

Temperature and humidity sensors



DP series temperature & humidity sensors

room, industrial and duct



CAREL proposes the new DP series range of active temperature and humidity sensors, available for rooms, industrial applications and ducts, designed for the residential and light industrial HVAC/R market.

The new range extends the number of models with 0 to 10 V and RS485 serial output (Modbus® and CAREL).

The RS485 version allows up to 32 sensors to be connected to the same local network, thus optimising the use of the I/Os on the controller, and simplifying wiring, with significant cost savings.

One important new feature is the case that houses the sensors for industrial applications and ducts, with IP55 index of protection, and simplified opening and protection of the electronic board that is separate from the case fastening screws.

General specifications

Power supply	9 to 30 Vdc / 12 to 24 Vac tol. -10%, +15%
Output signal	0 to 1 V / -0.5 to 1 V / 4 to 20 mA 0 to 10 V NTC 10K @ 25 °C RS485 serial (Modbus® RTU and CAREL protocol) - up to 32 addresses; - Baud rate 9600/19200 Bit/sec; - opto-isolated output; - Dew point variable on supervisor
Operating range	room -10 to 60°C / 10 to 90 rH% industrial & duct -10 to -60 °C / 10 to 90 rH% -20 to 70 °C / 0 to 100 rH%
Index of protection	room IP30 industrial IP55 / (sensor IP54) duct IP55 / (sensor IP40)

For other specifications, see the manual.



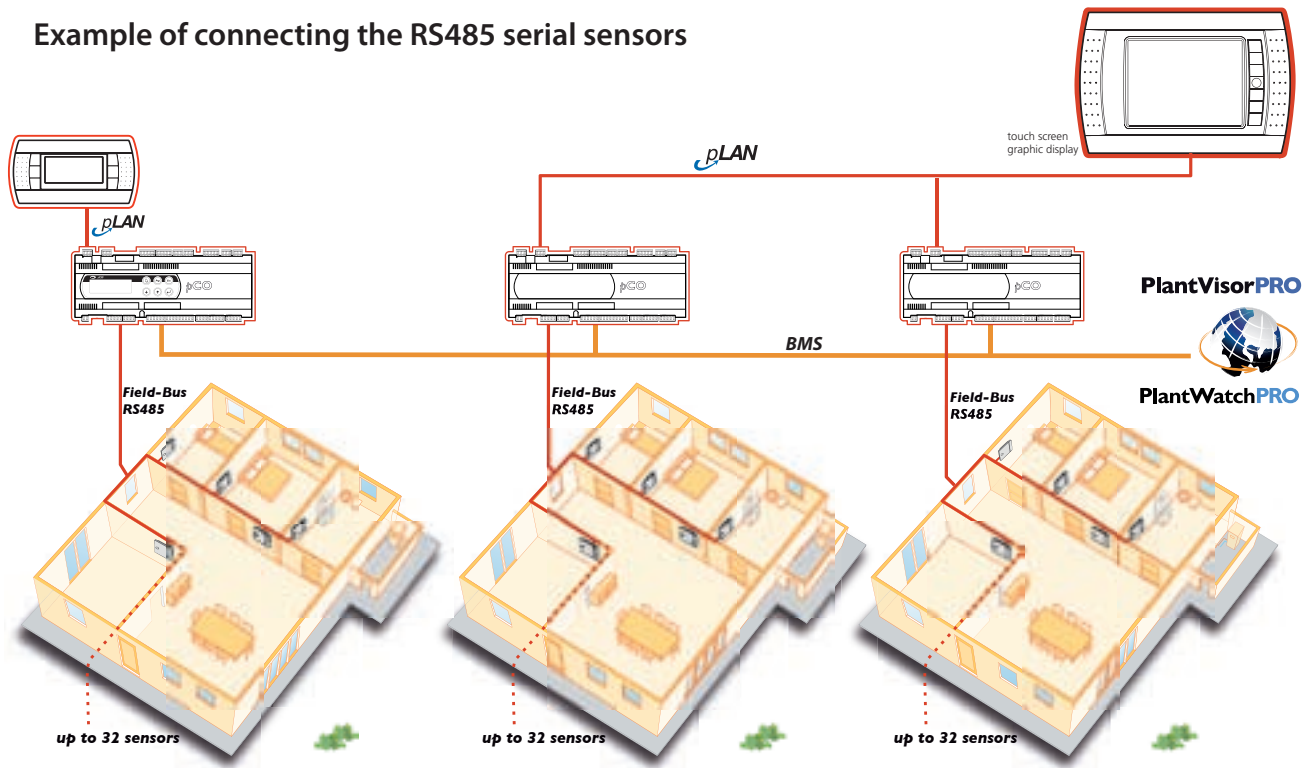
Cover opened and closed by simply twisting.

