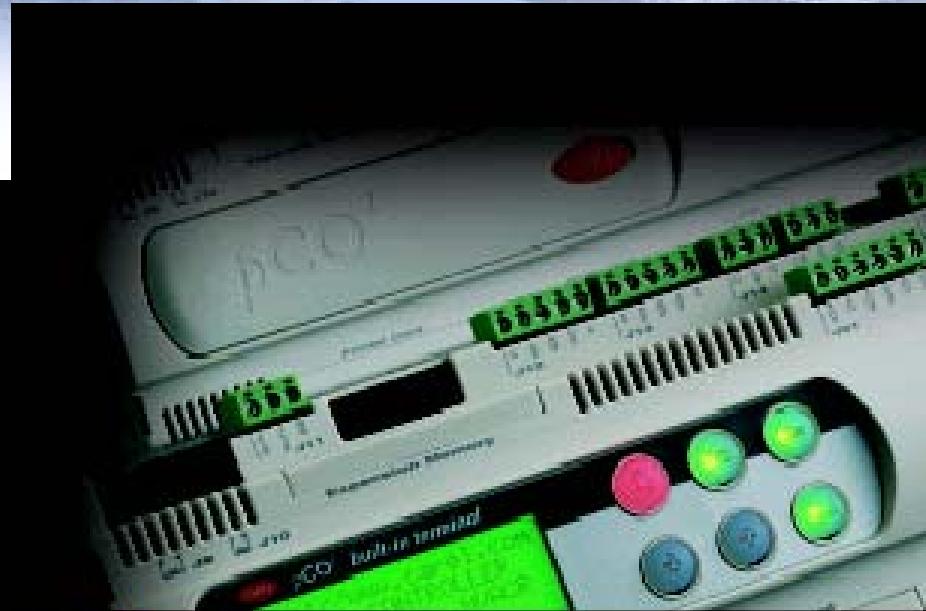


# The integral solution for the A.H.U.



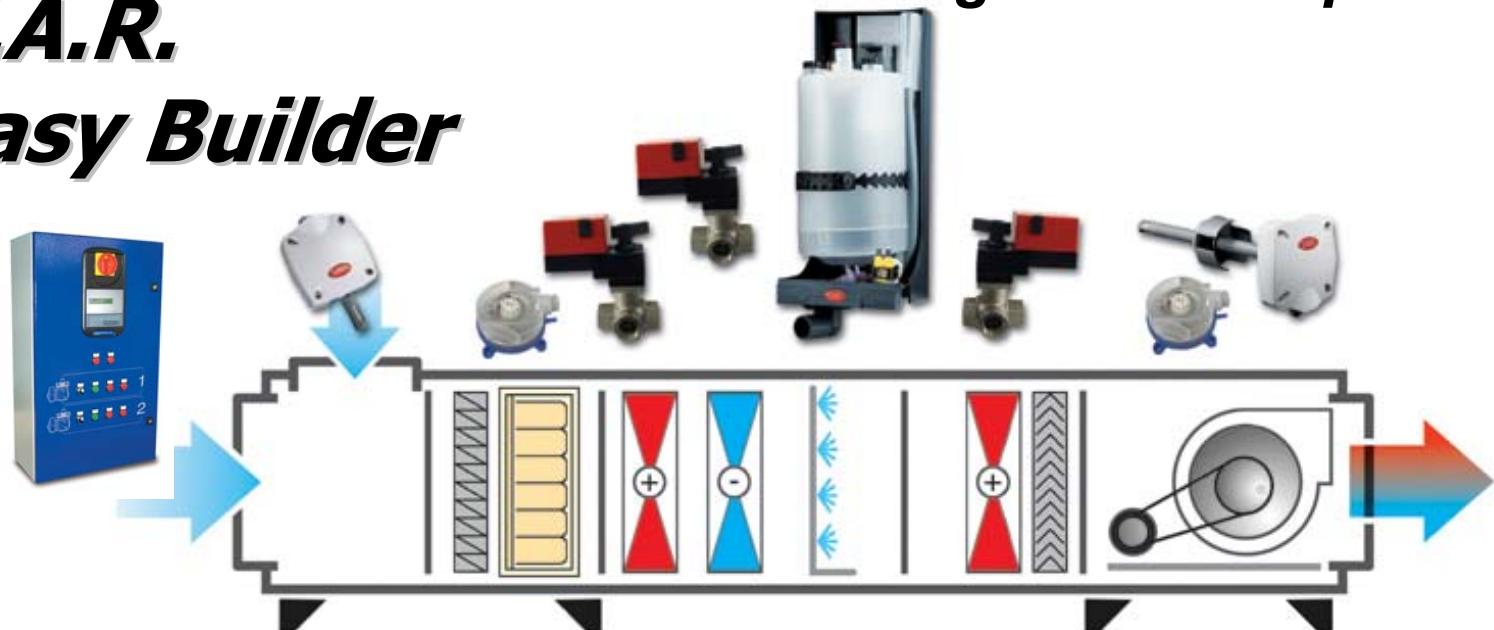
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# CAREL

