

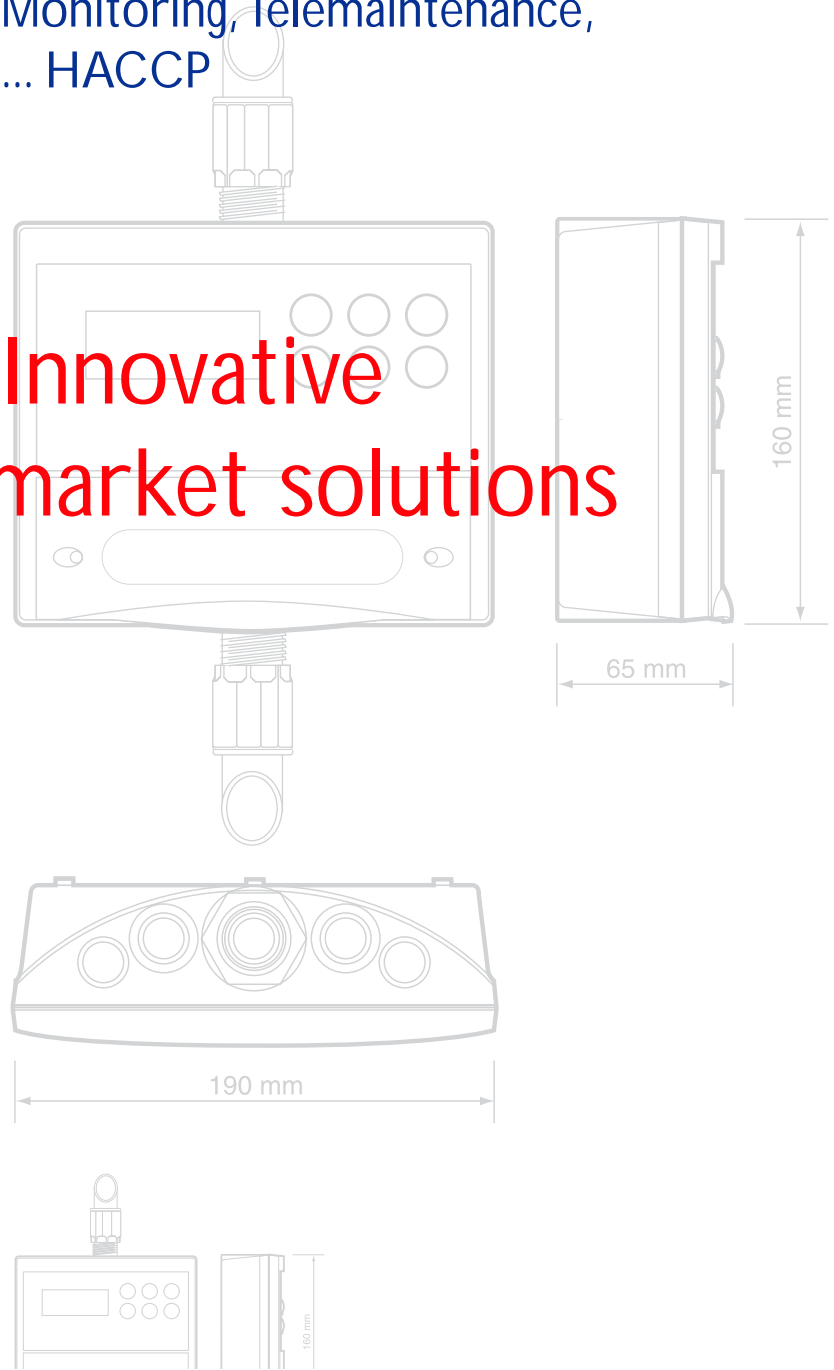


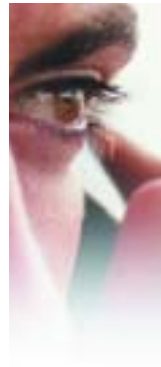
 **PlantWatch**



Monitoring, Telemaintenance,
... HACCP

**Innovative
Supermarket solutions**





PlantWatch

For more compact systems, with the same management and control needs as larger areas, *PlantWatch* offers the complete, integrated solution for all MONITORING, SURVEILLANCE and REMOTE MANAGEMENT requirements.

PlantWatch is a versatile DATA RECORDER, a formidable SURVEILLANCE SYSTEM and an exceptional instrument for REMOTE CONTROL.

