

## RPFTF

# Pendulum room humidity and temperature sensor - active



### Summary

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

### Application

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

### Function

The sensors measures temperature and relative humidity of air. The r.H. 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. The temperature sensor operating range is -35 to +80 °C. Measuring temperature ranges are optional (see table below). Do not exceed maximum environment temperature!

The units are intended for operating in a normal, chemically non-aggressive, dust-free environment. They do 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 sensors are mounted by 2 or 4 screws at any flat surface.

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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)
<b>Humidity sensor</b>	
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 $\Omega$
<b>Temperature sensor</b>	
Measuring range	optional via DIP switch; see table below

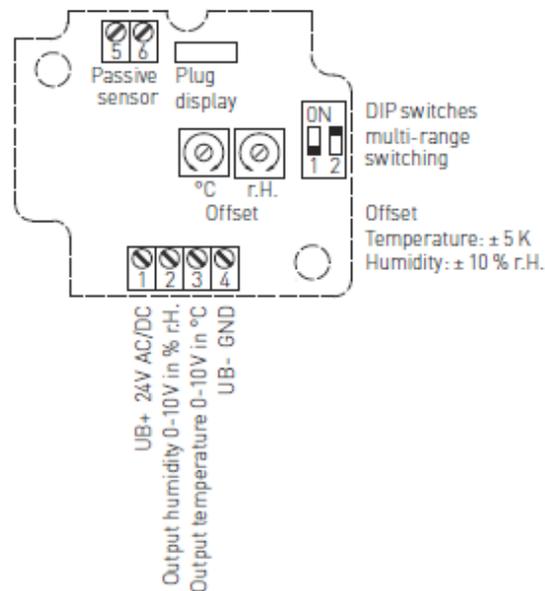
Operating range	-35...+80 °C
Deviation	±0,3 K (U-output) ±0,5 K (I-output) at 20 °C
Ambient temperature	store range -25...+50 °C operating range -5...+55 °C
Long-term stability	±1 % per year
Tube	metal, L= 100 mm + 25 mm, Ø=16 mm
Sensor cable	PVC, L= 2 m, other lengths on demand
Cover	polyamide, 30% 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 <sup>2</sup>
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

## DIP switches

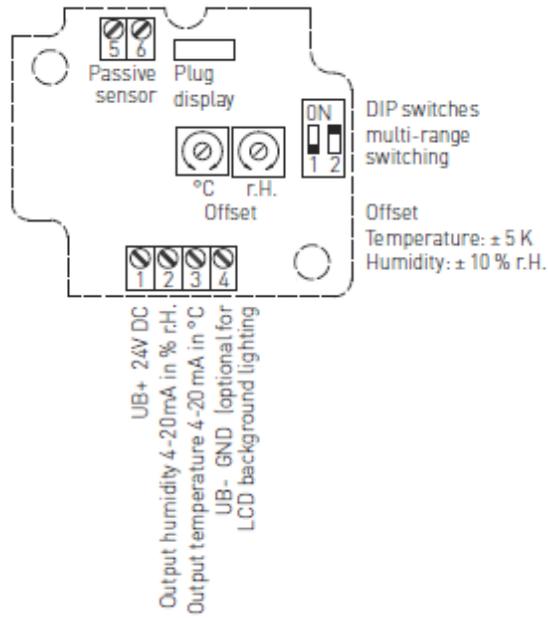
Temperature measuring ranges (adjustable)	DIP 1	DIP 2
-35°C...75°C	ON	ON
-35°C...35°C	OFF	OFF
0°C...50°C	OFF	ON
0°C...60°C	ON	OFF

## Terminals

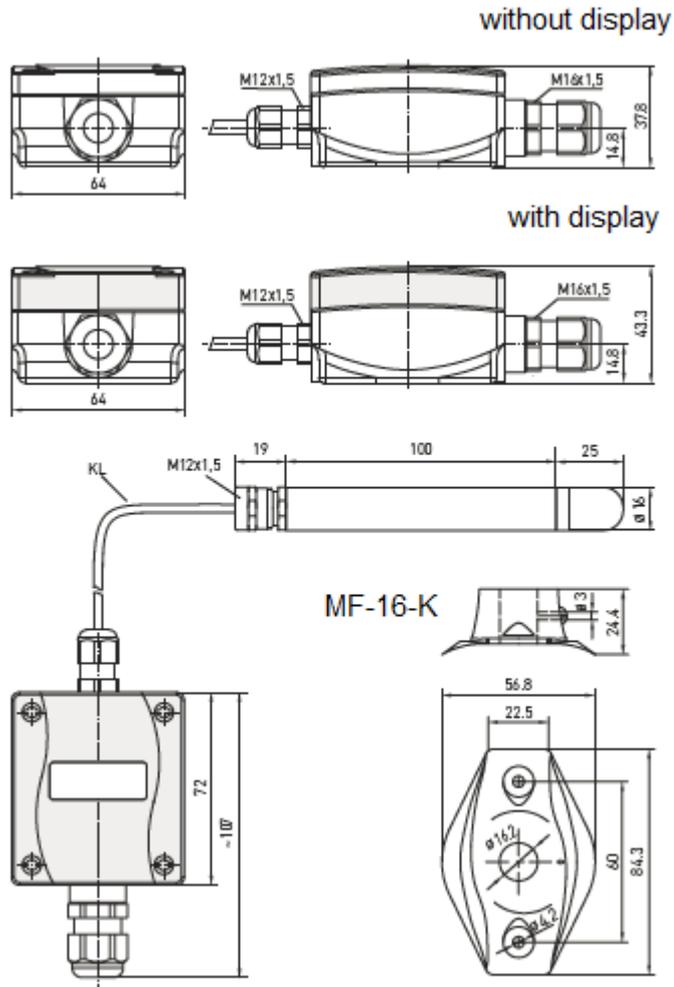
### RPFTF-U



# RPFTF-I



## Dimensions



03/2014 Subject to technical changes.