offline; 2:Invalid packet; 3:Exception; 4:Connecting;)	1	IR724	PIV4167
EBM_AlrmCode_ReturnFan4	EBM alarms code number - Fan Return 4	1	IR725	IV4168
ZA_AlrmCode_SupplyFan1	ZA alarms code number - Fan Supply 1	1	IR726	IV4169
ZA_AlrmCode_ReturnFan1	ZA alarms code number - Fan Return 1	1	IR727	IV4170
ZiehlAbegg_SupplyFan.FanSpeedInfo_ZA_2.CurrSpeed_rpm	ZA2 Supply - Fan speed informations - Actual speed [rpm] of the Zhiel-Abegg fan	1	IR728	PIV4171
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_2.DC_LinkV	ZA2 Supply - Fan electrical informations - DC link voltage (V)	1	IR729	PIV4172
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_2.LineV	ZA2 Supply - Fan electrical informations - Supply voltage (peak voltage)	1	IR730	PIV4173
ZiehlAbegg_SupplyFan.FanSpeedInfo_ZA_2.MaxSpeed_rpm	ZA2 Supply - Fan speed informations - Maximum set speed	1	IR731	PIV4174
ZiehlAbegg_SupplyFan.FanSpeedInfo_ZA_2.MinSpeed_rpm	ZA2 Supply - Fan speed informations - Minimum set speed	1	IR732	PIV4175
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_2.MotPwr	ZA2 Supply - Fan electrical informations - Motor input power (W)	1	IR733	PIV4176
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_2.ElectronicTemp	ZA2 Supply - Fan electrical informations - Electronics temperature (°C)	1	IR734	IV4177
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_2.IGBT_temp	ZA2 Supply - Fan electrical informations - IGBT temperature (°C)	1	IR735	IV4178
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_2.MCU_Temp	ZA2 Supply - Fan electrical informations - MCU temperature	1	IR736	IV4179
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_2.MotTemp	ZA2 Supply - Fan electrical informations - Motr temperature (°C)	1	IR737	IV4180

Variable	Description	Dim	Modbus	BACnet
FanAlrm_ZA_SupplyFan_2.ErrStatus	ZA2 supply - Fan alarms - Error status defines errors currently detected	1	IR738	PIV4181
ZiehlAbegg_SupplyFan.FanStatus_ZA_2.WorkingStatus	ZA2 Supply - Fan status - Working status defines current working conditions	1	IR739	PIV4182
ZiehlAbegg_SupplyFan.FanStatus_ZA_2.WorkStatusCode	ZA2 Supply - Fan status - Working status code	1	IR740	PIV4183
ZA_AlrmCode_SupplyFan2	ZA alarms code number - Fan Supply 2	1	IR741	IV4184
ZiehlAbegg_SupplyFan.FanSpeedInfo_ZA_3.CurrSpeed_rpm	ZA3 Supply - Fan speed informations - Actual speed [rpm] of the Zhiel-Abegg fan	1	IR742	PIV4185
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_3.DC_LinkV	ZA3 Supply - Fan electrical informations - DC link voltage (V)	1	IR743	PIV4186
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_3.LineV	ZA3 Supply - Fan electrical informations - Supply voltage (peak voltage)	1	IR744	PIV4187
ZiehlAbegg_SupplyFan.FanSpeedInfo_ZA_3.MaxSpeed_rpm	ZA3 Supply - Fan speed informations - Maximum set speed	1	IR745	PIV4188
ZiehlAbegg_SupplyFan.FanSpeedInfo_ZA_3.MinSpeed_rpm	ZA3 Supply - Fan speed informations - Minimum set speed	1	IR746	PIV4189
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_3.MotPwr	ZA3 Supply - Fan electrical informations - Motor input power (W)	1	IR747	PIV4190
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_3.Electroni-cTemp	ZA3 Supply - Fan electrical informations - Electronics temperature (°C)	1	IR748	IV4191
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_3.IGBT_temp	ZA3 Supply - Fan electrical informations - IGBT temperature (°C)	1	IR749	IV4192
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_3.MCU_Temp	ZA3 Supply - Fan electrical informations - MCU temperature	1	IR750	IV4193
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_3.MotTemp	ZA3 Supply - Fan electrical informations - Motr temperature (°C)	1	IR751	IV4194
FanAlrm_ZA_SupplyFan_3.ErrStatus	ZA3 supply - Fan alarms - Error status defines errors currently detected	1	IR752	PIV4195
ZiehlAbegg_SupplyFan.FanStatus_ZA_3.WorkingStatus	ZA3 Supply - Fan status - Working status defines current working conditions	1	IR753	PIV4196
ZiehlAbegg_SupplyFan.FanStatus_ZA_3.WorkStatusCode	ZA3 Supply - Fan status - Working status code	1	IR754	PIV4197
ZA_AlrmCode_SupplyFan3	ZA alarms code number - Fan Supply 3	1	IR755	IV4198
ZiehlAbegg_SupplyFan.FanSpeedInfo_ZA_4.CurrSpeed_rpm	ZA4 Supply - Fan speed informations - Actual speed [rpm] of the Zhiel-Abegg fan	1	IR756	PIV4199
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_4.DC_LinkV	ZA4 Supply - Fan electrical informations - DC link voltage (V)	1	IR757	PIV4200
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_4.LineV	ZA4 Supply - Fan electrical informations - Supply voltage (peak voltage)	1	IR758	PIV4201
ZiehlAbegg_SupplyFan.FanSpeedInfo_ZA_4.MaxSpeed_rpm	ZA4 Supply - Fan speed informations - Maximum set speed	1	IR759	PIV4202
ZiehlAbegg_SupplyFan.FanSpeedInfo_ZA_4.MinSpeed_rpm	ZA4 Supply - Fan speed informations - Minimum set speed	1	IR760	PIV4203
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_4.MotPwr	ZA4 Supply - Fan electrical informations - Motor input power (W)	1	IR761	PIV4204
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_4.Electroni-cTemp	ZA4 Supply - Fan electrical informations - Electronics temperature (°C)	1	IR762	IV4205
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_4.IGBT_temp	ZA4 Supply - Fan electrical informations - IGBT temperature (°C)	1	IR763	IV4206
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_4.MCU_Temp	ZA4 Supply - Fan electrical informations - MCU temperature	1	IR764	IV4207
ZiehlAbegg_SupplyFan.FanElectricalInfo_ZA_4.MotTemp	ZA4 Supply - Fan electrical informations - Motr temperature (°C)	1	IR765	IV4208
FanAlrm_ZA_SupplyFan_4.ErrStatus	ZA4 supply - Fan alarms - Error status defines errors currently detected	1	IR766	PIV4209
ZiehlAbegg_SupplyFan.FanStatus_ZA_4.WorkingStatus	ZA4 Supply - Fan status - Working status defines current working conditions	1	IR767	PIV4210
ZiehlAbegg_SupplyFan.FanStatus_ZA_4.WorkStatusCode	ZA4 Supply - Fan status - Working status code	1	IR768	PIV4211
ZA_AlrmCode_SupplyFan4	ZA alarms code number - Fan Supply 4	1	IR769	IV4212
ZiehlAbegg_ReturnFan.FanSpeedInfo_ZA_2.CurrSpeed_rpm	ZA2 Return - Fan speed informations - Actual speed [rpm] of the Zhiel-Abegg fan	1	IR770	PIV4213
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_2.DC_LinkV	ZA2 Return - Fan electrical informations - DC link voltage (V)	1	IR771	PIV4214
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_2.LineV	ZA2 Return - Fan electrical informations - Supply voltage (peak voltage)	1	IR772	PIV4215
ZiehlAbegg_ReturnFan.FanSpeedInfo_ZA_2.MaxSpeed_rpm	ZA2 Return - Fan speed informations - Maximum set speed	1	IR773	PIV4216
ZiehlAbegg_ReturnFan.FanSpeedInfo_ZA_2.MinSpeed_rpm	ZA2 Return - Fan speed informations - Minimum set speed	1	IR774	PIV4217
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_2.MotPwr	ZA2 Return - Fan electrical informations - Motor input power (W)	1	IR775	PIV4218
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_2.Electroni-cTemp	ZA2 Return - Fan electrical informations - Electronics temperature (°C)	1	IR776	IV4219
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_2.IGBT_temp	ZA2 Return - Fan electrical informations - IGBT temperature (°C)	1	IR777	IV4220
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_2.MCU_Temp	ZA2 Return - Fan electrical informations - MCU temperature	1	IR778	IV4221
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_2.MotTemp	ZA2 Return - Fan electrical informations - Motr temperature (°C)	1	IR779	IV4222
FanAlrm_ZA_RetFan_2.ErrStatus	ZA2 return - Fan alarms - Error status defines errors currently detected	1	IR780	PIV4223
ZiehlAbegg_ReturnFan.FanStatus_ZA_2.WorkingStatus	ZA2 Return - Fan status - Working status defines current working conditions	1	IR781	PIV4224
ZiehlAbegg_ReturnFan.FanStatus_ZA_2.WorkStatusCode	ZA2 Return - Fan status - Working status code	1	IR782	PIV4225
ZA_AlrmCode_ReturnFan2	ZA alarms code number - Fan Return 2	1	IR783	IV4226
ZiehlAbegg_ReturnFan.FanSpeedInfo_ZA_3.CurrSpeed_rpm	ZA3 Return - Fan speed informations - Actual speed [rpm] of the Zhiel-Abegg fan	1	IR784	PIV4227
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_3.DC_LinkV	ZA3 Return - Fan electrical informations - DC link voltage (V)	1	IR785	PIV4228
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_3.LineV	ZA3 Return - Fan electrical informations - Supply voltage (peak voltage)	1	IR786	PIV4229
ZiehlAbegg_ReturnFan.FanSpeedInfo_ZA_3.MaxSpeed_rpm	ZA3 Return - Fan speed informations - Maximum set speed	1	IR787	PIV4230
ZiehlAbegg_ReturnFan.FanSpeedInfo_ZA_3.MinSpeed_rpm	ZA3 Return - Fan speed informations - Minimum set speed	1	IR788	PIV4231
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_3.MotPwr	ZA3 Return - Fan electrical informations - Motor input power (W)	1	IR789	PIV4232
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_3.Electroni-cTemp	ZA3 Return - Fan electrical informations - Electronics temperature (°C)	1	IR790	IV4233
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_3.IGBT_temp	ZA3 Return - Fan electrical informations - IGBT temperature (°C)	1	IR791	IV4234
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_3.MCU_Temp	ZA3 Return - Fan electrical informations - MCU temperature	1	IR792	IV4235
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_3.MotTemp	ZA3 Return - Fan electrical informations - Motr temperature (°C)	1	IR793	IV4236
FanAlrm_ZA_RetFan_3.ErrStatus	ZA3 return - Fan alarms - Error status defines errors currently detected	1	IR794	PIV4237
ZiehlAbegg_ReturnFan.FanStatus_ZA_3.WorkingStatus	ZA3 Return - Fan status - Working status defines current working conditions	1	IR795	PIV4238
ZiehlAbegg_ReturnFan.FanStatus_ZA_3.WorkStatusCode	ZA3 Return - Fan status - Working status code	1	IR796	PIV4239
ZA_AlrmCode_ReturnFan3	ZA alarms code number - Fan Return 3	1	IR797	IV4240
ZiehlAbegg_ReturnFan.FanSpeedInfo_ZA_4.CurrSpeed_rpm	ZA4 Return - Fan speed informations - Actual speed [rpm] of the Zhiel-Abegg fan	1	IR798	PIV4241
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_4.DC_LinkV	ZA4 Return - Fan electrical informations - DC link voltage (V)	1	IR799	PIV4242
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_4.LineV	ZA4 Return - Fan electrical informations - Supply voltage (peak voltage)	1	IR800	PIV4243
ZiehlAbegg_ReturnFan.FanSpeedInfo_ZA_4.MaxSpeed_rpm	ZA4 Return - Fan speed informations - Maximum set speed	1	IR801	PIV4244
ZiehlAbegg_ReturnFan.FanSpeedInfo_ZA_4.MinSpeed_rpm	ZA4 Return - Fan speed informations - Minimum set speed	1	IR802	PIV4245
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_4.MotPwr	ZA4 Return - Fan electrical informations - Motor input power (W)	1	IR803	PIV4246
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_4.Electroni-cTemp	ZA4 Return - Fan electrical informations - Electronics temperature (°C)	1	IR804	IV4247
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_4.IGBT_temp	ZA4 Return - Fan electrical informations - IGBT temperature (°C)	1	IR805	IV4248
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_4.MCU_Temp	ZA4 Return - Fan electrical informations - MCU temperature	1	IR806	IV4249
ZiehlAbegg_ReturnFan.FanElectricalInfo_ZA_4.MotTemp	ZA4 Return - Fan electrical informations - Motr temperature (°C)	1	IR807	IV4250