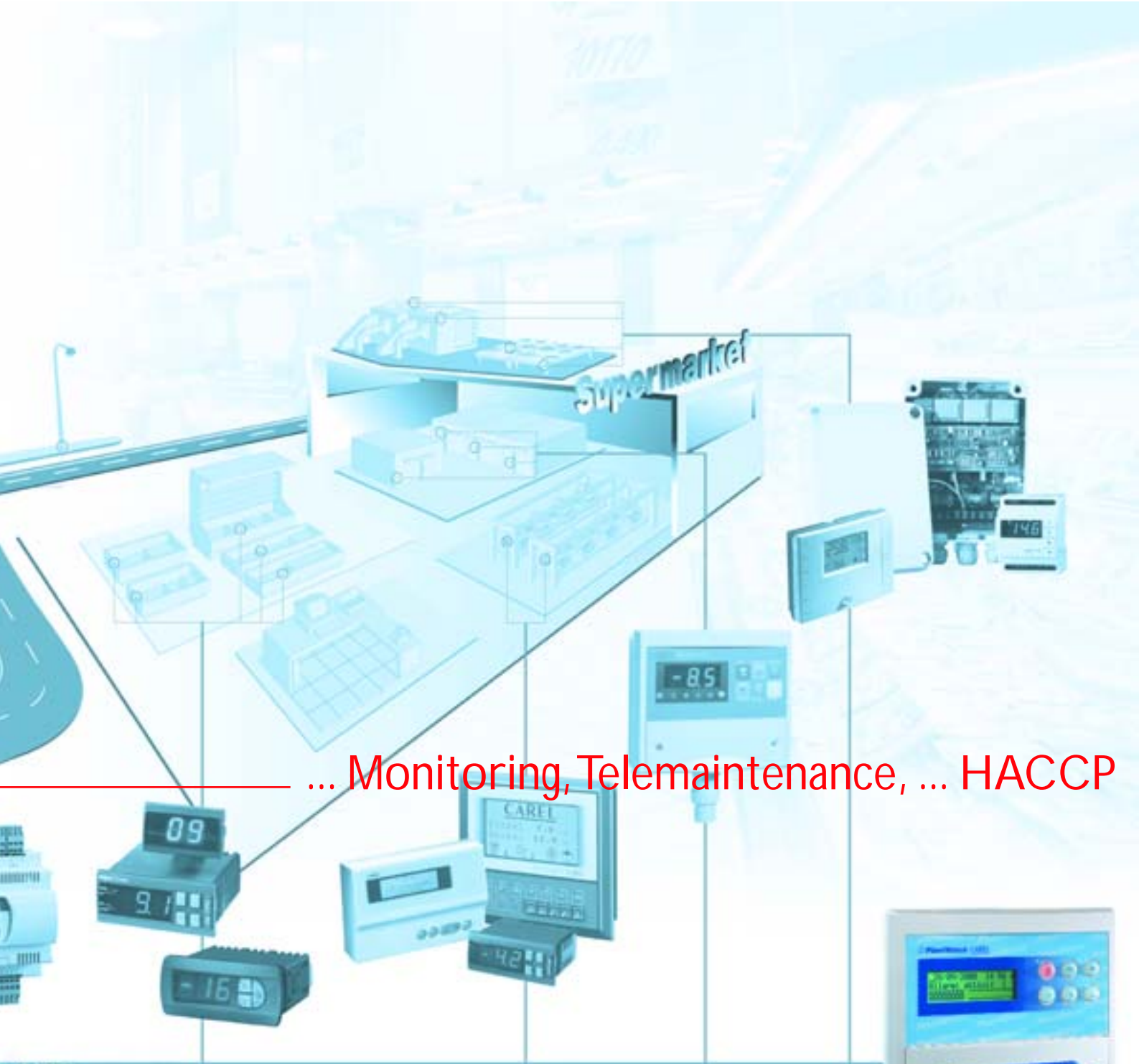
PlantWatch allows installers, managers, technicians and maintenance personnel complete control of Refrigeration, Air-conditioning, Heating and other systems. Up to 32 instruments can be connected to the system, including controls for cabinets, cold rooms, compressor packs, roof top units, chillers, lights, boilers, etc.

The system is especially versatile and innovative in terms of remote management, and equally powerful and effective as an independent control.

The messages can be displayed in one of five languages, and a built-in modem is also available, working with both PSTN and GSM.

