

P18S | - TEMPERATURE AND HUMIDITY TRANSDUCER

- Measuring probe with a dedicated interface/power cable.
- Calculation of selected physical quantities (dew-point temperature, absolute humidity).
- Reading measurements via the Modbus RS-485 interface. •
- Programming of measurement averaging time. •
- Compact housing with the possibility of using additional sensor covers. • •
 - Storage of measured and calculated maximum and minimum values.
- Configuration via RS-485 using the free eCon software.

EXAMPLE OF APPLICATION

CE

Control and monitoring of temperature and humidity in greenhouses.



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TECHNICAL DATA

INPUTS						
Measured value	Measuring range	Error				
Temperature	-30 <u>-20 60</u> 80°C	$\pm 0.6^{\circ}\text{C}~$ in range1040° C $\pm 1.0^{\circ}\text{C}~$ in the remaining range				
Relative humidity	0100%	\pm 3% for RH = 10 90% \pm 5% for RH in the remaining range				
DIGITAL INTERFACE						
Interface type	Transmission mode	Baud rate				
RS-485 Modbus RTU	8N1, 8N2, 8E1, 801	2.4; 4.8; 9.6; 19.2; 38.4; 57.6; 115.2 kbit/s				
EXTERNAL FEATURES						
Overall dimensions	86×12.5 mm					
Weight	0.1 kg					
Protection grade	tection grade ensured by the casing: IP65					
RATED OPERATING CONDITIONS						
Supply voltage	9 28 V d.c.	Power consumption < 0.5 VA				
Temperature	ambient: -20 <u>23</u> 60°C					
Humidity	< 95%	inadmissible condensation				
Operating position	any	in application not exposed to water contact				
	sensor chamber towards the earth	in application exposed to water contact				
Preheating time	15 minutes					
SAFETY AND COMPATIBILITY REQUIREMENTS						
Electromagnetic compatibility	noise immunity	acc. to EN 61000-6-2				
Liectromagnetic compatibility	noise emissions	acc. to EN 61000-6-4				
Isolation between circuits	podstawowa					
Pollution level	2					
Installation category	III	acc. to EN 61010-1				
Maximal phase-to-earth operating voltage	50 V					
Altitude a.s.l.	< 2000 m					

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EXTERNAL DIMENSIONS



ELECTRICAL CONNECTION

The transducer has a 4-wire non-detachable cord which is 2.5 or 10m long or a detachable M8 socket with a 2-meter long wire (depending on the version code) used for supplying and connecting the RS-485 interface:

non-detachable cord (color of the cord)	M8 socket (terminal number)	cable with M8 plug (color of the cord))	Function
green	3	blue	Positive power cord VCC
yellow	1	brown	Negative power cord GND
brown	4	black	RS-485 "B" signal
white	2	white	RS-485 "A" signal

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ORDERING CODE

	P185 -	ΧХ	ХХ	Х	Х
Connection way:					
socket-plug M8 , 2 m wire (included)		00			
wire 2 m		02			
wire 5 m		05			
wire 10 m		10			
Version:					
standard			00		
Language:					
polish-english				Μ	
Acceptance tests:					
without extra quality requirements					0
with quality inspection certificate					1
with calibration certificate					2

Order example:

The code **P185-02000M1** means transducers with 2 m wire, in standard version, polish-english language version, with quality inspection certifiate.

Order code	Design	Name	Construction	Features	Typical application
20-015-00-00011		Membrane filter	Casing made of PCV, membrane of teflon. Laminated by a film. Pore size: 1 μm	Mean filtration effect. Maximal temp.: up to 80 °C Response time: t10/90:15 s	Building automation. In rooms with low pollution.
20-015-00-00007		Filter made of teflon	Sintered teflon. Pore size: 50 µm	High chemical resistance Maximal temp.: up to 180 °C Response time: t10/90:14 s	Drying process in chemical applications.
20-015-00-00003		Filter made of sintered bronze	Sintered bronze. Pore size: 60 µm	High mechanical resistance. To co-operate in high pollution environments. Applied at small air humidity Response time: t10/90:10 s	Agricultural applications.





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