Variable	Description	Dim	Modbus	BACnet
FanAlrm_ZA_RetFan_4.ErrStatus	ZA4 return - Fan alarms - Error status defines errors currently detected	1	IR808	PIV4251
ZiehlAbegg_ReturnFan.FanStatus_ZA_4.WorkingStatus	ZA4 Return - Fan status - Working status defines current working conditions	1	IR809	PIV4252
ZiehlAbegg_ReturnFan.FanStatus_ZA_4.WorkStatusCode	ZA4 Return - Fan status - Working status code	1	IR810	PIV4253
ZA_AlrmCode_ReturnFan4	ZA alarms code number - Fan Return 4	1	IR811	IV4254
WrkHrs_SupplyFan_2.WrkHrs	Supply Fan - Working hours	2	IR812	PIV4267
WrkHrs_SupplyFan_2.WrkHrs_Left	Supply Fan - Working hours left to the maintenance	2	IR814	PIV4268
WrkHrs_SupplyFan_3.WrkHrs	Supply Fan - Working hours	2	IR816	PIV4269
WrkHrs_SupplyFan_3.WrkHrs_Left	Supply Fan - Working hours left to the maintenance	2	IR818	PIV4270
WrkHrs_SupplyFan_4.WrkHrs	Supply Fan - Working hours	2	IR820	PIV4271
WrkHrs_SupplyFan_4.WrkHrs_Left	Supply Fan - Working hours left to the maintenance	2	IR822	PIV4272
WrkHrs_ReturnFan_2.WrkHrs	Return Fan - Working hours	2	IR824	PIV4273
WrkHrs_ReturnFan_2.WrkHrs_Left	Return Fan - Working hours left to the maintenance	2	IR826	PIV4274
WrkHrs_ReturnFan_3.WrkHrs	Return Fan - Working hours	2	IR828	PIV4275
WrkHrs_ReturnFan_3.WrkHrs_Left	Return Fan - Working hours left to the maintenance	2	IR830	PIV4276
WrkHrs_ReturnFan_4.WrkHrs	Return Fan - Working hours	2	IR832	PIV4277
WrkHrs_ReturnFan_4.WrkHrs_Left	Return Fan - Working hours left to the maintenance	2	IR834	PIV4278
Fans.Value_AVG	SFP - Value to calculate the average	1	IR836	AV4279
Fans.AvgTimeData_AVG.Daily	SFP - Calculated average time data - Daily average	1	IR837	AV4280
Fans.AvgTimeData_AVG.Monthly	SFP - Calculated average time data - Monthly average	1	IR838	AV4281
HeatExchanger.Value_AVG	Heat Rec. Eff. - Value to calculate the average	1	IR839	AV4282
HeatExchanger.AvgTimeData_AVG.Daily	Heat Rec. Eff. - Calculated average time data - Daily average	1	IR840	AV4283
HeatExchanger.AvgTimeData_AVG.Monthly	Heat Rec. Eff. - Calculated average time data - Monthly average	1	IR841	AV4284
HumiSteamMng.CntCylHr_UEY	HumiSteam - Cylinder hours counter value	1	IR842	IV4346
HumiSteamMng.HumState_UEY	HumiSteam - Humidifier satus	1	IR843	IV4347
HumiSteamMng.Curr_UEY	HumiSteam - Immersed electrode current	2	IR844	IV4348
HumiSteamMng.Conductivity_UEY	HumiSteam - Conductivity of the water in the cylinder	1	IR846	IV4349
HumiSteamMng.SteamInstantFlowRate_UEY	HumiSteam - Steam istant flow rate value returned by the CPY	2	IR847	IV4350
UEY_AlrmCode	HumiSteam - UEY alarms code number	1	IR849	IV4351
Fans_regulation.SupplyFan_FanTempReg_SetPOffs	Supply fan - Temperature regulation setpoint offset	1	IR850	AV4370
Fans_regulation.SupplyFan_FC_FH_SetPOffs	Supply fan - FC/FH setpoint offset	1	IR851	AV4371
Fans_regulation.RetFan_FanTempReg_SetPOffs	Return fan - Temperature regulation setpoint offset	1	IR852	AV4372
Fans_regulation.RetFan_FC_FH_SetPOffs	Return fan - FC/FH setpoint offset	1	IR853	AV4373
GenericAin1.Uom_W	Generic Ain1 - Uom	1	IR854	PIV4388
GenericAin1.Val_Hw_R	Generic Ain1 - Value reads from board	1	IR855	AV4389
GenericAin1.Val_R	Generic Ain1	1	IR856	AV4390
GenericAin2.Uom_W	Generic Ain2 - Uom	1	IR857	PIV4402
GenericAin2.Val_Hw_R	Generic Ain2 - Value reads from board	1	IR858	AV4403
GenericAin2.Val_R	Generic Ain2	1	IR859	AV4404
GenericAin3.Uom_W	Generic Ain3 - Uom	1	IR860	PIV4416
GenericAin3.Val_Hw_R	Generic Ain3 - Value reads from board	1	IR861	AV4417
GenericAin3.Val_R	Generic Ain3	1	IR862	AV4418
GenericAin4.Uom_W	Generic Ain4 - Uom	1	IR863	PIV4430
GenericAin4.Val_Hw_R	Generic Ain4 - Value reads from board	1	IR864	AV4431
GenericAin4.Val_R	Generic Ain4	1	IR865	AV4432
GenericAin5.Uom_W	Generic Ain5 - Uom	1	IR866	PIV4444
GenericAin5.Val_Hw_R	Generic Ain5 - Value reads from board	1	IR867	AV4445
GenericAin5.Val_R	Generic Ain5	1	IR868	AV4446
OA _CoilRegReq	Outdoor air pre-treatment request from PID Seq	1	IR869	AV4562
OA_CoilReq	Outdoor air pre-treatment request	1	IR870	AV4563
WrkHrs_OA_CoilAout.WrkHrs	Outdoor air pre-treatment coil analog output - Working hours	2	IR871	PIV4564
WrkHrs_OA_CoilAout.WrkHrs_Left	Outdoor air pre-treatment coil analog output - Working hours left to the maintenance	2	IR873	PIV4565
WrkHrs_OA_CoilStep1.WrkHrs	Outdoor air pre-treatment coil step 1 - Working hours	2	IR875	PIV4566
WrkHrs_OA_CoilStep1.WrkHrs_Left	Outdoor air pre-treatment coil step 1 - Working hours left to the maintenance	2	IR877	PIV4567
WrkHrs_OA_CoilStep2.WrkHrs	Outdoor air pre-treatment coil step 2 - Working hours	2	IR879	PIV4568
WrkHrs_OA_CoilStep2.WrkHrs_Left	Outdoor air pre-treatment coil step 2 - Working hours left to the maintenance	2	IR881	PIV4569
WrkHrs_OA_CoilStep3.WrkHrs	Outdoor air pre-treatment coil step 3 - Working hours	2	IR883	PIV4570
WrkHrs_OA_CoilStep3.WrkHrs_Left	Outdoor air pre-treatment coil step 3 - Working hours left to the maintenance	2	IR885	PIV4571
WrkHrs_OA_CoilStep4.WrkHrs	Outdoor air pre-treatment coil step 4 - Working hours	2	IR887	PIV4572
WrkHrs_OA_CoilStep4.WrkHrs_Left	Outdoor air pre-treatment coil step 4 - Working hours left to the maintenance	2	IR889	PIV4573
OA_Vlv_Perc	Outdoor air pre-treatment floating valve: Estimating position valve	1	IR891	PIV4574

