Be sure. testo

Pendulum humidity transmitter with display 4-20 mA

Article number: 801311 2022

Our pendulum humidity transmitter with 4-20 mA current output and display has a robust plastic housing with quick-release screws. The device measures both humidity and optionally temperature, with four switchable measuring ranges available. The relative humidity is recorded by a digital humidity sensor, which is housed in a plastic sintered filter and attached to the housing with a two-meter cable. The two-line display shows either the humidity or the temperature in large format.

Supply and output	
Output	4 - 20 mA
Power consumption	< 1,1 VA / 24 V DC
Voltage supply	15 - 36 V DC
Connection type	See connection diagrams

General information	
Load	Ra (Ohm) = (Ub -14 V) / 0,02 A
Sensors	Digital humidity sensor, optionally with integrated temperature sensor

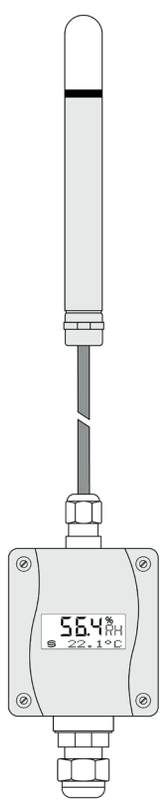
Humidity	
Measuring element humidity	Digital humidity sensor (low hysteresis, high long-term stability)
Measuring range humidity	0 % RH to 100 % RH
Output humidity	4-20 mA
Accuracy humidity	± 2.0 % (20 % RH to 80 % RH) at +25 °C, otherwise ± 3.0 %
Long-term stability	± 1 % / year

Temperature	
Measuring element Temperature	Pt1000, DIN EN 60751, Class B
Measuring range temperature	multi-range switching with 4 switchable measuring ranges
Output temperature	4 - 20 mA
Accuracy temperature	typically ± 0.2 K at +25 °C

Ambient conditions	
Storage temperature	-5 °C to +60 °C
Operating temperature	-5 °C to +60 °C
Permissible air humidity	0 % RH to 95 % RH (without condensation)

Certifications / Standards	
Protection class	III (according to EN 60 730)
Protection type	IP 65 according to EN 60 529
Standards	CE conformity electromagnetic compatibility according to EN 61326 according to EMC Directive 2014/ 30/ EU

Configurable options
M - Measured variable



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Managing Director: Prof. Burkart Knospe, Martin Arndt, Timo Löffler
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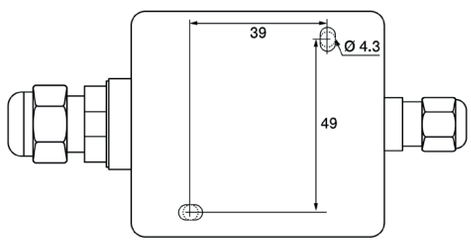
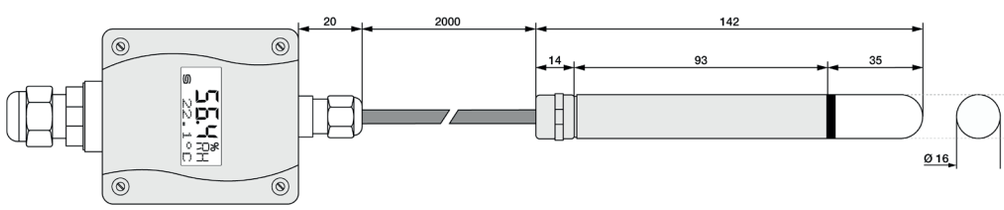
Housing	
Material	Plastic, UV-resistant Material polyamide, 30 % glass bead reinforced
Dimensions (L/W/H) (mm)	Aluminum die casting
Color	Traffic white (similar to RAL9016)
Screw connection	Cable gland, Plastic, M16x1,5, Strain relief, replaceable, max. 10,4 mm Ø Inner
Electrical connection	0.14 - 1.5 mm², via screw terminals on circuit board
Closure	with quick release screws
Display	
Two lines, lighted, For display of actual temperature and self-diagnostics	
Cut-out (B/H) (mm)	ca. 36 x 15

Drilling template



Cable		Pendulum		Sensor protection: Plastic sintered filter	
Cable material	PVC, LiYY	Material	Stainless steel 1.4301 | SUS 304	Material	Plastic
Cable length (m)	2	Ø (mm)	16	Length (mm)	35
Color	White	Length (mm)	55	Ø outside (mm)	16
Cross section (mm²)	6 x 0,14			Plastic sintered filter	replaceable



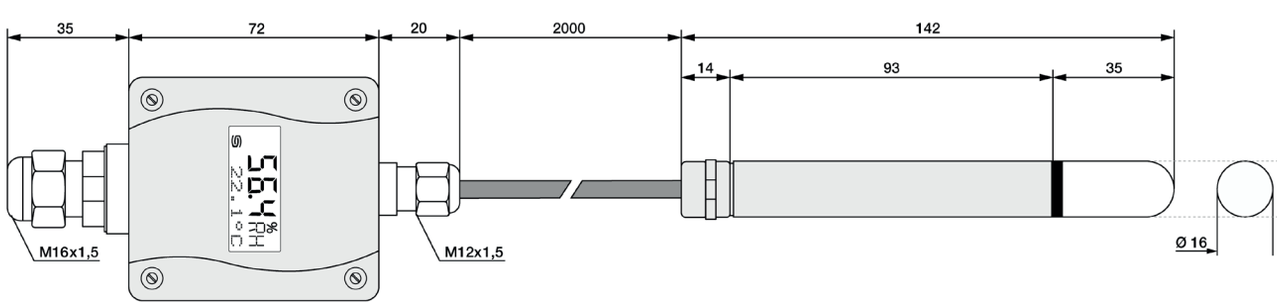
Delivery and Packing	
Delivery	Transmitter, Operating instructions
Packing	individually packed in cardboard box