For non-standard configurations, take off the protective cover by removing the screws.

White plastic to better suit the installation environment.

Protection of the electronic board. Only the connection terminals can be accessed. Fastening screws separated from the electronic board.

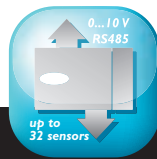
Example of connecting the RS485 serial sensors



Temperature and humidity sensors with digital technology



Extension of the temperature and humidity range to -20T70°C



Models with 0 to 10 V & RS485 output, with Modbus® or CAREL protocol, addresses for up to 32 sensors



Simplified opening of the case for industrial and duct version



Codes and comparison to the AS* series

ROOM VERSION

Code	Room version, 0 to 1 V / -0.5 to 1 Vdc/4 to 20 mA output	Corresponding code in AS version
DPWT010000	Temperature (-10T60 °C)	ASWT030000
DPWT011000	Temperature (-10T60 °C) (output: CAREL NTC only)	ASWT011000
DPWC111000	Temperature (-10T60 °C) (output: CAREL NTC only) and humidity (10 to 90% rH)	ASWC111000 ASWH100000** (**humidity only)
DPWC110000	Temperature (-10T60 °C) and humidity (10 to 90% rH)	ASWC110000
Room version, 0 to 10Vdc output		
DPWC115000	Temperature (-10T60 °C) (output: CAREL NTC only) and humidity (10 to 90% rH)	ASWC115000
DPWC112000	Temperature (-10T60 °C) and humidity (10 to 90% rH)	ASWC112000
Room version, optically-isolated RS485 serial output		
DPWC114000	Temperature (-10T60 °C) and humidity (10 to 90% rH)	-
DPWT014000	Temperature (-10T60 °C)	-

INDUSTRIAL VERSION

Code	Industrial version, 0 to 1 V / -0.5 to 1 Vdc/4 to 20 mA output	Corresponding code in AS version
DPPT010000	Temperature (-20T70 °C)	-
DPPT011000	Temperature (-20T70 °C) (output: CAREL NTC only)	ASPT011000
DPPC111000	Temperature (-10T60 °C) (output: CAREL NTC only) and humidity (10 to 90% rH)	-
DPPC110000	Temperature (-10T60 °C) and humidity (10 to 90% rH)	ASPC110000
DPPC210000	Temperature (-20T70 °C) and humidity (0 to 100% rH)	ASPC230000/ASPC230010
Industrial version, 0 to 10Vdc output		
DPPC112000	Temperature (-10T60 °C) and humidity (10 to 90% rH)	-
DPPC212000	Temperature (-20T70 °C) and humidity (0 to 100% rH)	-
Industrial version, optically-isolated RS485 serial output		
DPPT014000	Temperature (-20T70 °C)	-
DPPC114000	Temperature (-10T60 °C) and humidity (10 to 90% rH)	-
DPPC214000	Temperature (-20T70 °C) and humidity (0 to 100% rH)	-