## Integral Solution

- ***Hardware Solutions***
- ***V.A.R.***
- ***Easy Builder***

- $pCO^2$  &  $pCO1$  &  $pCO^{xs}$
- ***Sensors and Contacts***
- ***Wiring electrical panel***



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# CAREL Solution

## Hardware Solutions

### Pco<sup>1</sup> with MP Bus



Models	Price
PCO1MP0AS0	€ 310,00
PCO1MP0AM0	€ 400,00

# Hardware Solution

## pCO XS



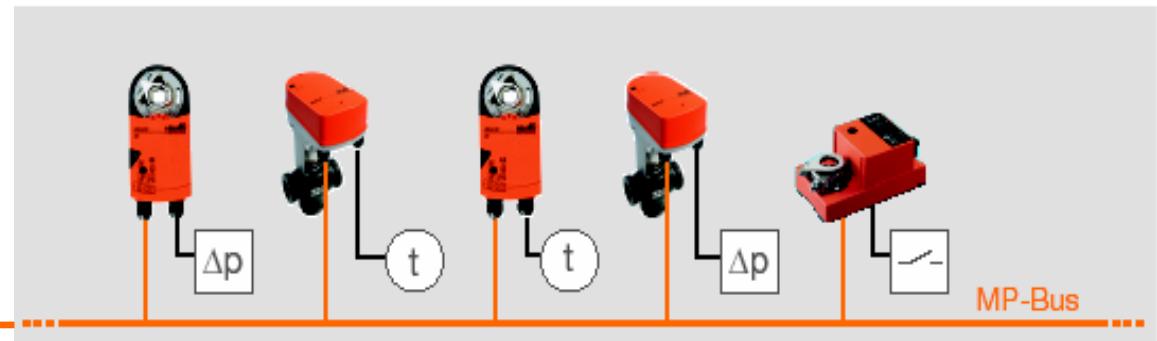
I/O	pCO <sup>XS</sup>
Dig.Inputs	<b>6</b>
An.Inputs	<b>4 (2 NTC)</b>
Relays	<b>5</b>
An.Outputs	<b>2 + 1 PWM</b>
Serial Line	<b>1 pLAN 1 Plant Visor 1 MP Bus</b>

# IT *BELIMO Cooperation*

pCOXS with  
MP-Bus output  
integrated



**T-lan**



**Up to 8 ACTUATORS!!!**  
**... and 8 additional sensors**  
**(NTC – 0-10V – D.C.)**

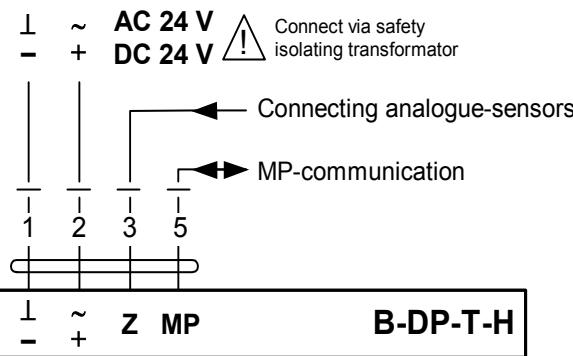
# *The integral solution : Sensors & switches*