Tab. 11.r

12. ALARMS AND SIGNALS

12.1 Types of alarms

The k.Air controller manages three types of alarms, depending on the reset mode:
- automatic: the alarm is reset and the unit restarts automatically when the alarm condition is no longer present;
- semi- automatic: if the alarm occurs several times, reset becomes manual and an operator needs to physically restart the unit;
- manual: an operator needs to physically restart the unit.

When an alarm occurs:
- pGDE: the Alarm button flashes and the display continues to show the standard view;
- th-Tune (if unit ON): the icons at the bottom of the display flash (see the Alarm table);
- pGDX: a red number is shown at the top right, next to the alarm icon, which indicates the number of active alarms.
- The alarm relays are activated on the digital outputs.

If the alarm is reset automatically, the Alarm button (pGDE)/icons on the display (th- Tune)/alarm signal (pGDX) goes off, the alarm code is cleared from the list and the alarm reset event is recorded in the alarm log.

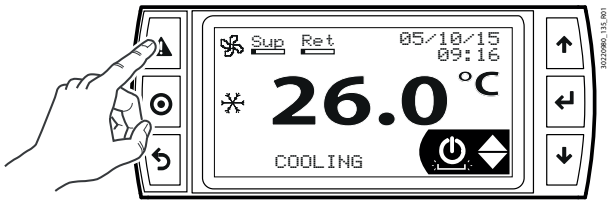


Fig. 12.a

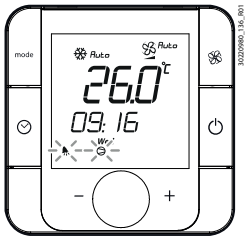


Fig. 12.b

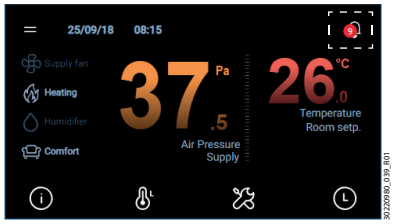
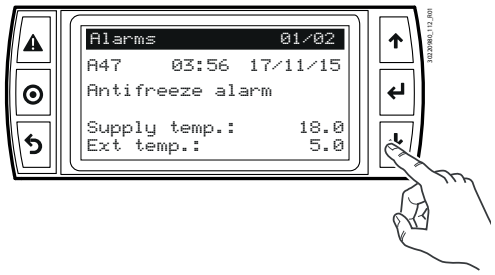
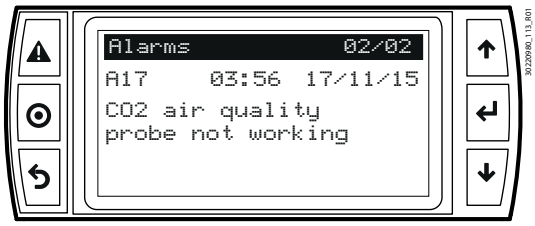


Fig. 12.c

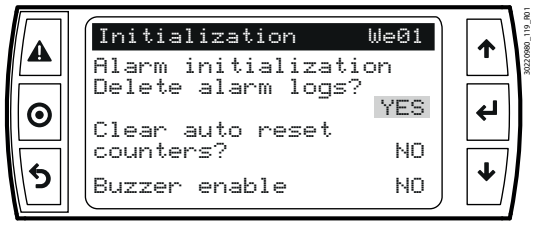


On the pGDE terminal, press Alarm to view a brief description of the alarm



Press DOWN several times to display all of the active alarms

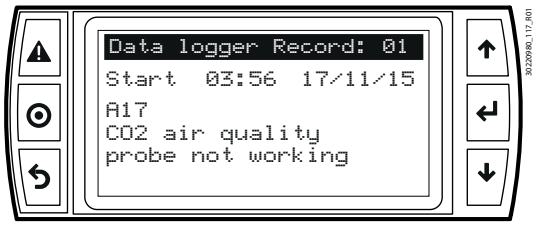
At the end of the list, the screen is shown to reset the alarm and add the event to the alarm log (Data Logger).



Press Alarm for 3 s to attempt to reset all of the alarms:
1. if the cause of the alarms is no longer present, they will be successfully reset and the light on the red button will go off;
2. if the alarms cannot be reset, the light on the Alarm button stays on steady, indicating the alarm has been acknowledged.

To clear the alarm log, access screen Xe01. On the second row, it is possible to clear the event counter for requiring manual reset of semi-automatic alarms.

Example: alarm A14; CO2 probe is shown in the alarm list, and the Start and Stop times are recorded in the log.