Your order code		M - Measured variable	
Article number	**Measured variable**	**code**	**Measured variable**
801311 2022	____	M1	% RH (Relative humidity)
		M2	°C + % RH (Temperature and relative humidity)

Technical drawing

Configurable options
M - Measured variable

All dimensions in mm



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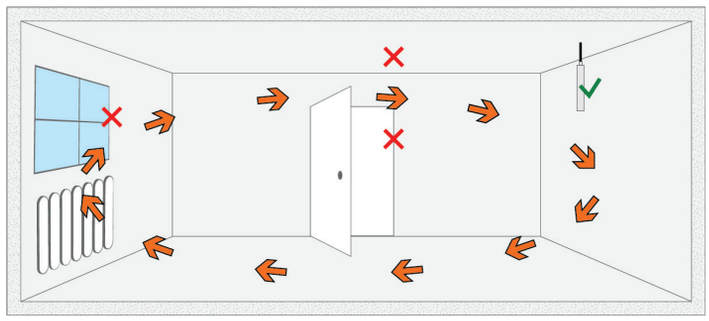
Important assembly instructions

For an accurate measurement of the humidity and temperature in the room, it is important to take the temperature dynamics into account. Air circulation should not distort the measurement. For this reason, the transmitter should be installed away from objects or obstacles that shield air movements. Please also avoid uncontrolled air currents (draughts) and uncontrolled solar radiation by installing the device near doors or windows (or other heat sources).

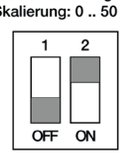
The device should only be used in pollutant-free, non-condensing air (< 95 % RH). The sintered filter protects the humidity sensor in outdoor and duct probes from dust, which can falsify the measurement result. Maintenance in the event of contamination is therefore important. Avoid touching the humidity element to prevent incorrect measurements.



Circuit diagrams and assignment (Please also read the operating instructions before connecting the transmitter)

Default configuration

Werkseinstellungen:
Skalierung: 0 .. 50 °C



Set scaling via DIP switch

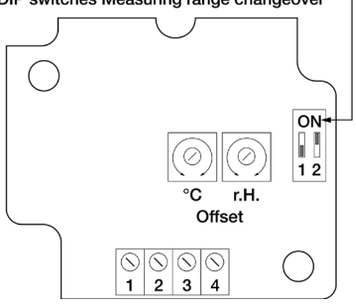
Messbereichsumschaltung via DIP-Schalter
Changing measuring range via DIP switches

DIP 1	DIP 2	Scaling Range
on	on	-35 .. +75°C
off	off	-35 .. +35°C
off	on	0 .. +50°C
on	off	0 .. +80°C

Temperature table in OI

Wiring diagram

DIP-Schalter Messbereichsumschaltung
DIP switches Measuring range changeover



Assignment % RH

1 = +UB 24V DC
2 = Output Humidity 4-20mA
3 = free
4 = UB GND (for display lighting)

Assignment °C + % RH

1 = +UB 24V DC
2 = Output Humidity 4-20mA
3 = Output temperature 4 -20mA
4 = UB GND (for display lighting)

The humidity path must be connected for the current version! Please refer to the operating instructions for the correct connection.

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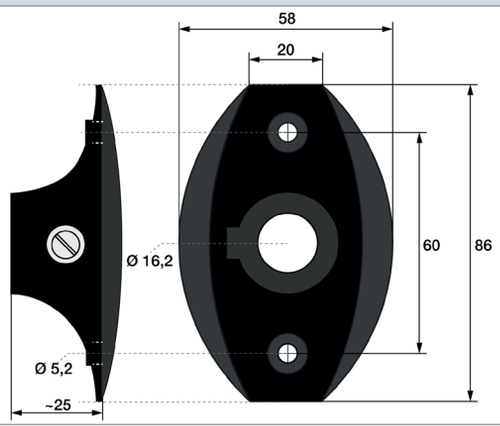
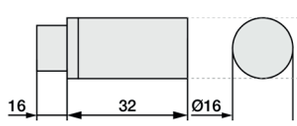
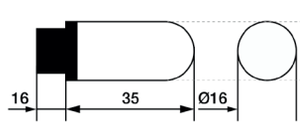
Accessoires: Monuting flange

Plastic flange MF-16-K	
Article number	**809500 7000**
Material	Plastic
Fastening	2 x Ø 5,2 mm drill holes
Hole (mm)	16,2



Accessoires: Sintered filter

Metal sintered filter			
Article image	**Your order code**		**Technical drawing**
	**Article number**	**809990 0005**	
	Material	Stainless steel 1.4404 | 316L	
	Length (mm)	32	
	Ø outside (mm)	16	

Plastic sintered filter			
Article image	**Your order code**		**Technical drawing**
	**Article number**	**809990 0006**	
	Material	Plastic	
	Length (mm)	35	
	Ø outside (mm)	16	

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