## Air pressure Switch

- DCPD000100  
range 0,5 - 5 Pascal
- DCPD010100  
range 0,5 - 5 Pascal with mounting  
kit integrated
- DCTF000320  
Antifreeze thermostat Protection IP  
65 Capillary length m. 3



# The integral solution: Digital Sensor B-DP-T(-H)



for measuring of

➤ differential pressure

- measure-range 0...3200 Pa
- accuracy 0...100 Pa: <2 Pa
- >100Pa: ±2 %
- signal-resolution 0,1 Pa

➤ temperature

- measure-range -30...+50 °C
- accuracy ±1 %
- signal-resolution 0,02 °C

➤ humidity

- measure-range 0...100% r.F.
- accuracy ±5 %
- signal-resolution 0,01 %

# *The integral solution: Digital Sensor B-DP-T(-H)*

- ASDM204000 DP & T  
Euro 280
- ASDM244000 DP & T & H  
Euro 390



# The integral solution

## Electrical Panels

**C T** \_\_\_\_\_

Type of controller:

I pCO<sup>2</sup> Large & Built-in

L pCO<sup>2</sup> Large

M pCO<sup>2</sup> Medium

N pCO<sup>2</sup> Medium & Built-in

S pCO<sup>2</sup> Small

T pCO<sup>2</sup> Small & Built in

X pCO<sup>XS</sup> fitted with MP-Bus

Y pCO<sup>XS</sup> fitted with MP-Bus & Built-in

F FCM fitted with inputs 4...20 mA

U pCO<sup>XS</sup> basic

Z pCO<sup>XS</sup> basic & Built-in

Starting:

D Direct three-phase

S Star-delta three-phase

M Direct single-phase

Additional accessories:

0 No accessory

1 { 1 emergency stop button

{ 1 additional light

{ 3 primary safety relays

Power to second return fan \*

Power to first return fan \*

Power to second supply fan \*

Power to first supply fan \*

Fan power			
Code	Power in kW	Code	Power in kW
0	No connection	A	3
1	0	B	4
2	0.18	C	5.5
3	0.25	D	7.5
4	0.37	E	11
5	0.55	F	15
6	0.75	G	18.5
7	1.1	H	22
8	1.5	I	30
9	2.2	J	37
		K	45
		L	55
		M	75



**CAREL**

# CAREL EasyBuilder 1.0 - NoName

File Edit View Tools Help



# EasyBuilder

intuitive s



### New Project

**EasyBuilder**  
intuitive system

New | Existent | Recent | Search |

AHU\_Demo NewApplication NewModule

Select a project type

Don't show this dialog in the future

OK Cancel Help

Project type

Application  Module

Application Name (filename):

NoName

Customer:

Reference:

Remarks:

Languages:

- |   |      |
|---|------|
| <input checked="" type="checkbox"/> English | (EN) |
| <input type="checkbox"/> French             | (FR) |
| <input type="checkbox"/> German             | (DE) |
| <input type="checkbox"/> Italian            | (IT) |
| <input type="checkbox"/> Spain              | (SP) |
| <input type="checkbox"/> USER               | (MY) |

Default language:

EN

Controller Code Version

PCO2000AL0 0 . 0 . 0

Project Modules Supervisor Documents Controller

BLOC NUM INS

# CAREL

**CAREL**

**CAREL EasyBuilder 1.0 - AHU\_Demo**

File Edit View Tools Help

AHU\_Demo

- AHU\_General(1)
- AHU\_Filter(2)
- AHU\_Heating\_Battery(3)
- AHU\_Rotative\_Recovery(4)
- AHU\_Fan(5)

1 2 3 4 5

AHU\_General AHU\_Filter AHU\_Heating\_B AHU\_Rotative\_F AHU\_Fan

Add Insert Edit Delete

AHU\_Fan AHU\_Filter AHU\_General AHU\_Heating\_B AHU\_Rotative\_Recovery

ALL AHU

Project Modules Supervisor Documents Controller

BLOC NUM INS

**CAREL**

## Module configuration: AHU\_HEATING\_BATTERY.EBM(3)

	Settings	Input/Output connections		Modules connections		Controller
Preheating temperature	Terminal AUTO	Sensor Temperature	Signal Generic	Application Generic	Range Generic	Carel code -
Out heating modulating valve	Terminal AUTO	Speed Generic	Type 0/10V			ASDC110000 ASDC111000 ASDC230000
Out heat pump	Terminal AUTO	Type Relay	Common Generic	Contact N.O. (Norm. C)	Voltage Generic	ASDT011000 ASDT030000 ASET030000 ASET030001