12.2 Alarm parameters

These involve the thresholds and delays after which the alarms are activated, for example:
- Ac56 - frost protection: warning and alarm delay;
- Ac60 - low supply temperature: threshold, alarm delay at start-up and in steady operation;
- Ae03 - fan operating hours: alarm threshold, hours elapsed, reset hours;

See the Parameter table for the complete list.

12.3 Contatti generici di ingresso e uscita di allarme

For greater installation flexibility, k.air features three generic alarm inputs and three signal outputs. These contacts are always available, simply associate an activation channel using the I/O configuration menus Wb03 and Wb04.

The following inputs are available:
- Unit stop alarm, the unit is stopped immediately without completing the shutdown procedure
- Generic alarm, the unit is stopped after completing the shutdown procedure
- Signal input, no effect on control.

The following outputs are available:
- Global alarm, cumulative contact for all alarms and signals
- Serious alarm, cumulative contact of the alarms that stop the entire unit (with and without shutdown procedure)
- Minor alarm, cumulative contact of alarms that do not stop the unit and signals, e.g. filter alarm, maintenance alarm, temperature not reached.

12.4 Alarm table

Code	Description	Reset	Effect	Modbus
AL000	Reserved	Automatic	-	DI1000
AL001	Supply temperature probe alarm	Automatic	Unit off / Unit in control probe error status (parameter)	DI1001
AL002	Supply humidity probe alarm	Automatic	Display only	DI1002
AL003	Return temperature probe alarm	Automatic	Unit off / Unit in control probe error status (parameter)	DI1003
AL004	Return humidity probe alarm	Automatic	Display only	DI1004
AL005	Room temperature probe alarm	Automatic	Unit off / Unit in control probe error status (parameter)	DI1005
AL006	Room humidity probe alarm	Automatic	Display only	DI1006
AL007	Fresh air temperature probe alarm	Automatic	Display only	DI1007
AL008	Fresh air humidity probe alarm	Automatic	Display only	DI1008
AL009	Exhaust temperature probe alarm	Automatic	Display only	DI1009
AL010	Exhaust humidity probe alarm	Automatic	Display only	DI1010
AL011	Antifreeze temperature probe alarm	Automatic	Display only	DI1011
AL012	Saturation temperature probe alarm	Automatic	Display only	DI1012
AL013	Saturation humidity probe alarm	Automatic	Display only	DI1013
AL014	Reserved	Automatic	Display only	DI1014
AL015	Supply air pressure probe alarm	Automatic	Display only	DI1015
AL016	Return air pressure probe alarm	Automatic	Display only	DI1016
AL017	CO2 sensor probe alarm	Automatic	Display only	DI1017
AL018	VOC sensor probe alarm	Automatic	Display only	DI1018
AL019	Discharge pressure probe alarm	Automatic	Display only	DI1019
AL020	Discharge temperature probe alarm	Automatic	Display only	DI1020
AL021	Suction pressure probe alarm	Automatic	Display only	DI1021
AL022	Suction temperature probe alarm	Automatic	Display only	DI1022
AL023	Allarme sonda di temperature acqua batteria aria esterna guasta	Automatico	Solo visualizzazione	DI1023
AL024	Preheat coil water temperature probe alarm	Automatic	Display only	DI1024
AL025	Main coil water temperature probe alarm	Automatic	Display only	DI1025
AL026	Reheat coil water temperature probe alarm	Automatic	Display only	DI1026
AL027	Auxiliary probe 1 probe alarm	Automatic	Display only	DI1027
AL028	Auxiliary probe 2 probe alarm	Automatic	Display only	DI1028
AL029	Auxiliary probe 3 probe alarm	Automatic	Display only	DI1029
AL030	Auxiliary probe 4 probe alarm	Automatic	Display only	DI1030
AL031	Set point by AIN probe alarm	Automatic	Display only	DI1031
AL032	Reserved	Automatic	Display only	DI1032
AL033	Reserved	Automatic	Display only	DI1033
AL034	Hepa filter 1 probe alarm	Automatic	Display only	DI1034

