

# CAREL



refrigeration and retail controllers  
refrigeration controllers



## Solutions for integration of HVAC systems

[carel.com](http://carel.com)

I n t e g r a t e d   C o n t r o l   S o l u t i o n s   &   E n e r g y   S a v i n g s

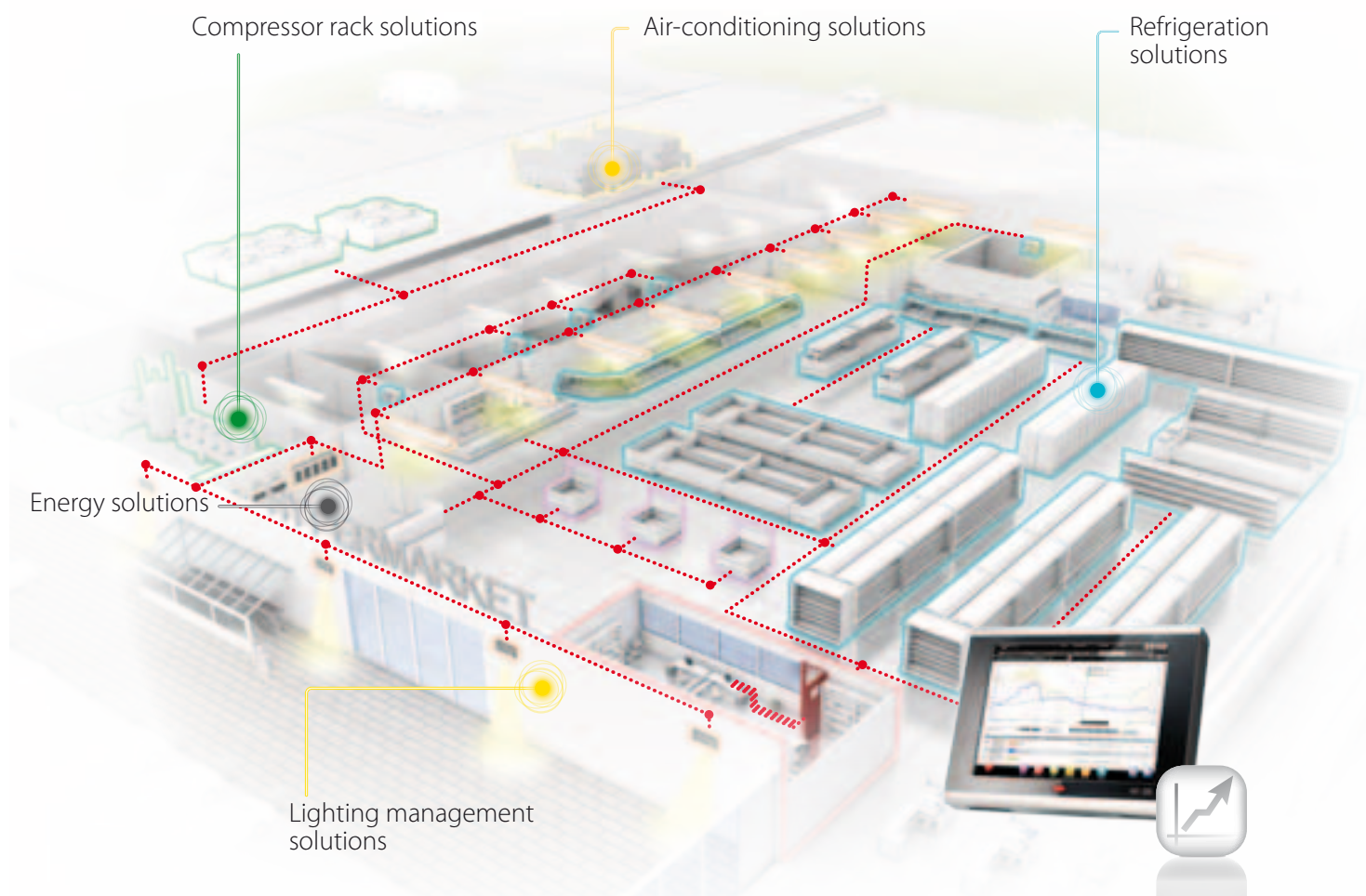
# Optimise supermarket systems, ensuring comfort and low energy consumption

Supermarkets are complex systems of independent devices, often integrated into a supervisory system. Carel now offers solutions to ensure interaction between these within the system.

Interaction involves continuous sharing of information, so as to increase the performance of individual instruments

CAREL has always offered its customers a range of products and solutions for improving the efficiency of its stores and optimising energy consumption in retail applications. Integration and interaction are two fundamental steps for intelligent management of energy consumption. Through interaction, information that

was previously "disconnected", can now be combined together to create new synergies. This is why CAREL now provides a series of functions that optimise and reduce store energy consumption, through the new ECO-HVAC package.



## Easy to use

Plug&play concept for easy system configuration



## Maximum adaptability

Suitable for all types of stores.

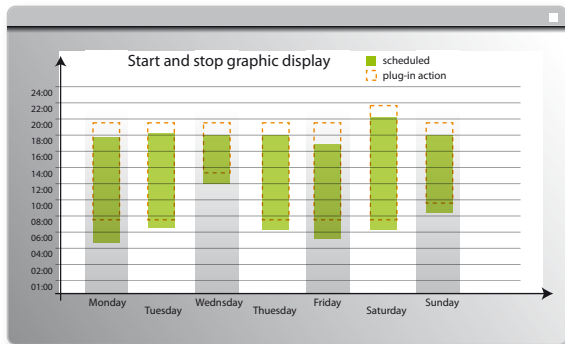


## Energy saving

Optimise consumption, reducing waste.