OK

Cancel

Module configuration Windows Version: - 0.0.3

**CAREL**

## Module configuration: AHU\_HEATING\_BATTERY\_EBM(3)

Settings	Input/Output connections	Modules connections	Controller
Controller code	Description		
AUTO	-		
AUTO	Controller' already defined		
PCO2000AS0			
PCO2000AM0			
<b>PCO2000AL0</b>			
PCO2000BS0			
PCO2000BM0			
PCO2000BL0			
PCO2001AS0			

Find controller / Define connections      Show all codes

OK

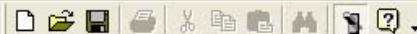
Cancel

Module configuration Windows Version: - 0.0.3

CAREL

# CAREL EasyBuilder 1.0 - AHU\_Demo

File Edit View Tools Help



## KeyFunction - [PROJECT]

IN-OUT

CLOCK

SET

PROG

INFO

RED

BLUE

ON-OFF

ALARM

UP

DOWN

MODULE: AHU\_General(1)

1	LET	Led_Lighter	0	
2	IF	GLOBAL_ALARM	=	1
3	IF	BUZZER	=	1
4	SET	RESET_BUZZER		
5	GOTO_SCREEN	%LOOP_ALARM%		
6	END_IF			
7	END_IF			
8	IF	GLOBAL_ALARM	=	1
9	IF	BUZZER	=	0
10	SET	RESET_ALARMS		
11	GOTO_SCREEN	%LOOP_ALARM%		
12	END_IF			
13	END_IF			
14	IF	GLOBAL_ALARM	=	0

