

RPF

Pendulum room humidity sensor - active



Summary

The RPF humidity sensor is active analogue room sensor. It is used for humidity measuring in rooms, production halls, etc.

Application

- **HVAC systems – humidity measuring and control in clean room technology, refrigeration, air conditioning, ventilation etc.**
- **monitoring and recording of room humidity in hotels, technical rooms, meeting rooms and convention centres**

Function

The sensor measures relative humidity of air, the signal of which is electronically processed and available at the screw terminals (0...10 V or 4...20 mA). The sensor is protected by exchangeable plastic sinter. Do not exceed maximum environment temperature!

The unit is intended for operating in a normal, chemically non-aggressive, dust-free environment. It does not need any servicing or maintenance and shall be mounted so as the cable gland faces the floor, and the measuring tube is hanging in the room or in the duct.

The sensor is mounted by 2 or 4 screws at any flat surface.

Power	24 V AC $\pm 20\%$ for output 0 ...10 V DC 15 ...36 V DC $\pm 10\%$ for output 4 ...20mA (depending on working resistance)
Humidity sensor	
Measuring range	0...100 % r.H., output 0...10 V or 4...20 mA
Operating range	0...95 % r.H. (without formation of dew)
Deviation	$\pm 3\%$ r.H. (20...80 %) at +20 °C; otherwise $\pm 5\%$ r.H.
Working resistance (I-output)	<800 Ω
Ambient temperature	store range -25...+50 °C operating range -5...+55 °C
Long-term stability	$\pm 1\%$ per year
Tube	metal, L= 100 mm + 25 mm, $\varnothing=16$ mm

Sensor cable	PVC, L= 2 m, other lengths on demand
Cover	polyamide, 30% glass fibre reinforced, with quick locking screws, colour white, similar to RAL 9010; cover for display is transparent
Dimensions	electronics: 72 x 64 x 37,8 mm without display 72 x 64 x 43,3 mm with display
Electrical connections	Screw terminals for wires 0.14 ... 1.5 mm ²
Cable gland	M16 x 1,5; strain relief
Protection degree	IP65 (according to EN 60 529)
Protection class	III (according to EN 60730)
Optional	illuminated two line display 36 x 15 mm mounting flange MF-16-K

Terminals

RPFF-U

	+UB 24V AC/DC
	Output humidity in % r.H. 0-10V
	Free
	-UB-GND

RPFF-I

	+UB 24V DC
	Output humidity in % r.H. 4-20mA
	Free
	-UB-GND (optional for backlighting)

Dimensions