Code	Description	Reset	Effect	Modbus
AL035	Hepa filter 2 probe alarm	Automatic	Display only	DI1035
AL036	Generic alarm from digital input	Manual	Unit shutdown	DI1036
AL037	Main heater alarm	Manual	Immediate main coil shutdown	DI1037
AL038	Supply fan overload	Manual	Immediate unit shutdown	DI1038
AL039	Return fan overload	Manual	Immediate return fan shutdown	DI1039
AL040	Fan overload	Manual	Immediate unit shutdown	DI1040
AL041	Compressor overload	Manual	Immediate compressor shutdown	DI1041
AL042	High discharge pressure switch	Manual	Immediate compressor shutdown	DI1042
AL043	Low suction pressure switch	Manual	Immediate compressor shutdown	DI1043
AL044	Supply air flow switch alarm	Manual	Immediate unit shutdown	DI1044
AL045	Return air flow switch alarm	Manual	Immediate return fan shutdown	DI1045
AL046	Air flow switch alarm	Manual	Immediate unit shutdown	DI1046
AL047	Antifreeze alarm	Automatic	Unit shutdown	DI1047
AL048	EEV-Low SH	Manual	Immediate compressor shutdown	DI1048
AL049	EEV-Motor error	Manual	Immediate compressor shutdown	DI1049
AL050	EEV-Setting out of bounds	Automatic	Display only	DI1050
AL051	EEV-settings range error	Automatic	Immediate compressor shutdown	DI1051
AL052	Inverter-Offline	Automatic	Display only	DI1052
AL053	Inverter-Drive overcurrent (01)	Manual	Immediate compressor shutdown	DI1053
AL054	Inverter-Motor overload (02)	Automatic	Immediate compressor shutdown	DI1054
AL055	Inverter-DC Bus overvoltage (03)	Automatic	Immediate compressor shutdown	DI1055
AL056	Inverter-DC bus undervoltage (04)	Automatic	Immediate compressor shutdown	DI1056
AL057	Inverter-Drive overtemperature (05)	Automatic	Immediate compressor shutdown	DI1057
AL058	Inverter-Drive undertemperature (06)	Automatic	Immediate compressor shutdown	DI1058
AL059	Inverter-HW overcurrent HW(07)	Automatic	Immediate compressor shutdown	DI1059
AL060	Inverter-PTC motor overtemperature (08)	Automatic	Immediate compressor shutdown	DI1060
AL061	Inverter-IGBT module error (09)	Automatic	Immediate compressor shutdown	DI1061
AL062	Inverter - CPU error (10)	Automatic	Immediate compressor shutdown	DI1062
AL063	Inverter - Parameter default (11)	Automatic	Immediate compressor shutdown	DI1063
AL064	Inverter - DC bus ripple (12)	Automatic	Immediate compressor shutdown	DI1064
AL065	Inverter - Data communication fault (13)	Automatic	Immediate compressor shutdown	DI1065
AL066	Inverter - Drive thermistor fault (14)	Automatic	Immediate compressor shutdown	DI1066
AL067	Inverter - Autotuning fault (15)	Automatic	Immediate compressor shutdown	DI1067
AL068	Inverter - Drive disabled (16)	Automatic	Immediate compressor shutdown	DI1068
AL069	Inverter - Motor phase fault (17)	Automatic	Immediate compressor shutdown	DI1069
AL070	Inverter - Internal fan fault (18)	Automatic	Immediate compressor shutdown	DI1070
AL071	Inverter - Speed fault (19)	Automatic	Immediate compressor shutdown	DI1071
AL072	Inverter - PFC module error (20)	Automatic	Immediate compressor shutdown	DI1072
AL073	Inverter - PFC overvoltage (21)	Automatic	Immediate compressor shutdown	DI1073
AL074	Inverter - PFC undervoltage (22)	Automatic	Immediate compressor shutdown	DI1074
AL075	Inverter - STO detection error (23)	Automatic	Immediate compressor shutdown	DI1075
AL076	Inverter - STO detection error (24)	Automatic	Immediate compressor shutdown	DI1076
AL077	Inverter - Ground fault (25)	Automatic	Immediate compressor shutdown	DI1077
AL078	Inverter - ADC conversion sync fault (26)	Automatic	Immediate compressor shutdown	DI1078
AL079	Inverter - HW sync fault (27)	Automatic	Immediate compressor shutdown	DI1079
AL080	Inverter - Drive overload (28)	Automatic	Immediate compressor shutdown	DI1080
AL081	Inverter - Drive overtemperature (HW) (29)	Automatic	Immediate compressor shutdown	DI1081
AL082	Inverter - Unexpected stop (99)	Automatic	Immediate compressor shutdown	DI1082
AL083	BLDC - Starting failure	Manual	Immediate compressor shutdown	DI1083
AL084	Prototype software	Automatic	Unit shutdown	DI1084
AL085	High number of retain memory writings	Manual	Unit shutdown	DI1085
AL086	Error in retain memory writings	Manual	Unit shutdown	DI1086
AL087	th - Tune offline	Automatic	Display only	DI1087
AL088	Low supply temperature	Automatic	Unit shutdown (in cooling mode) / Display only (in heating mode)	DI1088
AL089	Main coil water temperature out of range warning	Automatic	Display only / Valve forced open / Valve forced closed (parameter)	DI1090
AL090	Supply air flow warning	Automatic	Immediate switch-off of supply fan	DI1091
AL091	Return air flow warning	Automatic	Immediate switch-off of return fan	DI1092
AL092	Air flow warning	Automatic	Immediate switch-off of supply fan	DI1093
AL093	Antifreeze warning	Automatic	unit in antifreeze state	DI1094
AL094	Humidifier alarm	Manual	Immediate switch-off humidifier	DI1095
AL095	Warning - Humidifier maintenance required	Automatic	Display only	DI1096
AL096	Warning - Supply fan maintenance required	Automatic	Display only	DI1097
AL097	Warning - Return fan maintenance required	Automatic	Display only	DI1098
AL098	Warning - Thermal wheel maintenance required	Automatic	Display only	DI1099
AL099	Warning - Filters maintenance required	Automatic	Display only	DI1100
AL100	Common - Dirty filters alarm	Automatic	Display only	DI1101
AL101	Warning - Compressor maintenance required	Automatic	Display only	DI1102
AL102	Compressor envelope - High compression ratio	Automatic	Immediate compressor shutdown	DI1103
AL103	Compressor envelope - High discharge pressure	Manual	Immediate compressor shutdown	DI1104
AL104	Compressor envelope - High motor current	Automatic	Immediate compressor shutdown	DI1105
AL105	Compressor envelope - High suction pressure	Automatic	Immediate compressor shutdown	DI1106
AL106	Compressor envelope - Low compression ratio	Automatic	Immediate compressor shutdown	DI1107
AL107	Compressor envelope-Low differential pressure	Automatic	Immediate compressor shutdown	DI1108
AL108	Compressor envelope-Low discharge pressure	Manual	Immediate compressor shutdown	DI1109
AL109	Compressor envelope-Low suction pressure	Semi-automatic	Immediate compressor shutdown	DI1110
AL110	Compressor envelope -High discharge temperature	Automatic	Immediate compressor shutdown	DI1111
AL111	EEV-LOP	Automatic	Immediate compressor shutdown	DI1112
AL112	EEV-MOP	Automatic	Immediate compressor shutdown	DI1113
AL113	EEV-High condensing temperature	Automatic	Immediate compressor shutdown	DI1114
AL114	EEV-Low suction temperature	Automatic	Immediate compressor shutdown	DI1115
AL115	EEV-Emergency closing	Automatic	Immediate compressor shutdown	DI1116
AL116	BLDC-Pressure delta greater than allowed at startup	Automatic	Display only	DI1117
AL117	th - Tune clock not working	Automatic	Display only	DI1118
AL118	BMS offline	Automatic	Unit shutdown / Display only (parameter)	DI1121
AL119	EVD-Selftuning alarm	Automatic	Immediate compressor shutdown	DI1122
AL120	Humisonic-Offline	Automatic	Display only	DI1123
AL121	Humisonic-High humidity	Automatic	Immediate humisonic shutdown	DI1124
AL122	Humisonic-Low humidity	Automatic	Immediate humisonic shutdown	DI1125
AL123	Humisonic-No production	Automatic	Immediate humisonic shutdown	DI1126
AL124	Humisonic-Faulty drain	Automatic	Immediate humisonic shutdown	DI1127
AL125	Humisonic-No water	Automatic	Immediate humisonic shutdown	DI1128
AL126	Humisonic-External signal not correctly connected	Automatic	Immediate humisonic shutdown	DI1129
AL127	Humisonic-Functional test not completed	Automatic	Immediate humisonic shutdown	DI1130
AL128	Humisonic-Autotest failure	Automatic	Immediate humisonic shutdown	DI1131
AL129	Humisonic-EEPROM error	Automatic	Immediate humisonic shutdown	DI1132
AL130	EBM supply fan-Offline	Automatic	Display only	DI1133
AL131	EBM outlet Fan -Generic Alarm	Manuale	Immediate switch-off of supply fan	DI1134