PlantWatch recognises and manages all Carel instruments fitted with an RS485 interface.

The system can be easily configured to identify and control the hundreds of standard or customised applications available on the *pCO* and *pCO²* platforms, even those developed independently using *EasyTools*.



... Monitoring, Telemaintenance, ... HACCP

a (9.2kbit)



Simple, economical, indispensable



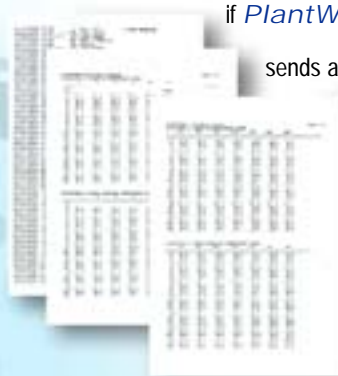
Indispensable

PlantWatch records the Temperature, Pressure, Humidity and all other values used in the control of your system. For each possible critical situation, you can decide

if *PlantWatch* activates a siren (internal), sends a FAX, sends an SMS message to your

GSM mobile phone, saves the event, prints it or calls the service centre! *PlantWatch* can print the information, either automatically or on request, and transfer it to a PC or your data storage centre.

Comply With
HACCP
93/43/EU



Economical and reliable



PlantWatch is complete.

It replaces the PC and the supervisory program, and the RS485 interface is built-in.

There are no problems of dimensions and installation, no problems of the PC shutting down and... No more costly and bulky components: what you don't need, you don't pay for!

With *PlantWatch*, your system's safety is in safe hands!

Even in the event of the shut-down of *PlantWatch* or interruption to the data transmission line (the RS485 line connecting the instruments), the optional PRT module can activate an independent alarm signal!

Simple to install



Simply fasten *PlantWatch* to the wall, connect the RS485 line and the power supply and you're already in business!

To customise the installation with names or descriptions, special alarm management, special print-outs or control functions, simply connect *PlantWatch* to a PC (optional kit and software).

Using an external MODEM with the "basic" *PlantWatch*, or the models with built-in MODEM/GSM-MODEM, you can, from your home or office, also modify the *PlantWatch* configuration and customise its functions!

Accessories



Printer module, in desktop version or with control panel mounting (DIN RAIL). Connected to the same RS485 line as the instruments being controlled, at up to 1000 metres from the *PlantWatch* system itself, it can PRINT on any printer (parallel), REPEAT the alarm signals or SURVEY the efficiency of the line and the *PlantWatch* system.

PW Manager Kit.

Connects *PlantWatch* to a PC for configuration, customisation or to transfer the saved data

MODEM adapter cable.

This accessory connects the basic *PlantWatch* version to an external modem to allow the remote management possibilities offered by *PlantWatch* to be fully exploited. *PlantWatch* are also available with built-in PSTN and GSM modem.

Other CAREL solutions for Supermarkets ...

MasterPlant: the most powerful Integrated System

MasterPlant allows you to centralise all the operating parameters of industrial and commercial refrigeration systems (supermarkets, walk-in refrigerators, storage rooms, cold rooms) which require a continuous monitoring for reasons of safety, efficiency, and compliance with food preservation standards. All these things are carried out via:

- alarm devices (fax, siren, paper and file report, GSM messages, remote station connection);
- recording and standard printing of graphs of the temperature, humidity and pressure values being measured;
- simple, easy and safe modification of the controller parameters.

The software of the MasterPlant local/remote supervisory system uses in Windows™ operating system in order to exploit the simplicity of usage of the windows and command and menu standardisation. With MasterPlant you can utilise the layout of your own system to obtain full customisation. MasterPlant is available on CD ROM in: Italian, English, French, German and Spanish.

Connectable instruments:

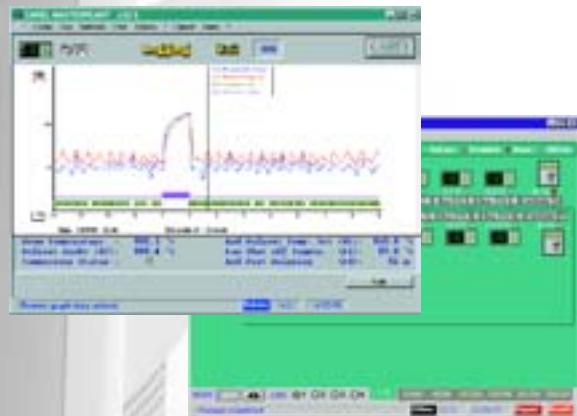
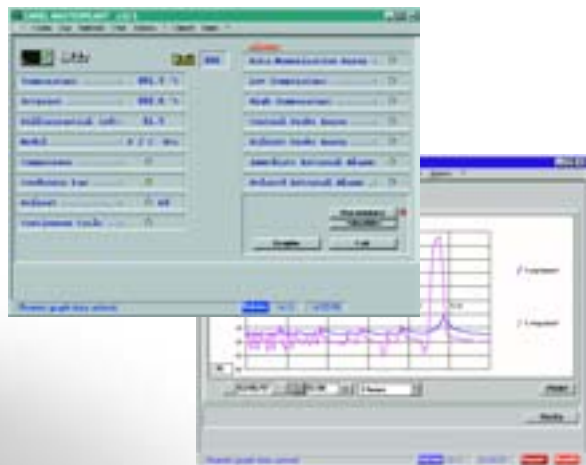
- IR32 / IRDR / IR96 for refrigeration
- IR32 E series for refrigeration
- IR32 / IRDR universal series
- IRMPX for multiplexed cabinets
- PJ32 Plug-in for Plug-in units
- CR72 universal controller (*)
- Frigobase refrigeration controller (*)
- pCO for 3-compressor pack
- pCO for stage control
- pCO for storage rooms
- Macroplus for 5-compressor pack (*)
- Macroplus for 4 compressor chiller (*)

Types of connections:

2-wire (RS485) or 5-wire (RS422) serial network for the connection of 800 (maximum) Carel controllers.

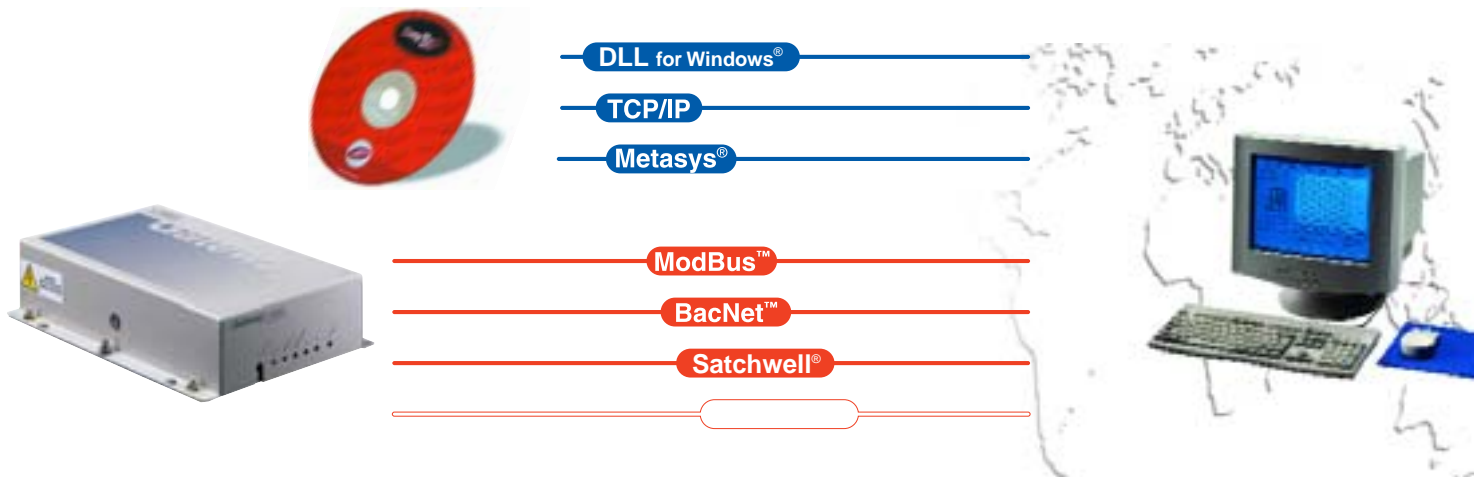
Connection to local PC through converter.

Supervisory remote station with PC-PC connection for the control via modem of plants.



... and Shopping Centres

Connections to BMS Systems



Carel's solutions

Gateways are interfaces that allow the exchange of information between networks using different electrical standards and protocols.

Carel offers numerous Gateways to interface with the most commonly-used BMS protocols, with others currently being developed. Carel also provides developers and integrators of systems for the more important BMS applications with DLLs for 16-bit or 32-bit Windows applications.

