

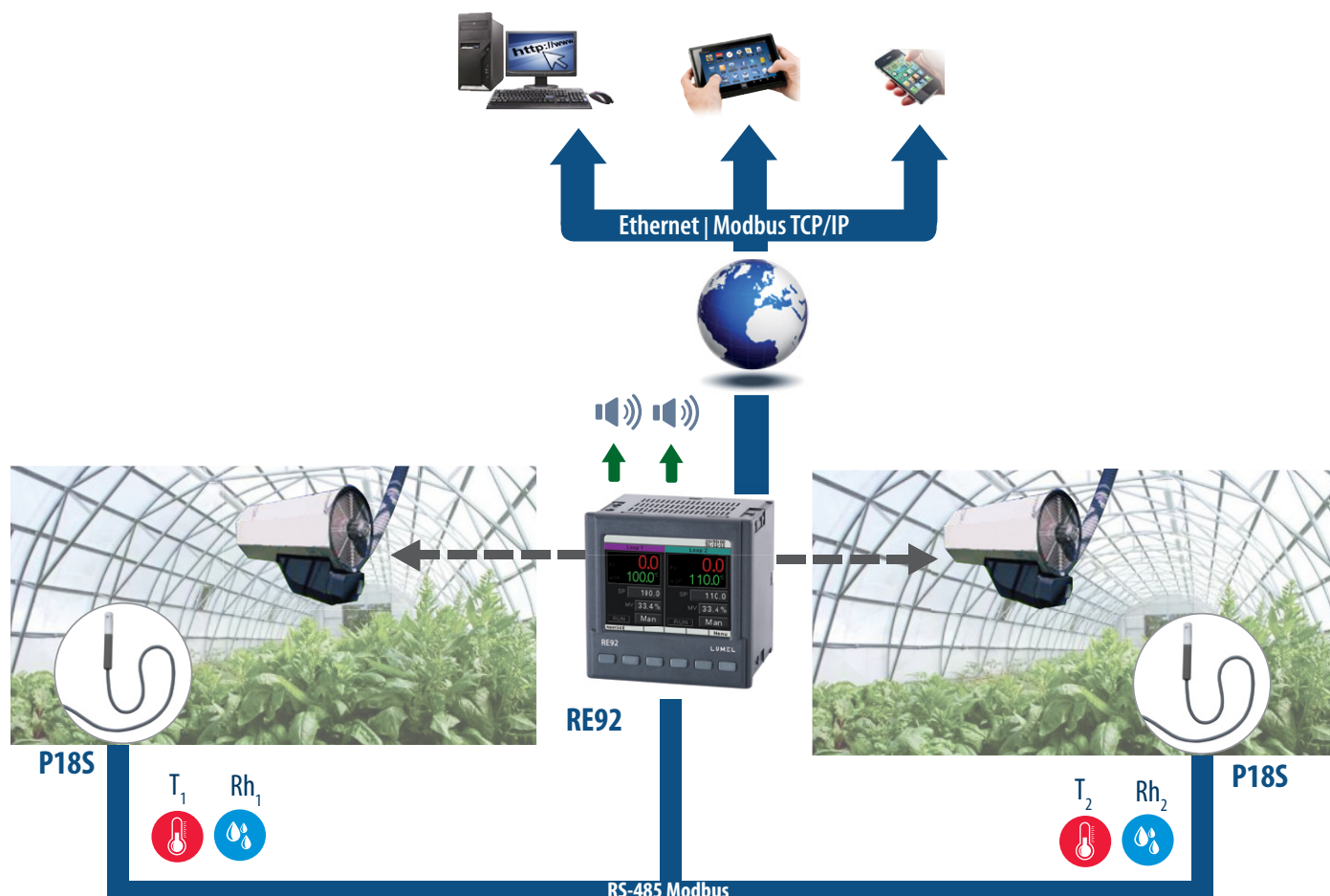
## P18S - TEMPERATURE AND HUMIDITY TRANSDUCER

- 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

Control and monitoring of temperature and humidity in greenhouses.



## FEATURES

MOD  
BUS

RS  
485

eCon

## INPUT



## OUTPUT

RS  
485

## TECHNICAL DATA

### INPUTS

Measured value	Measuring range	Error
Temperature	-30 .. -20 .. 60 .. 80°C	±0.6°C in range 10...40°C ±1.0°C in the remaining range
Relative humidity	0 .. 100%	± 3% for RH = 10 .. 90% ± 5% for RH in the remaining range

### DIGITAL INTERFACE

Interface type	Transmission mode	Baud rate
RS-485 Modbus RTU	8N1, 8N2, 8E1, 8O1	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	ensured by the casing: IP65

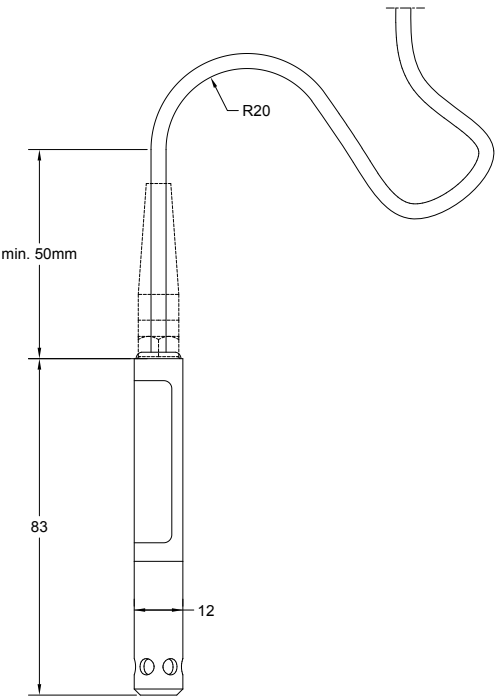
### RATED OPERATING CONDITIONS

Supply voltage	9 .. 28 V d.c.	Power consumption < 0.5 VA
Temperature	ambient: -20...23...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

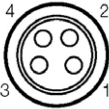
Electromagnetic compatibility	noise immunity	acc. to EN 61000-6-2
	noise emissions	acc. to EN 61000-6-4
Isolation between circuits	podstawowa	
Pollution level	2	
Installation category	III	acc. to EN 61010-1
Maximal phase-to-earth operating voltage	50 V	
Altitude a.s.l.	< 2000 m	

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

## ORDERING CODE

P18S -	XX	XX	X	X
<b>Connection way:</b>				
socket-plug M8 . . . , 2 m wire (included)	00			
wire 2 m	02			
wire 5 m	05			
wire 10 m	10			
<b>Version:</b>				
standard	00			
<b>Language:</b>				
polish-english		M		
<b>Acceptance tests:</b>				
without extra quality requirements				0
with quality inspection certificate				1
with calibration certificate				2

### Order example:

The code **P18S-02000M1** means transducers with 2 m wire, in standard version, polish-english language version, with quality inspection certificate.

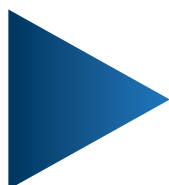
Order code	Design	Name	Construction	Features	Typical application
20-015-00-00011		Membrane filter	Casing made of PCV, membrane of teflon. Laminated by a film. Pore size: 1 µm	Mean filtration effect. Maximal temp.: up to 80 °C Response time: t10/90:15 s	Building automation. In rooms with low pollution.
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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EVERYTHING COUNTS

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