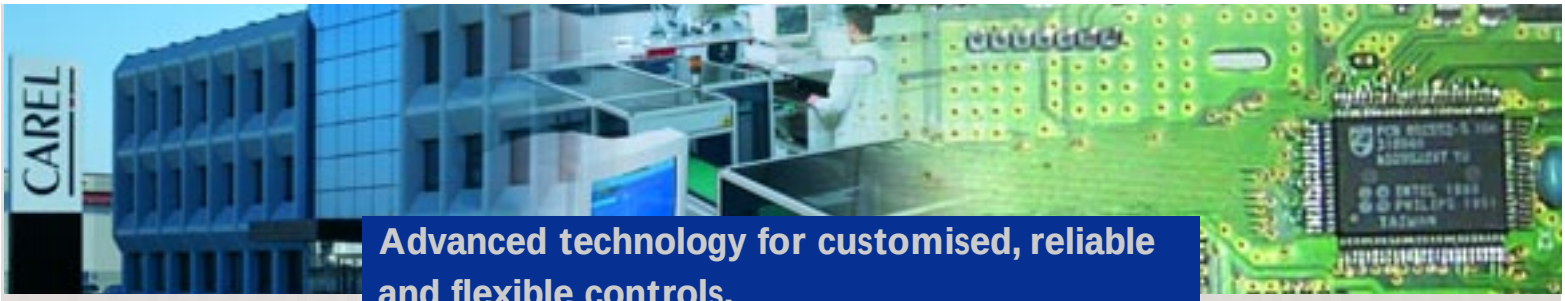
pCO²

The *pCO²* series is the new line in the range of Carel programmable controls for Air-conditioning and Refrigeration.
The unique performance of the new *pCO²* series is guaranteed by its advanced electronics, together with CAREL's experience in HVACR applications.
By using *pCO²* components with "*EasyTools*" and "***pLAN***", the OEM can create a System capable of offering made-to-measure solutions. We have called this the "*pCO sistema*".
By using the "*pCO sistema*", each manufacturer can develop its own customised controls, from both a functional and aesthetic point of view, for the regulation of units and plants, using standard components which ensure excellent performance, maximum reliability and competitive prices.



Advanced technology for customised, reliable and flexible controls.

The *p*CO ***sistema***, first developed by Carel in 1984, now offers many more benefits to the manufacturer of Air-Conditioning and Refrigeration units and plants, thanks to the introduction of the new *p*CO^2 series controls, which allow:

- reduced assembly and wiring times, with new DIN-rail mounting plastic cases;
- real time management of even the fastest transients, using a powerful 16-bit microprocessor;
- possibility to save events (alarms, temperatures, pressure, ...) even for long periods, in Flash RAM memory;
- greater flexibility in the definition of functions and algorithms, thanks to the new 32 bits *EasyTools* development software and the multi-standard inputs;
- flexible and customised appearance, thanks to compatibility with the numerous Carel LCD or LED, graphic or alphanumeric user interfaces;
- simple connection to the more common communication standards using embedded multiprotocol software;
- excellent price/performance ratio, due to the wide range of controls available.

CAREL

Saving of events and alarm log

Thanks to the high capacity flash memory (expandable up to 6 Mbytes) and the clock with back-up battery, all active alarms, the values of the main regulated measurements (temperature, pressure, humidity, ...) and the status of the controlled devices (compressors, fans, pumps, ...) can be stored for very long periods.

High execution

A 16-bit microprocessor ensu execution speed and efficient interfaces and the expansion boards, as well as handling of even the fastest transients.

Programmability

The exclusive Carel *EasyTools* development system allows quick software customisation. The Flash RAM technology used in the *p*CO^2 now makes this process even simpler. The software can be transferred directly from a Personal Computer, or using an electronic “plug & play” key. All or part of the software can also be updated via modem, thus avoiding operations on-site.