Code	Description	Reset	Effect	Modbus
AL132	EBM Supply fan 2 -Offline	Automatic	Display only	DI1135
AL133	EBM Supply fan 2 -Generic alarm	Manual	Immediate switch-off of supply fan	DI1136
AL134	EBM Supply fan 3 -Offline	Automatic	Display only	DI1137
AL135	EBM Supply fan 3 -Generic alarm	Manual	Immediate switch-off of supply fan	DI1138
AL136	EBM Supply fan 4 -Offline	Automatic	Display only	DI1139
AL137	EBM Supply fan 4 -Generic alarm	Manual	Immediate switch-off of supply fan	DI1140
AL138	Alarm NOT USED 138	Automatic	Display only	DI1141
AL139	Alarm NOT USED 139	Automatic	Display only	DI1142
AL140	Alarm NOT USED 140	Automatic	Display only	DI1143
AL141	Alarm NOT USED 141	Automatic	Display only	DI1144
AL142	Alarm NOT USED 142	Automatic	Display only	DI1145
AL143	Alarm NOT USED 143	Automatic	Display only	DI1146
AL144	Alarm NOT USED 144	Automatic	Display only	DI1147
AL145	Alarm NOT USED 145	Automatic	Display only	DI1148
AL146	Alarm NOT USED 146	Automatic	Display only	DI1149
AL147	Alarm NOT USED 147	Automatic	Display only	DI1150
AL148	Alarm NOT USED 148	Automatic	Display only	DI1151
AL149	Alarm NOT USED 149	Automatic	Display only	DI1152
AL150	Alarm NOT USED 150	Automatic	Display only	DI1153
AL151	Alarm NOT USED 151	Automatic	Display only	DI1154
AL152	Alarm NOT USED 152	Automatic	Display only	DI1155
AL153	Alarm NOT USED 153	Automatic	Display only	DI1156
AL154	Alarm NOT USED 154	Automatic	Display only	DI1157
AL155	Alarm NOT USED 155	Automatic	Display only	DI1158
AL156	EBM Return Fan-Offline	Automatic	Display only	DI1159
AL157	EBM Return Fan - Generic Alarm	Manual	Immediate switch-off of return fan	DI1160
AL158	EBM Return Fan 2 -Offline	Automatic	Display only	DI1161
AL159	EBM Return Fan 2 - Generic alarm	Manual	Immediate switch-off of return fan	DI1162
AL160	EBM Return Fan 3 -Offline	Automatic	Display only	DI1163
AL161	EBM Return Fan 3 - Generic alarm	Manual	Immediate switch-off of return fan	DI1164
AL162	EBM Return Fan 4 -Offline	Automatic	Display only	DI1165
AL163	EBM Return Fan 4 - Generic alarm	Manual	Immediate switch-off of return fan	DI1166
AL164	Alarm NOT USED 164	Automatic	Display only	DI1167
AL165	Alarm NOT USED 165	Automatic	Display only	DI1168
AL166	Alarm NOT USED 166	Automatic	Display only	DI1169
AL167	Alarm NOT USED 167	Automatic	Display only	DI1170
AL168	Alarm NOT USED 168	Automatic	Display only	DI1171
AL169	Alarm NOT USED 169	Automatic	Display only	DI1172
AL170	Alarm NOT USED 170	Automatic	Display only	DI1173
AL171	Alarm NOT USED 171	Automatic	Display only	DI1174
AL172	Alarm NOT USED 172	Automatic	Display only	DI1175
AL173	Alarm NOT USED 173	Automatic	Display only	DI1176
AL174	Alarm NOT USED 174	Automatic	Display only	DI1177
AL175	Alarm NOT USED 175	Automatic	Display only	DI1178
AL176	Alarm NOT USED 176	Automatic	Display only	DI1179
AL177	Alarm NOT USED 177	Automatic	Display only	DI1180
AL178	Alarm NOT USED 178	Automatic	Display only	DI1181
AL179	Alarm NOT USED 179	Automatic	Display only	DI1182
AL180	Alarm NOT USED 180	Automatic	Display only	DI1183
AL181	Alarm NOT USED 181	Automatic	Display only	DI1184
AL182	Warning - Modulating humidifier maintenance required	Automatic	Display only	DI1185
AL183	Thermal wheel overload	Manual	Immediate thermal wheel shutdown	DI1186
AL184	ZA supply fan - Offline	Automatic	Display only	DI1187
AL185	ZA Supply fan - Generic alarm	Manual	Immediate switch-off of supply fan	DI1188
AL186	ZA Supply fan 2 - Offline	Automatic	Display only	DI1189
AL187	ZA Supply fan 2 - Generic alarm	Manual	Immediate switch-off of supply fan	DI1190
AL188	ZA Supply fan 3 - Offline	Automatic	Display only	DI1191
AL189	ZA Supply fan 3 - Generic alarm	Manual	Immediate switch-off of supply fan	DI1192
AL190	ZA Supply fan 4 - Offline	Automatic	Display only	DI1193
AL191	ZA Supply fan 4 - Generic alarm	Manual	Immediate switch-off of supply fan	DI1194
AL192	ZA Supply fan 1 - Firmware not compatible	Automatic	Immediate switch-off of supply fan	DI1195
AL193	ZA Supply fan 2 - Firmware not compatible	Automatic	Immediate switch-off of supply fan	DI1196
AL194	ZA Supply fan 3 - Firmware not compatible	Automatic	Immediate switch-off of supply fan	DI1197
AL195	ZA Supply fan 4 - Firmware not compatible	Automatic	Immediate switch-off of supply fan	DI1198
AL196	ZA Supply fan - Offline	Automatic	Display only	DI1199
AL197	ZA Return fan - Generic alarm	Manual	Immediate switch-off of return fan	DI1200
AL198	ZA Return fan 2 - Offline	Automatic	Display only	DI1201
AL199	ZA Return Fan 2 - Generic alarm	Manual	Immediate switch-off of return fan	DI1202
AL200	ZA Return fan 3 - Offline	Automatic	Display only	DI1203
AL201	ZA Return Fan 3 - Generic alarm	Manual	Immediate switch-off of return fan	DI1204
AL202	ZA Return fan 4 - Offline	Automatic	Display only	DI1205
AL203	ZA Return Fan 4 - Generic alarm	Manual	Immediate switch-off of return fan	DI1206
AL204	ZA Return fan 1 - Firmware not compatible	Automatic	Immediate switch-off of return fan	DI1207
AL205	ZA Return fan 2- Firmware not compatible	Automatic	Immediate switch-off of return fan	DI1208
AL206	ZA Return fan 3 - Firmware not compatible	Automatic	Immediate switch-off of return fan	DI1209
AL207	ZA Return fan 4 - Firmware not compatible	Automatic	Immediate switch-off of return fan	DI1210
AL208	IO - Configuration error	Automatic	Display only	DI1211
AL209	High supply temperature	Automatic	Unit shutdown (in heating mode) / Display only (in cooling mode)	DI1212
AL210	VDI alarm - Hygiene Inspection	Automatic	Unit shutdown / Display only (parameter)	DI1213
AL211	VDI alarm - Check for contamination, damage and corrosion	Automatic	Unit shutdown / Display only (parameter)	DI1214
AL212	VDI alarm - Check for contamination, damage and corrosion	Automatic	Unit shutdown / Display only (parameter)	DI1215
AL213	VDI alarm - Functional check of drain and trap	Automatic	Unit shutdown / Display only (parameter)	DI1216
AL214	VDI alarm - Clean wet cooler, mist collector and condensate tray	Automatic	Unit shutdown / Display only (parameter)	DI1217
AL215	VDI alarm - Check for contamination, damage and corrosion on the air side	Automatic	Unit shutdown / Display only (parameter)	DI1218
AL216	VDI alarm - Check for water precipitation	Automatic	Unit shutdown / Display only (parameter)	DI1219
AL217	VDI alarm - Check empty housings for contamination, damage, and corrosion	Automatic	Unit shutdown / Display only (parameter)	DI1220
AL218	VDI alarm - Check for contamination, damage, microbial growth and corrosion	Automatic	Unit shutdown / Display only (parameter)	DI1221
AL219	VDI alarm - Check condensate precipitation in the humidifier chamber	Automatic	Unit shutdown / Display only (parameter)	DI1222
AL220	VDI alarm - Check steam distribution system for deposits	Automatic	Unit shutdown / Display only (parameter)	DI1223

