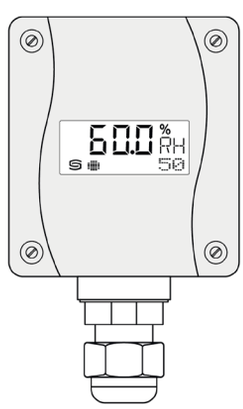
Dew point monitor switching contact with display

Article number: 802111 2025

The dew point monitor switching contact with display reliably detects the formation of condensation on cold surfaces such as cooling ceilings or cold water pipes. It measures temperature, relative humidity, and the resulting dew point temperature with high accuracy—without any conductivity-based sensors—and automatically activates the integrated switching output via a potentiometer (factory setting: 75%) when a preset limit value between 75 and 100% RH is reached. Integrated LEDs indicate the current switching status, while the display allows easy on-site checking of the measured values. Ideal for use in building automation, technical control rooms, HVAC systems, clean rooms, and wherever condensation must be reliably prevented.

Supply and output	
Output	Counter, 1 A ohmic load
Power consumption	< 1,1 VA / 24 V DC; < 2,2 VA / 24 V AC
Voltage supply	24 V AC (± 20 %) | 15 - 36 V DC
Connection type	See connection diagrams

General information	
Pressure type	Dew point temperature
Measuring range humidity	75% RH to 100% RH switchable via potentiometer (75% RH delivery state)
Sensors	Digital humidity sensor with integrated temperature sensor, low hysteresis, high long-term stability
Sensor protection	Membrane filter
Long-term stability	± 1 % / year
Process connection	Endless belt with metal buckle, 300 mm, for pipes up to 3 '' (included)



Ambient conditions	
Storage temperature	-35 °C to +85 °C
Operating temperature	-30 °C to +70 °C
Medium	clean air and non-aggressive, non-flammable gases

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

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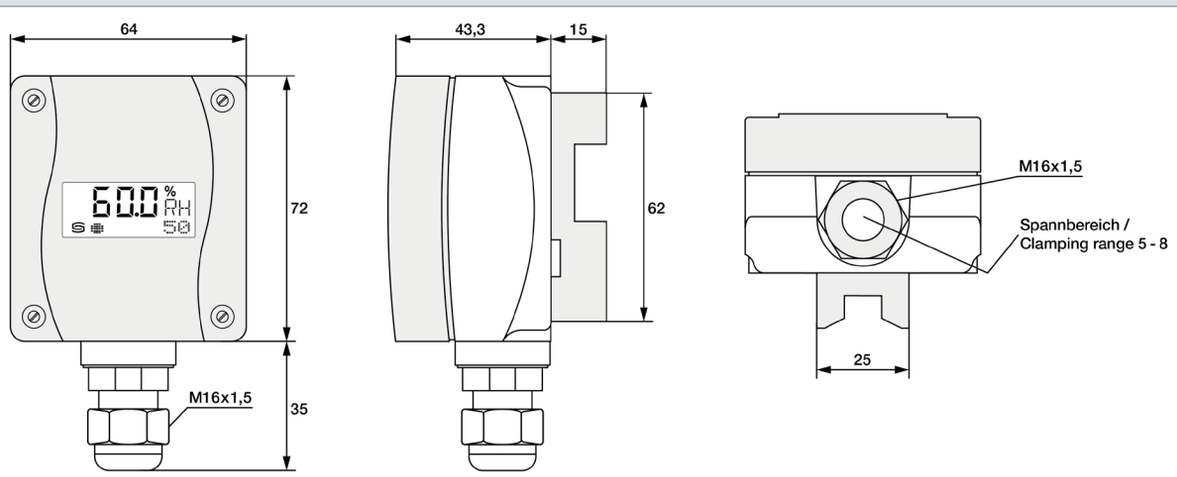
Housing		Contact body	
Material	Plastic, UV-resistant, Material polyamide, 30 % glass bead reinforced	Conctact geometry	Block
Dimensions (L/W/H) (mm)	Aluminum die casting	Material	Aluminium
Color	Traffic white (similar to RAL9016)	Length (mm)	62
Screw connection	Cable gland, 0, Plastic, M16x1,5, Strain relief, replaceable	Width (mm)	25
Electrical connection	0.14 - 1.5 mm², via screw terminals on circuit board	Height (mm)	15
Closure	with quick release screws		

Display	
Two lines, lighted, For displaying the actual humidity and the switching status of the switching contact	
Cut-out (B/H) (mm)	ca. 36 x 15
The first line of the display shows the relative humidity as standard. The second line shows information on the switching status of the relays (as a circle) on the left and the respective switching value in % RH (switching point adjustable via potentiometer, default setting 75 % RH) on the right.	
Circuit, empty	changeover contact in idle state
Circuit, full	changeover contact energized

