

Software & libraries
for HVAC/R applications

CAREL

1ttool

the essence of *25 years* of experience in programming tools

Integrated Control Solutions & Energy Savings

Development, simulation & commissioning:

1tool is the new development tool for the CAREL programmable controller platform.

It features five different environments available to the designer for managing all phases of the application program: from design to testing and debugging and commissioning in the field.

The fundamental aspect of this tool is integration: all the environments are linked together to best support development of the application program. Each environment is dedicated to the development of a specific function and interacts with the other

environments, so as to ensure:

- greater reliability, thanks to the real time error notification in the design phase;
- a reduction in development times using the new functions available, above all the new libraries of functional modules;
- flexibility in terms of software customisation.

All these features, new graphics and user-friendliness make 1tool the ideal solution to respond to a variety of needs for HVAC/R applications.

Connectivity

CAREL, as well as offering its customers high quality and reliable products, has always paid special attention to the requirement of OEMs operating in the HVAC/R sector to interface the pCO sistema controllers with the most commonly-used BMS (Building Management Systems). For the designer, in fact, it has become standard to offer software applications that can interface with the most common protocols. Using 1tool, interfaces with the main BMS, such as Modbus®, LonWorks® and BACnet™ can be implemented simply in the design phase.

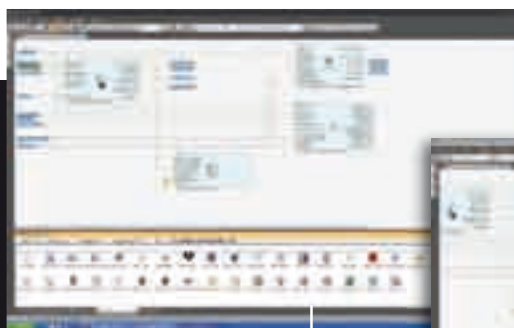
Documents

The tool creates all the main documents relating to the application, such as the list of I/Os, list of parameters, supervisor and alarm tables. In this way, the developer can simply and quickly source the essential information required to create the instruction manual for the application.

development: multi programming levels and integrated user interface management



WYSIWYG mask editor



atom, macroblock and module libraries



WYSIWYG simulation editor

simulation: integrated application debugging algorithm, user interface, network

development simulation

3 needs, **1tool**



Development

1tool offers different level of programming; in addition to the consolidated libraries of atoms and macroblocks, new libraries of functional modules are now also available. The modules are functional blocks made up of control algorithms and user interfaces. The designer can thus simply import the desired algorithm and the corresponding user interface into the project, saving a significant

amount of development time.

To best support its customers, CAREL provides libraries of functional modules designed for the various different HVAC/R applications. Users can also convert their own specific algorithms into reusable modules, making the development of subsequent projects faster and more secure, being based on consolidated logic.



Simulation

Using the Simulation Editor the applications developed can be tested quickly and reliably, simulating the control algorithm and the corresponding user interface in detail, and using new and more powerful functions when compared to the previous EasyTools. Simulation Editor can be used to apply different types of simulation, from continuous execution of

the application to step-by-step execution of the various functional blocks making up the algorithm. During simulation, the input and output values of the various functional blocks can be displayed in real time.

Finally, the use of break-points allows faster debugging of the application being developed.



Commissioning

pCO Manager is the new 1tool environment that assists the user in the configuration and commissioning of the HVAC/R unit. Available in two versions (integrated in 1tool & stand-alone), it allows the user to configure the unit parameters quickly and safely, and then test the actual application using the serial connection

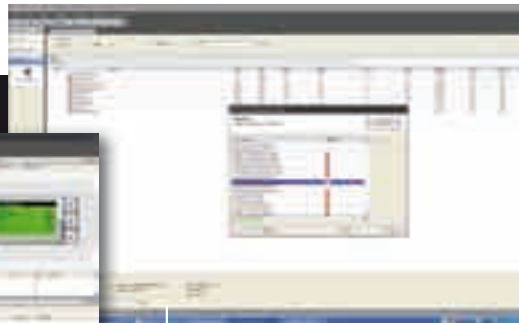
between the controller on the unit and the PC. Security in controlling the parameters is ensured by different access profiles, each with different restrictions based on the type of user. Remote monitoring is guaranteed by the connection via modem (PSTN or GSM).

commissioning: easier field setup, local & remote diagnostic and maintenance

real time data values



datalogging management



unit monitoring



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