low Format Insert

UTPUT D

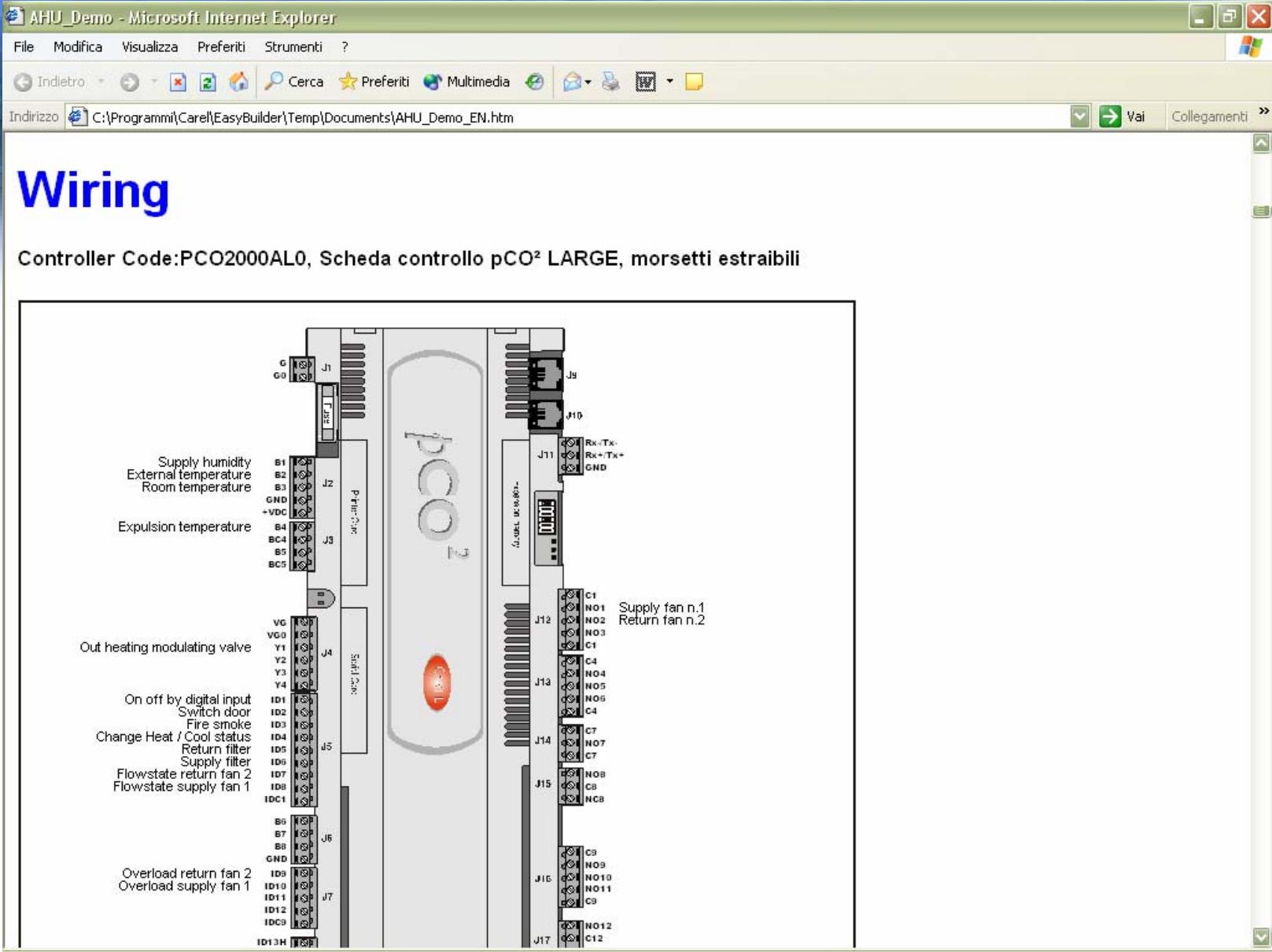
UTPUT +III

UTPUT d

OK Cancel Help

BLOC NUM INS

CAREL



**CAREL EasyBuilder 1.0 - AHU\_Demo**

File Edit View Tools Help

Compile

Before to upload the software into the controller you need to compile

Rebuilding loops and screens...

Creating USER INTERFACE file, language: EN (ETPRJEN.TRR)...

Updating SUPERVISOR to STRATEGY...

Creating STRATEGY file (ETPRJ0.CAD)...

Creating project file (ETPRJ.PRJ)...

End precompiling - 0 warning(s), 0 error(s)

Precompiling results:

Number of Modules: 113  
Number of Atoms: 1408  
Number of Screens: 110  
Number of Labels: 1333  
Number of Settings: 135  
Precompiling time: 17 s

Start compiling...

End compiling - 0 warning(s), 0 error(s)

Run WinSIM after compilation   **Simulation**   **Compile**

Upload controller

Upload the software into the controller (all languages)   **Upload**

WinLOAD

WinLOAD allows advanced management of the controller   **WinLOAD**

BLOC NUM INS

The screenshot displays the CAREL EasyBuilder 1.0 software interface. On the left, there are two main windows: one showing a user interface with various buttons and displays, and another showing a control logic diagram with components like 'Heating', 'Fan', 'Humidifier', and 'Control'. A large binary code overlay (0101001010000101111101101...) is visible across the center of the screen. On the right, there is a 'Compile' panel with a progress log, a 'Run WinSIM after compilation' checkbox, and 'Simulation' and 'Compile' buttons. Below it is an 'Upload controller' section with an 'Upload' button, and a 'WinLOAD' section with a 'WinLOAD' button. The bottom navigation bar includes buttons for 'Project', 'Modules', 'Supervisor', 'Documents', 'Controller', 'BLOC', 'NUM', and 'INS'.

**CAREL**



# **CAREL Solution**

## **Easy Builder Code & Price**

*Available for the end of  
october 2003!!!*

Code	Description	Price
EBSTDFL000	Full Version	€ 650
EBSTDLT000	Light Version	€ 100

# VAR: Italy situation

- Emilia Romagna:
- Friuli:
- Lazio - Toscana
- Liguria
- Piemonte
- Valle d'Aosta
- Lombardia
- Marche
- Sardegna
- Sicilia
- Trentino Alto Adige e Veneto
- Veneto



Climasystem – Bissaro  
Studio Zatti – Massimo Zatti  
Atix - Gatto -

*We started!!!*



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