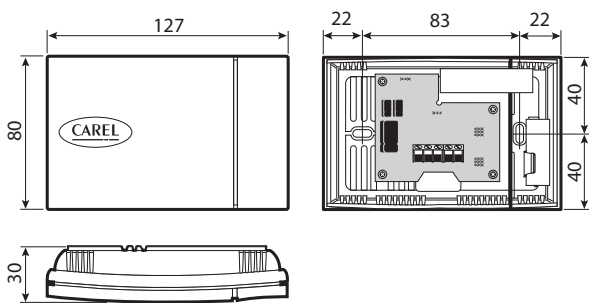
DUCT VERSION

Code	Duct version 0 to 1 V / -0.5 to 1 Vdc/4 to 20 mA output	Corresponding code in AS version
DPDT010000	Temperature (-20T70 °C)	ASDT030000
DPDT011000	Temperature (-20T70 °C) (output: CAREL NTC only)	ASDT011000
DPDC111000	Temperature (-10T60 °C) (output: CAREL NTC only) and humidity (10 to 90% rH)	ASDC111000
DPDC110000	Temperature (-10T60 °C) and humidity (10 to 90% rH)	ASDC110000 ASDH100000** (**humidity only)
DPDC210000	Temperature (-20T70 °C) and humidity (0 to 100% rH)	ASDC230000 ASDH20000** (**humidity only)
Duct version 0 to 10Vdc output		
DPDC112000	Temperature (-10T60 °C) and humidity (10 to 90% rH)	-
DPDC212000	Temperature (-20T70 °C) and humidity (0 to 100% rH)	-
Duct version optically-isolated RS485 serial output		
DPDT014000	Temperature (-20T70 °C)	-
DPDC114000	Temperature (-10T60 °C) and humidity (10 to 90% rH)	-
DPDC214000	Temperature (-20T70 °C) and humidity (0 to 100% rH)	-

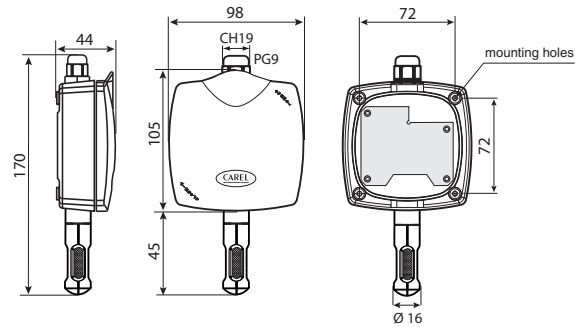
Note: 1. Neutral versions available upon request (CAREL codes DP*****N); 2. Custom front logo available upon specific request

Dimensions (mm)

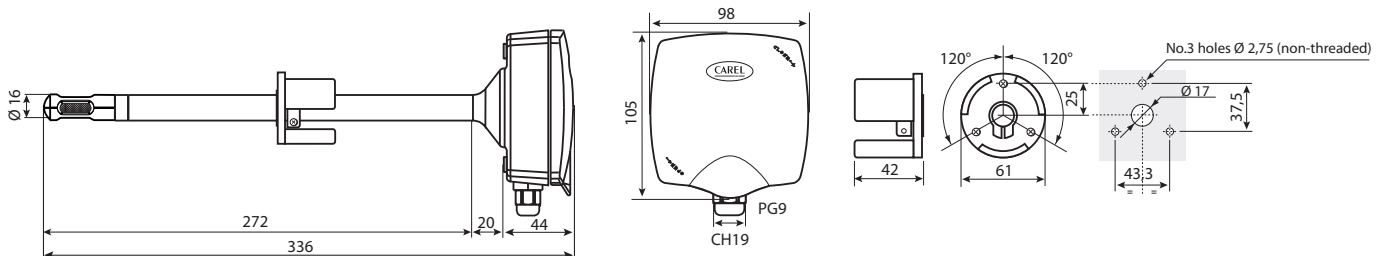
Room sensor



Sensor for industrial applications



Duct sensor



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