Multi-standard

The inputs on the *p*CO^2 can to accept the more common ty By simply changing a softwar the characteristics of the inpu the more common market sta PT1000, 0-1V, 0-10V, 0-20mA

speed

ures high program

t management of the

inputs

be configured

ypes of sensor.

re parameter,

uts can be adapted to

andards (NTC,

A, 4-20mA, ON/OFF).

Reduced assembly and wiring times

The new *p*CO^2 series boards feature a plastic case which guarantees an excellent physical protection of the board and reduces the risk of electrostatic discharges due to incorrect handling. It also allows quick DIN rail mounting, thus reducing the assembly and wiring times.

The case is also available with built-in user interface.

Excellent price/performance ratio

The *pCO*^{2} series offers the control with the best price/performance ratio for each application.

Three different sizes are available, differentiated by the number of inputs/outputs:

- *p*CO^2 Small
- *p*CO^2 Medium
- *p*CO^2 Large

Furthermore, additional expansion boards can be added to manage more complex units.

pCO sistema

Offers the manufacturers of Air-Conditioning and Refrigeration units and plants a range of controls and accessories, communication interfaces and development software which allow the right solution to be found in terms of appearance, functions and price.

Communication standa

In HVACR compatibility with the supervisory s

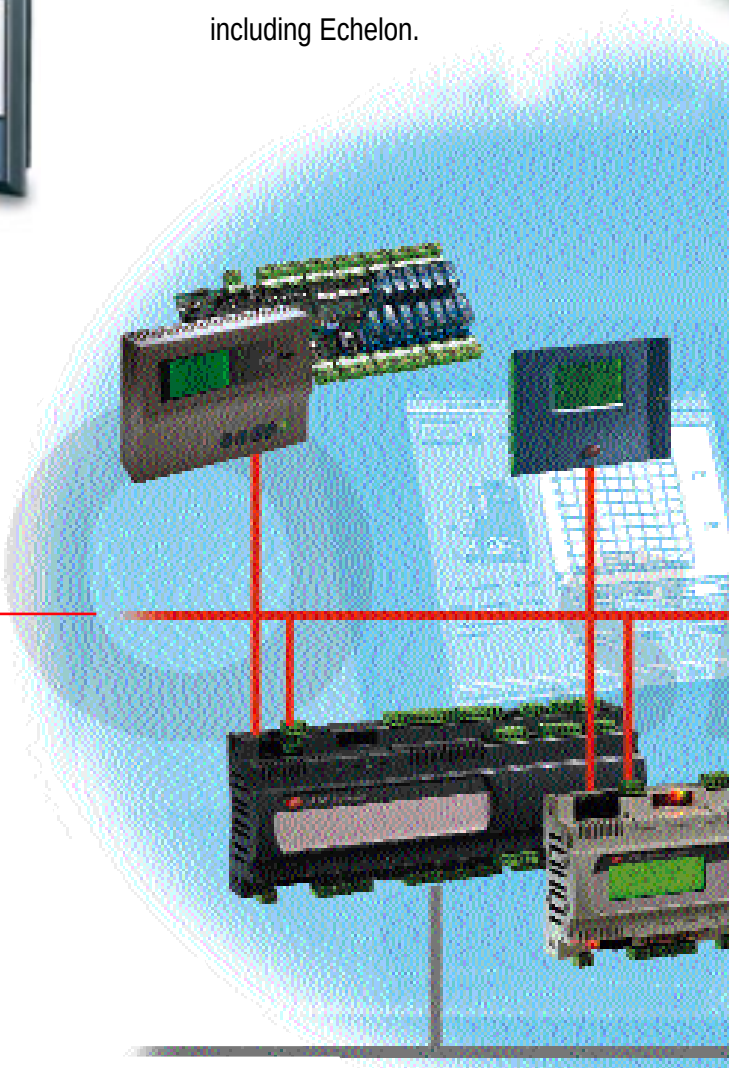
*p*CO ***sistema*** can interface to the more com

developed by Carel (Modbus, BacNet, ...).

the *p*CO^2 series can be connected

external gateway, to various

including Echelon.