Code	Description	Reset	Effect	Modbus
AL221	VDI alarm - Check spray nozzles for deposits	Automatic	Unit shutdown / Display only (parameter)	DI1224
AL222	VDI alarm - Check drain	Automatic	Unit shutdown / Display only (parameter)	DI1225
AL223	VDI alarm - Determine number of CFU in the humidifier water	Automatic	Unit shutdown / Display only (parameter)	DI1226
AL224	VDI alarm - Functional check of control valve	Automatic	Unit shutdown / Display only (parameter)	DI1227
AL225	VDI alarm - Check humidity limiter	Automatic	Unit shutdown / Display only (parameter)	DI1228
AL226	VDI alarm - Check for unacceptable contamination, damage (leakage) and odours	Automatic	Unit shutdown / Display only (parameter)	DI1229
AL227	VDI alarm - Check differential pressure	Automatic	Unit shutdown / Display only (parameter)	DI1230
AL228	VDI alarm - Maximum interval until first filter stage is to be changed	Automatic	Unit shutdown / Display only (parameter)	DI1231
AL229	VDI alarm - Maximum interval until second filter stage is to be changed	Automatic	Unit shutdown / Display only (parameter)	DI1232
AL230	VDI alarm - Check accessible duct section for damage contamination, corrosion, and water precipitation	Automatic	Unit shutdown / Display only (parameter)	DI1233
AL232	VDI alarm - Check silencers for contamination. Damage, and corrosion	Automatic	Unit shutdown / Display only (parameter)	DI1235
AL233	VDI alarm - Check for contamination, damage, and corrosion	Automatic	Unit shutdown / Display only (parameter)	DI1236
AL234	VDI alarm - Visual inspection of air-to-air plate or cross-flow heat exchanger for contamination damage and corrosion	Automatic	Unit shutdown / Display only (parameter)	DI1237
AL235	VDI alarm - Visual inspection of air-to-air rotary heat exchanger for contamination, damage and corrosion	Automatic	Unit shutdown / Display only (parameter)	DI1238
AL236	VDI alarm - Heaters: Check for contamination damage, corrosion and tightness	Automatic	Unit shutdown / Display only (parameter)	DI1239
AL237	VDI alarm - Coolers: Check tube bundles, mist collectors and condensate tray for contamination, corrosion, damage and tightness	Automatic	Unit shutdown / Display only (parameter)	DI1240
AL238	VDI alarm - Functional check of drain and trap	Automatic	Unit shutdown / Display only (parameter)	DI1241
AL239	VDI alarm - Supply humidity probe is needed	Automatic	Unit shutdown / Display only (parameter)	DI1242
AL240	Alarm - Door open	Automatic	Immediate unit shutdown	DI1243
AL241	Alarm - Fire/Smoke	Automatic	Immediate unit shutdown	DI1244
AL242	Serious alarm from digital input	Automatic	Immediate unit shutdown	DI1245
AL243	Generic warning from digital input	Automatic	Display only	DI1246
AL244	Supply - Dirty filter alarm	Automatic	Display only	DI1247
AL245	Supply 2 - Dirty filter alarm	Automatic	Display only	DI1248
AL246	Return - Dirty filter alarm	Automatic	Display only	DI1249
AL247	HEPA Filter 1 alarm	Automatic	Display only	DI1250
AL248	HEPA Filter 2 alarm	Automatic	Display only	DI1251
AL249	Main coil pump 1 overload	Automatic	Immediate main coil shutdown	DI1252
AL250	Main coil pump 2 overload	Automatic	Immediate main coil shutdown	DI1253
AL251	Reheat coil pump 1 overload	Automatic	Immediate reheating coil shutdown	DI1254
AL252	Reheat coil pump 2 overload	Automatic	Immediate reheating coil shutdown	DI1255
AL253	Preheat coil pump 1 overload	Automatic	Immediate preheating coil shutdown	DI1256
AL254	Preheat coil pump 2 overload	Automatic	Immediate preheating coil shutdown	DI1257
AL255	Main coil flow switch alarm	Automatic	Immediate main coil shutdown	DI1258
AL256	Reheat coil flow switch alarm	Automatic	Immediate reheating coil shutdown	DI1259
AL257	Preheat coil flow switch alarm	Automatic	Immediate preheating coil shutdown	DI1260
AL258	Recovery clogged alarm	Automatic	Display only	DI1261
AL259	Reheater alarm	Automatic	Immediate reheating coil shutdown	DI1262
AL260	Preheater alarm	Automatic	Immediate preheating coil shutdown	DI1263
AL261	Alarm - uChiller	Automatic	Immediate uChiller shutdown	DI1264
AL262	Alarm - uChiller offline	Automatic	Display only	DI1265
AL263	Warning - Main coil pump 1 maintenance required	Automatic	Display only	DI1266
AL264	Warning - Main coil pump 2 maintenance required	Automatic	Display only	DI1267
AL265	Warning - Main coil analogue output maintenance required	Automatic	Display only	DI1268
AL266	Warning - Main coil step 1 maintenance required	Automatic	Display only	DI1269
AL267	Warning - Main coil step 2 maintenance required	Automatic	Display only	DI1270
AL268	Warning - Main coil step 3 maintenance required	Automatic	Display only	DI1271
AL269	Warning - Main coil step 4 maintenance required	Automatic	Display only	DI1272
AL270	Warning - Preheating coil pump 1 maintenance required	Automatic	Display only	DI1273
AL271	Warning - Preheating coil pump 2 maintenance required	Automatic	Display only	DI1274
AL272	Warning - Preheating coil analogue output maintenance required	Automatic	Display only	DI1275
AL273	Warning - Preheating coil step 1 maintenance required	Automatic	Display only	DI1276
AL274	Warning - Preheating coil step 2 maintenance required	Automatic	Display only	DI1277
AL275	Warning - Preheating coil step 3 maintenance required	Automatic	Display only	DI1278
AL276	Warning - Preheating coil step 4 maintenance required	Automatic	Display only	DI1279
AL277	Warning - Reheating coil step 4 maintenance required	Automatic	Display only	DI1280
AL278	Warning - Reheating coil pump 1 maintenance required	Automatic	Display only	DI1281
AL279	Warning - Reheating coil pump 2 maintenance required	Automatic	Display only	DI1282
AL280	Warning - Reheating coil analogue output maintenance required	Automatic	Display only	DI1283
AL281	Warning - Reheating coil step 1 maintenance required	Automatic	Display only	DI1284
AL282	Warning - Reheating coil step 2 maintenance required	Automatic	Display only	DI1285
AL283	Warning - Reheating coil step 3 maintenance required	Automatic	Display only	DI1286
AL284	Warning - Auxiliary digital output maintenance required	Automatic	Display only	DI1287
AL285	Warning - Auxiliary analogue output maintenance required	Automatic	Display only	DI1288
AL286	Warning - IEC maintenance required	Automatic	Display only	DI1289
AL287	Warning - Unit maintenance required	Automatic	Display only	DI1290
AL288	Alarm - Humifog alarms present	Automatic	Immediate humifog shutdown	DI1291
AL289	Alarm - IEC Humifog alarms present	Automatic	Immediate humifog shutdown	DI1292
AL290	Alarm - Humifog offline	Automatic	Display only	DI1293
AL291	Alarm - IEC Humifog offline	Automatic	Display only	DI1294
AL292	Warning - k.water offline	Automatic	Display only	DI1295
AL293	Alarm - EEV Hardware compatibility error	Automatic	Display only	DI1296
AL294	Warning - pGDx Offline	Automatic	Display only	DI1297
AL295	Preheating coil water temperature out of range warning	Automatic	Display only / Valve forced open / Valve forced closed (parameter)	DI1302
AL296	Reheating coil water temperature out of range warning	Automatic	Display only / Valve forced open / Valve forced closed (parameter)	DI1303
AL297	Alarm - c.pCOe no. 1 Offline		Display only	DI1298
AL298	Alarm - c.pCOe no. 2 Offline		Display only	DI1299
AL299	Alarm - c.pCOe no. 3 Offline		Display only	DI1300
AL300	Alarm - c.pCOe no. 4 Offline		Display only	DI1301
AL301	PM10 sensor probe alarm	Automatic	Display only	DI1322
AL302	PM2.5 sensor probe alarm	Automatic	Display only	DI1323
AL303	Sanification device alarm	Automatic	Display only	DI1326
AL304	Warning - Sanification device maintenance required	Automatic	Display only	DI1327
AL305	Warning - Supply fan 2 maintenance required	Automatic	Display only	DI1334
AL306	Warning - Supply fan 3 maintenance required	Automatic	Display only	DI1335
AL307	Warning - Supply fan 4 maintenance required	Automatic	Display only	DI1336
AL308	Warning - Return fan 2 maintenance required	Automatic	Display only	DI1337
AL309	Warning - Return fan 3 maintenance required	Automatic	Display only	DI1338

Code	Description	Reset	Effect	Modbus
AL310	Warning - Return fan 4 maintenance required	Automatic	Display only	DI1339
AL311	Alarm - Supply fan inverter feedback - Alarm status	Manual	Immediate switch-off of supply fan	DI1342
AL312	Alarm - Return fan inverter feedback - Alarm status	Manual	Immediate switch-off of return fan	DI1343
AL313	Alarm - Supply damper feedback - Alarm status	Manual	Immediate unit switch-off	DI1344
AL314	Alarm - Return damper feedback - Alarm status	Manual	Immediate unit switch-off	DI1345
AL315	Alarm - Fresh air damper feedback - Alarm status	Manual	Immediate unit switch-off	DI1346
AL316	Alarm - Exhaust air damper feedback - Alarm status	Manual	Immediate unit switch-off	DI1347
AL317	Alarm - Mixing air damper feedback - Alarm status	Manual	Immediate unit switch-off	DI1348
AL318	HumiSteam - Offline alarm	Automatic	Display only	DI1349
AL319	HumiSteam - Generic alarm	Automatic	HumiSteam immediate switch-off	DI1350
AL320	Generic Ain1 probe alarm - Alarm status	Automatic	Display only	DI1397
AL321	Generic Ain2 probe alarm - Alarm status	Automatic	Display only	DI1398
AL322	Generic Ain3 probe alarm - Alarm status	Automatic	Display only	DI1399
AL323	Generic Ain4 probe alarm - Alarm status	Automatic	Display only	DI1400
AL324	Generic Ain5 probe alarm - Alarm status	Automatic	Display only	DI1401
AL325	Alarm - Generic Din 1 - Alarm status	Automatic	Switching off unit / Display only (parameter)	DI1402
AL326	Alarm - Generic Din 2 - Alarm status	Automatic	Switching off unit / Display only (parameter)	DI1403
AL327	Alarm - Generic Din 3 - Alarm status	Automatic	Switching off unit / Display only (parameter)	DI1404
AL328	Alarm - Generic Din 4 - Alarm status	Automatic	Switching off unit / Display only (parameter)	DI1405
AL329	Alarm - Generic Din 5 - Alarm status	Automatic	Switching off unit / Display only (parameter)	DI1406
AL330	Pre-treatment foreign air battery water temperature outside limits	Automatic	Display only / Valve forced open / Valve forced closed (parameter)	DI1421
AL331	Warning - Maintenance of pre-treatment foreign air coil modulating devi-ce required	Automatic	Display only	DI1416
AL332	Warning - Maintenance step 1 foreign air coil pre-treatment required	Automatic	Display only	DI1417
AL333	Warning - Pre-treatment foreign air coil step 2 maintenance required	Automatic	Display only	DI1418
AL334	Warning - Pre-treatment foreign air coil step 3 maintenance required	Automatic	Display only	DI1419
AL335	Warning - Pre-treatment foreign air coil step 4 maintenance required	Automatic	Display only	DI1420

Tab. 12.a

13. SOFTWARE UPDATE

The k.Air controller application program can be updated as follows:
- Update from computer via USB cable connection;
- Update via USB pen drive;
- Update with file transfer via FTP;

Note: to update the controller, the .ap1 application update file is required, supplied by CAREL INDUSTRIES S.p.A.