These DLLs allow the application to include communication with the instruments manufactured

by Carel, including the Infrared series for Refrigeration, and the Infrared Universal and μ chiller models, also in the compact version.

Thanks to the integrated multi-protocol software, the new Carel pCO^2 controls allow direct connection in many applications to different communication standards, such as Modbus™, BACnet™, and Echelon®.

For further information, please contact Carel or visit our web site www.carel.com.

pCO^2 : the new range of Carel controls

The technology used in the pCO^2 controls allows connection to the more common communication standards (Modbus™, BACnet™, Echelon®, Modem, ...) without requiring a Gateway.



RS485: Carel, Modbus™



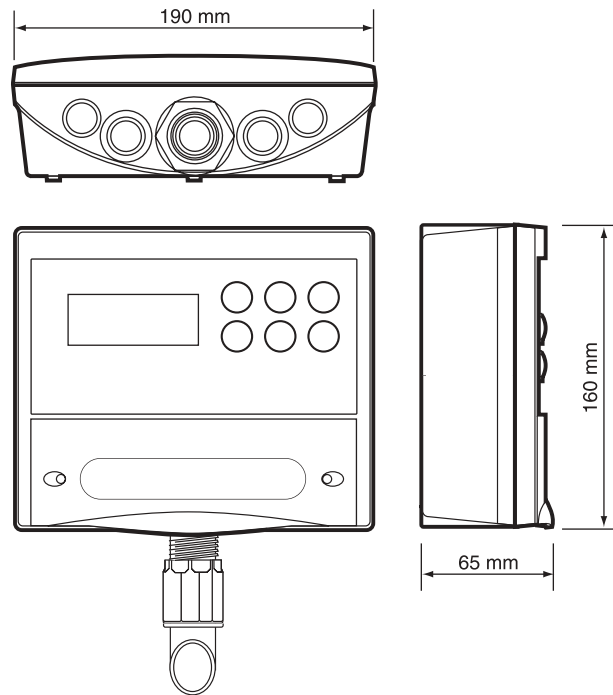
**RS232: modem, Modbus™
BACnet™**



ECHELON®
THE LONWORKS® COMPANY

Echelon, LONWORKS®, and the Echelon logo are trademarks of Echelon Corporation registered in the United States and other countries.

Dimensions:



Technical Specifications:

PlantWatch technical specifications

<i>No. of instruments connected:</i>	32
<i>No. of events/alarms recorded:</i>	4500
<i>No. of variables stored:</i>	32 analogue / 64 digital
<i>Recording duration with 32x10 min. analogue variables 64x20 sec. digital variables:</i>	13.5 days
<i>Power supply:</i>	230Vac \pm 15% 50/60 Hz (PLW00B0000/PLW00M0000) 115Vac \pm 15% 50/60 Hz (PLW00U0000)
<i>Power consumption:</i>	approx. 10VA
<i>Digital outputs:</i>	- 1x220Vac relay with normally-open contact, contacts protected by varistor 250V-2 A max resistive/inductive load for external modem reset - 1x220Vac relay with changeover contact, contacts protected by varistor 250V-2 A max resistive/inductive load for alarm signal
<i>Data connections:</i>	- optically-isolated RS485 serial connection with 3 screw terminals for connection to peripherals - max RS485 line length 1 km - RS232 serial connection using 8-way telephone connector for external modem and setup

<i>Only for vers. PLW00M0000:</i>	internal 33k6 PSTN modem
<i>Operating temp.:</i>	T40 with 20-80% humidity, non-condensing
<i>Index of protection:</i>	IP65
<i>Mounting:</i>	wall-mounting

Technical specifications, printer board

<i>Power supply:</i>	
<i>desktop vers. PLWOPPR00:</i>	230Vac \pm 15% 50/60Hz using plug transformer supplied
<i>DIN version PLWOPPR00:</i>	24Vac \pm 15% 50/60Hz
<i>Power consumption:</i>	2W
<i>Digital outputs:</i>	1 relay (24Vac desktop vers.) (230Vac DIN vers.) 2 A max resistive/inductive load
<i>Data connections:</i>	- optically-isolated RS485 serial connection with 3 screw terminals for connection to PlantWatch - parallel for printer connection
<i>Operating temp.:</i>	T40 with 20-80% humidity, non-condensing
<i>Index of protection:</i>	IP00 – desktop versions: IP20

