



# t-Store panel

Innovation and complete store management

# t-Store panel

The one-stop-shop solution, ideal for both new and existing installations, improves energy efficiency in the food retail and food service industry, guaranteeing complete and intelligent optimisation of store energy consumption.

- Fully functionally-tested electrical panel before delivery;
- Total store solution to simplify interaction and synergy between the typical units and subsystems in a store;
- Local and remote supervisory services to enable performance analysis between different stores and highlight the most critical areas in terms of energy consumption.

t-Store Panel is CAREL's proposal for the food service and food retail industry (from small quick-service restaurants to large hypermarkets) that integrates and manage all of the data generated by the various energy-intensive areas of the store, so as to ensure operation in synergy and optimise management in terms of energy consumption.

#### Main features:

- Plug & play and ready-to-use modular electrical panel based on the specific requirements of the store;
- HW components and SW control logic already on board, with high reliability guaranteed right from the very first stages of production, thanks to a specific series of functional tests
- Possibility to integrate and manage lighting, air conditioning and

refrigeration systems and other generic loads;

- Local supervisor and remote monitoring system to keep the store under control, collecting and analysing the most significant data relating to the different energy-consuming areas.



Energy consumption monitored in real time



Optimised and centralised control of the air conditioning system



#### Flexibility

Scalable system, module design for full flexibility.



#### Optimisation

One-stop-shop solution that brings together complete management of the different areas of the store, with the possibility to integrate third-party devices.



#### Simplicity and reliability

Ease of installation and configuration with operational functionality verified during production.

**The combined proposal of solutions and services to simplify integration and synergy between the typical energy-intensive areas in a store**

With its "multi-system" design, t-Store Panel can help achieve high performance while at the same time reducing operating costs in all the areas of a store that typically consume the most energy.

In particular:

- **HVAC:** optimised and centralised management of underfloor heating systems, heat recovery units and air conditioning via specific zone set points and control logic to ensure optimal comfort inside the store;

- **Energy:** reading and monitoring of electrical parameters and global consumption of the connected loads, so as to monitor demand and avoid critical situations that may generate hidden waste, as well as evaluate any corrective actions to be taken;
- **Lights:** complete and intelligent zone control of the light fixtures across the store display area, offices and car parks. To bring significant reductions in electricity costs, it is possible to adjust the scheduling, adding vacation periods and daily exceptions.

- **Refrigeration:** wide range of control solutions that, through advanced algorithms and logic, maximise the performance of refrigeration units and systems.



# t-Store electrical panel features

- Designed for installation in equipment rooms, the electrical panel has been built to allow operation on electronic devices even when powered, thanks to an internal Plexiglas protective cover and a non-interlocked disconnect switch;
- Dedicated circuit breakers for each load so as to isolate the line for special maintenance;
- Auxiliary terminal blocks divided by HVAC management, lighting management and serial networks. Placed on a raised, inclined guide to facilitate wiring during system installation and maintenance. On request, these can be positioned differently, with installation in advance of the cable gland and cable clamp system, and pre-connected and terminated cable extensions;
- Control interface with selectors/ buttons and indicator lights divided by reference energy area; totally customisable polycarbonate panel;
- Quick and easy installation ensured by: wall-mounting brackets, service socket, internal panel light, numbered wires, preloaded software and additional accessories on request.