Technical drawing

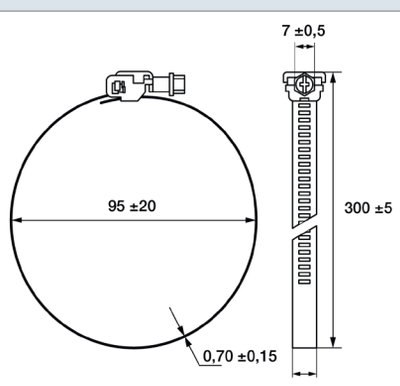


All dimensions in mm

Delivery and Packing	
Delivery	Transmitter, Quick-release strap, Operating instructions
Packing	individually packed in cardboard box

Endless clamping strap with metal lock (included in delivery)

Clamping range	For pipes up to 3”
Material	Metal
Dimensions (L/W) (mm)	300 / 9
Closure	Screw closure



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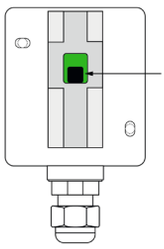
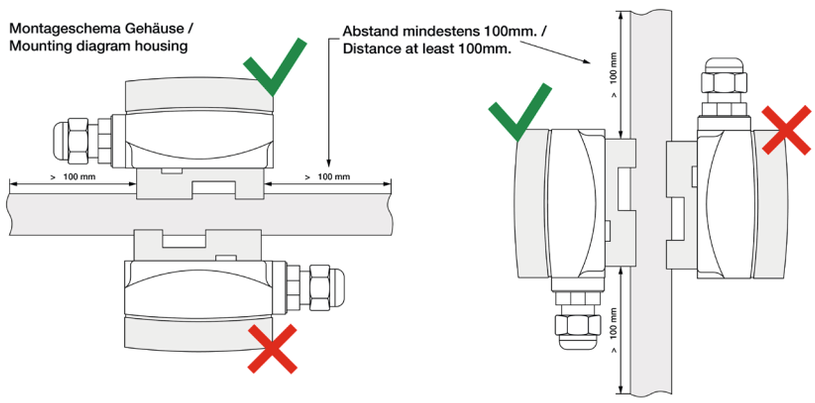
Wichtige Montagehinweise



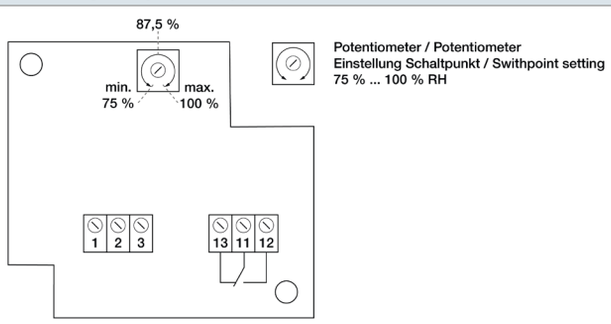
Sensor muss frei bleiben! Umgebungsluft darf nicht abgeschnitten werden. / The sensor must remain clear! Ambient air must not be cut off.

The dew point monitor is mounted directly onto bare metal pipes or smooth, grease-free surfaces such as cooling ceilings using a quick-release strap. To ensure reliable measurement of the dew point temperature, make sure there is good thermal contact with the surface and that the air flow to the sensor is unobstructed.

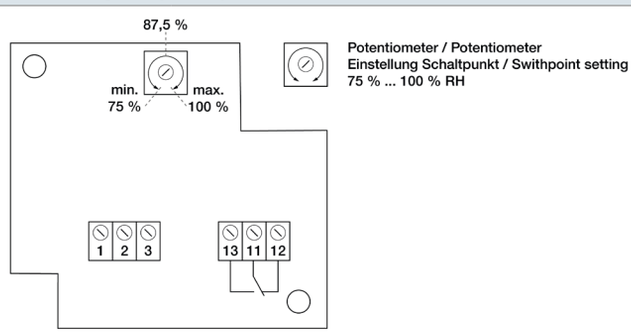


Circuit diagrams and assignment (Please also read the operating instructions before connecting the transmitter)

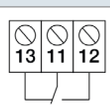
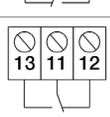
Circuit diagram (untinted)



Circuit diagram (tinted)



Assignment
1 = +UB 24V AC/DC
2 = free
3 = GND
13 = Normally open contact
11 = Changeover contact
12 = Breaker

Function Switching contact	
	LED short pulses = Relay active --> Switching point undershot ACTUAL humidity < set switching point (not dew-covered)
	LED long pulses = Relay inactive --> Switching point exceeded ACTUAL humidity > set switching point (dew-covered)

The relay output is activated (contact 13-11 closed) when falls below the set switching point (default setting 75 % RH) and opens (contact 12-11 closed) in the event of a fault (power failure, condensation).

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