Supervisor network (RS485 - up to 19.2kbit)

*p*CO ***sistema***

Flexibility and modularity

Numerous components can be integrated into the *p*CO ***sistema*** for the control and regulation of HVACR systems:

- single-phase or three-phase speed regulators for fans, pumps, ...;
- drivers for optimal management of electronic expansion valves;
- low cost controls for direct expansion units;
- programmable thermostats with built-in clock.

The pLAN local network

All the components in the *p*CO ***sistema*** car

thanks to the ***pLAN*** local network. This allow

system management.

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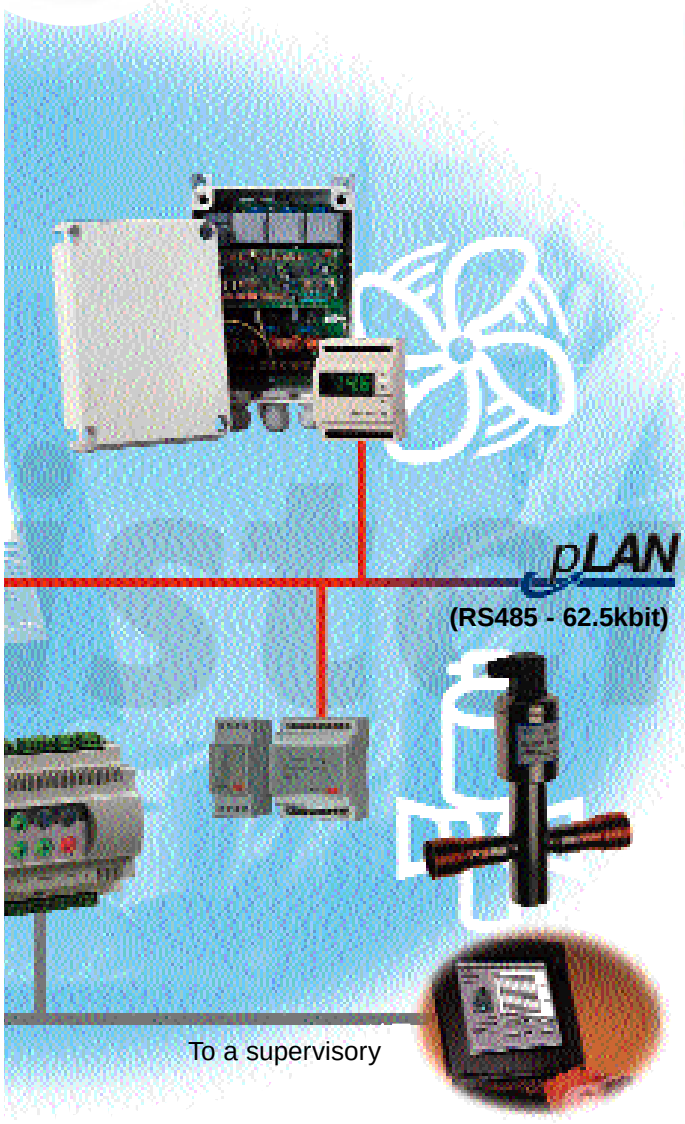
systems is becoming ever more important. The

ınmon communication standards using gateways

Thanks to its multiprotocol software,

directly, without requiring an

communication standards,



pLAN

n be easily and quickly connected to each other

ws a shared and reliable regulation for optimal

The EasyTools development software

One of the strong points of the *p*CO ***sistema*** is the exclusive *EasyTools* software.

With *EasyTools,* customised programs for any HVACR application (Chillers, Air-Handling Units, Compressor Packs, ...) can be created quickly and easily.

EasyTools is simple, thanks to its graphic programming language, reliable, thanks to its tested software modules, and is transportable onto other controls of the *p*CO ***sistema***, even those yet to be developed.

EasyTools components

EasyTools offers the HVACR manufacturer four software packages:

- WinCad, for customising algorithms.
- WinMask, for customising the user interface or for creating customised supervisory software in Windows™ operating systems.
- WinNet, for ***pLAN*** applications.
- WinSim, for debugging the software on a normal PC.

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