Specifications	Description
Power supply	3P+N+E, 400 V, 50/60Hz
Operating temperature	Up to 40 °C
Casing material	Steel sheet, 15/10 thick, door equipped with continuously moulded gasket
Back plate material	20/10 thick galvanised steel
Casing painting	RAL 7035
Door opening	From left to right (reversible on request), lockable with the tool supplied
IP rate	65
Secondary circuit voltage	24 Vac or 230 Vac
Cooling system	Yes, with fan and grilles
Terminals	Spring terminals, double level (screw terminals on request). Raised and inclined 45°
Cables	Type FS17 - 450/750 V - S17 PVC insulation
Certification	IEC EN 61439 Low-voltage switchgear and controlgear assemblies (LV switchboards) IEC EN 60204-1 Safety of machinery - Electrical equipment of machines

## Headquarters

CAREL INDUSTRIES HQs  
Via dell'Industria, 11  
35020 Brugine - Padova (Italy)  
carel@carel.com



## HygroMatik GmbH

Lise-Meitner-Straße 3  
24558 Henstedt-Ulzburg - Germany  
hy@hygromatik.de

## RECUPERATOR

Via Valfurva 13  
20027 Rescaldina (MI), Italy  
customercare@recuperator.eu

## For more information

CAREL Asia - [www.carel.hk](http://www.carel.hk)  
 CAREL Australia - [www.carel.com.au](http://www.carel.com.au)  
 CAREL Central & Southern Europe - [www.carel.com](http://www.carel.com)  
 CAREL Czech & Slovakia - [www.carel.cz](http://www.carel.cz)  
 CAREL spol. s.r.o.  
 CAREL Deutschland - [www.carel.de](http://www.carel.de)  
 CAREL China - [www.carel-china.com](http://www.carel-china.com)  
 CAREL France - [www.carelfrence.fr](http://www.carelfrence.fr)  
 CAREL Korea - [www.carel.kr](http://www.carel.kr)  
 CAREL Ibérica - [www.carel.es](http://www.carel.es)  
 CAREL Ireland - [www.carel.ie](http://www.carel.ie)  
 FarrahVale Controls & Electronics Ltd.  
 CAREL Italy - [www.carel.it](http://www.carel.it)  
 CAREL India - [www.carel.in](http://www.carel.in)  
 CAREL Japan - [www.carel-japan.com](http://www.carel-japan.com)

CAREL Mexicana - [www.carel.mx](http://www.carel.mx)  
 CAREL Middle East - [www.carel.ae](http://www.carel.ae)  
 CAREL Nordic - [www.carelnordic.se](http://www.carelnordic.se)  
 CAREL Poland - [www.carel.pl](http://www.carel.pl)  
 ALFACO POLSKA Sp z o.o.  
 CAREL Russia - [www.carelrussia.com](http://www.carelrussia.com)  
 CAREL South Africa - [www.carelcontrols.co.za](http://www.carelcontrols.co.za)  
 CAREL Sud America - [www.carel.com.br](http://www.carel.com.br)  
 CAREL Thailand - [www.carel.co.th](http://www.carel.co.th)  
 CAREL Turkey - [www.carel.com.tr](http://www.carel.com.tr)  
 CFM Sogutma ve Otomasyon San. Tic. Ltd.  
 CAREL U.K. - [www.careluk.com](http://www.careluk.com)  
 CAREL U.S.A. - [www.carelusa.com](http://www.carelusa.com)  
 CAREL Ukraina - [www.carel.ua](http://www.carel.ua)  
 CAREL Canada - [www.enersol.ca](http://www.enersol.ca)  
 Enersol Inc.

# CAREL

To the best of CAREL INDUSTRIES S.p.A. knowledge and belief, the information contained herein is accurate and reliable as of the date of publication. However, CAREL INDUSTRIES S.p.A. does not assume any liability whatsoever for the accuracy and completeness of the information presented without guarantee or responsibility of any kind and makes no representation or warranty, either expressed or implied. A number of factors may affect the performance of any products used in conjunction with user's materials all of which must be taken into account by the user in producing or using the products. The user should not assume that all necessary data for the proper evaluation of these products are contained herein and is responsible for the appropriate, safe and legal use, processing and handling of CAREL's products. The information provided herein does not relieve the user from the responsibility of carrying out its own tests, and the user assumes all risks and liabilities related to the use of the products and/or information contained herein. © 2021 CAREL INDUSTRIES S.p.A. All rights reserved.