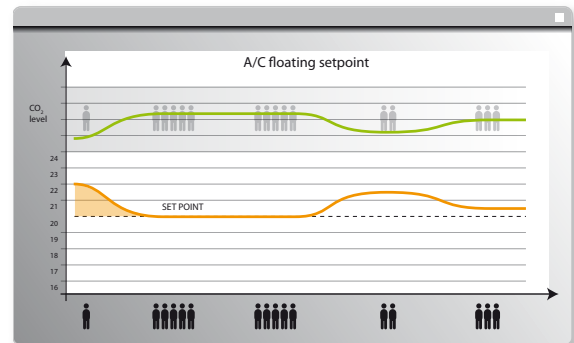
# HVAC-ECO package

CAREL can today provide customers four plug-ins for reducing supermarket energy consumption. HVAC-ECO is available with the Carel PlantVisorPRO supervisory system.



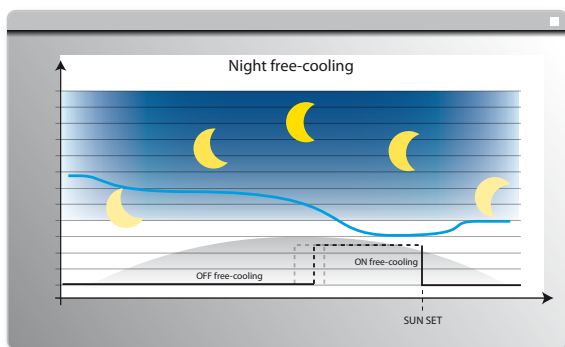
## HVAC Smart Start

This optimises air-conditioning system on/off times using a preset scheduler. A special algorithm ensures the set point is reached by calculating system inertia and constantly monitoring indoor and outdoor temperature.



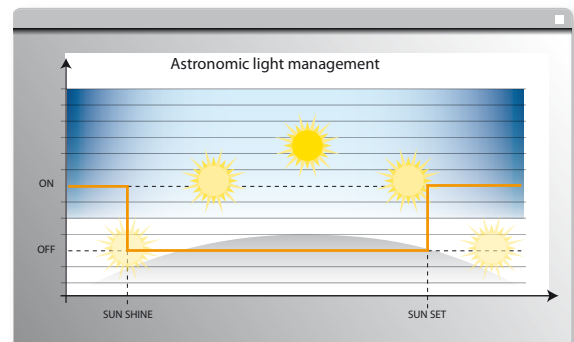
## HVAC Smart Set

The air-conditioning system set point is offset based on information processed by the PlantVisorPRO supervisory system, considering the number of people and the air quality inside the supermarket.



## Smart night purge

The air-conditioning system is switched on before the sun rises, for a calculated time; system inertia is calculated based on enthalpy values. This action aims to reduce supermarket heat load through free cooling only. Consequently, air-conditioning pre-start times are reduced in summer and in mid seasons.



## Geo-Lighting

Based on site latitude and longitude, sunrise and sunset times can be used for precise management functions, such as outdoor lighted signs. Moreover, Geo-Lighting optimises the action of the Smart night purge function.

# PlantVisorPRO

The CAREL solution for system monitoring, management and optimisation, including third-party devices

PlantVisorPRO ensures complete control of the system in all stages of operation:

- Setup: centralised configuration of all the parameters for the instruments installed, unit monitoring on commissioning;
- Daily operation: system interface, data logging, reports, activity scheduling, automatic optimisation of operation;
- Maintenance: remote access, alarm management with automatic notifications and actions.



## Energy Saving

Optimisation and monitoring of system performance.



## Data analysis

Detailed and complete graphs and reports on system variables.



## Alarm management

Detection and signalling of all alarm situations.

## Headquarters ITALY

**CAREL INDUSTRIES HQs**  
Via dell'Industria, 11  
35020 Brugine - Padova (Italy)  
Tel. (+39) 0499 716611  
Fax (+39) 0499 716600  
carel@carel.com

## Sales organization

**CAREL Asia**  
[www.carel.com](http://www.carel.com)

**CAREL Australia**  
[www.carel.com.au](http://www.carel.com.au)

**CAREL China**  
[www.carel-china.com](http://www.carel-china.com)

**CAREL Deutschland**  
[www.carel.de](http://www.carel.de)

**CAREL France**  
[www.carelfrence.fr](http://www.carelfrence.fr)

**CAREL Iberica**  
[www.carel.es](http://www.carel.es)

**CAREL India**  
[www.carel.in](http://www.carel.in)

**CAREL HVAC/R Korea**  
[www.carel.com](http://www.carel.com)

**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 U.K.**  
[www.careluk.co.uk](http://www.careluk.co.uk)

**CAREL U.S.A.**  
[www.carelusa.com](http://www.carelusa.com)

## Affiliates

**CAREL Czech & Slovakia**  
[www.carel-cz.cz](http://www.carel-cz.cz)

**CAREL Korea (for retail market)**  
[www.carel.co.kr](http://www.carel.co.kr)

**CAREL Ireland**  
[www.carel.com](http://www.carel.com)

**CAREL Thailand**  
[www.carel.co.th](http://www.carel.co.th)

**CAREL Turkey**  
[www.carel.com.tr](http://www.carel.com.tr)