Important: only application software supplied and approved by CAREL INDUSTRIES S.p.A. can be loaded onto the k.Air controller.

Important: before updating the k.Air controller via USB connection, check in the system menu that the USB Host port is enabled (path Settings > USB Settings > Pen drive).
- Use only FAT formatted pen drives.
- On k.Air Large models, do not use the controller's two USB ports at the same time.
- Do not use mass storage devices with a current draw higher than 500 mA.

Important: when updating the application software, any configurations previously set by the user will be lost. Consequently, before starting the update, the configuration can be saved and then reloaded after updating the application software. For details on the procedure for saving and loading the user configurations, see the chapter "Commissioning".

13.1 Update via USB cable

On k.Air models equipped with a USB device (Slave) port, the application program can be updated by connecting a computer to the controller via USB cable:

1. Connect the computer and the c.pCO controller via USB cable using the USB device port

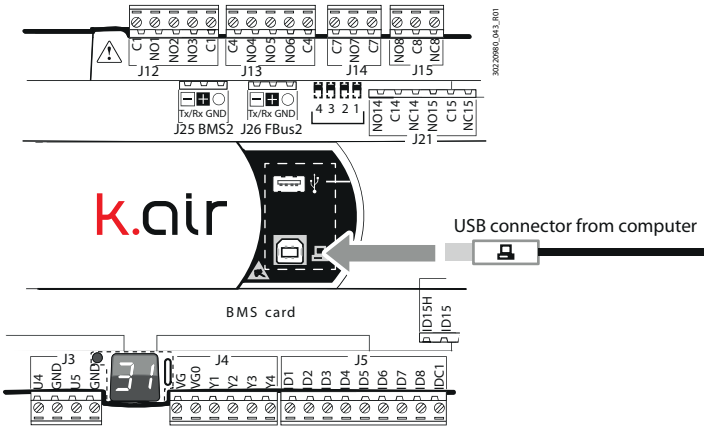


Fig. 13.a

1. The controller will be seen by the system as an external drive; save the .ap1 file to the folder called "UPGRADE";
2. Unplug the cable; the k.Air controller operating system will automatically update the application software. The update procedure will last a few minutes, then the unit will reboot.
3. Return to the system menu and run the Application > Wipe retain command, or alternatively go to screen Ac30 and run the "Clear permanent memory" command.

13.2 Update via USB pen drive

All k.Air models are equipped with a USB host (Master) port that a USB mass storage device can be connected to (typically a USB pen drive or portable hard disk) so as to update the application program. To update the controller, the .ap1 application update file is required, supplied by CAREL INDUSTRIES S.p.A.:

1. Save the .ap1 file on a USB pen drive, in a folder callee "UPGRADE";
2. Plug the pen drive into the USB Host port and enter the system menu (press Alarm and Enter for 3 s);

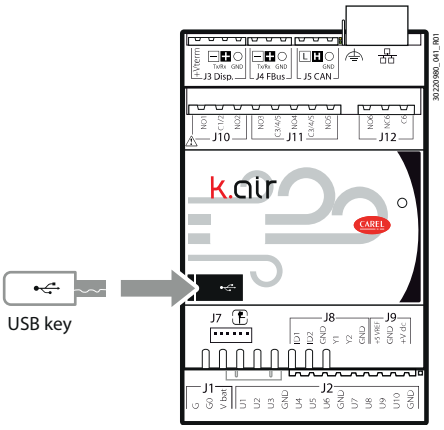


Fig. 13.b

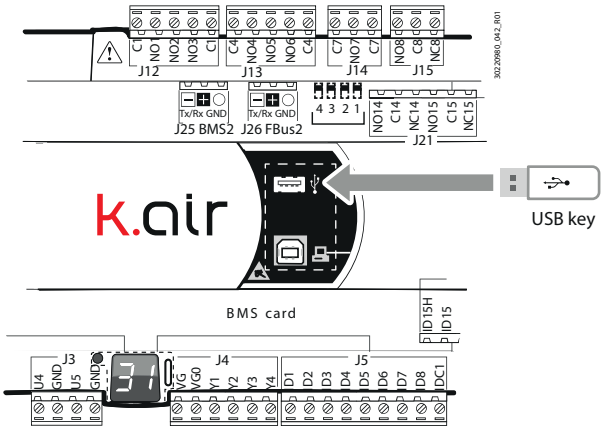
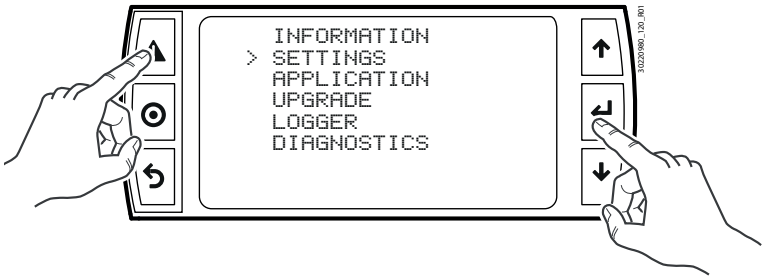
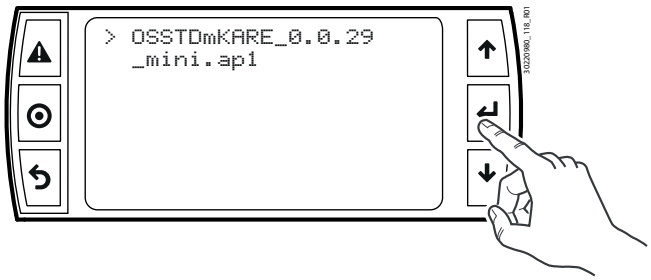


Fig. 13.c



3. Select "UPGRADE" and confirm with Enter; the update procedure will last a few minutes, then the unit will reboot.



4. Return to the system menu and run the Application > Wipe retain command, or alternatively go to screen Ac30 and run the "Clear permanent memory" command.

13.3 Update with file transfer via FTP

k.Air controllers include an FTP server that allows access to the public partition of the file system. It is thus possible to read, modify, create and remove files and folders. A client program is used to transfer files with the FTP protocol, such as "FileZilla". The default username for accessing the file system is "anonymous", with no password (to protect the contents of the public file system from unauthorised access, different users can be created, giving each user different access profiles). For further details, see the c.pCO manual +0300057EN.

To update the application program via FTP:

1. Open a file uploader with FTP protocol (e.g. FileZilla).
2. Enter the IP address of the c.pCO controller and the access credentials (default user "anonymous", no password).
3. Drag and drop the .ap1 update file from the computer folder to the "UPGRADE" folder on the c.pCOn controller.

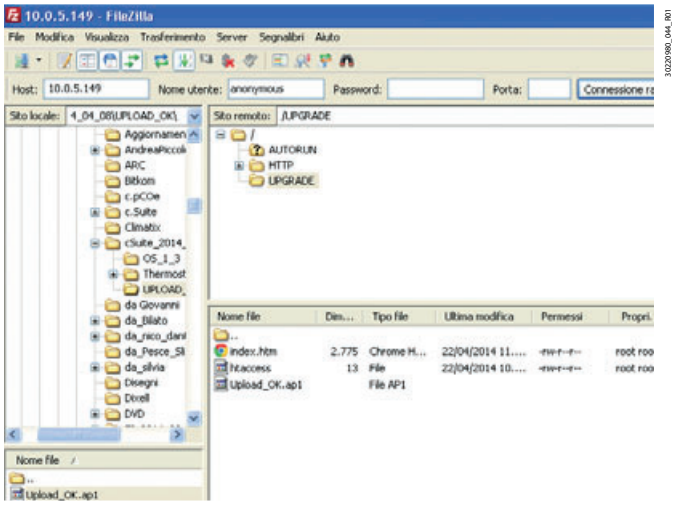


Fig. 13.d

Note: set the following configuration in FileZilla:

- Edit > Settings > Connection -> set timeout in seconds = 0
- Edit > Settings > Transfers > set maximum simultaneous transfers to 1

4. Enter the system menu (press Alarm and Enter for 3 s) and select "UPGRADE". Proceed as described in the previous paragraph.

Note: after uploading the update file to the upgrade folder via FTP, the update can also be started remotely via a virtual terminal. For further details, see the c.pCO manual +0300057EN.

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