

Temperature and Humidity Sensor HUMTMP

As of 16-06-2016



The combination transducer HUMTMP is applicable for precise and simultaneous measurement of temperature and humidity.

- Combined measurement of humidity and temperature
- Measuring range of temperature from -10 to +60°C
- Measuring range of relative humidity from 0 to 100%
- Fast Response

Technical Description

Temperature is measured by a passive Pt100 platinum-element. Humidity is measured by a capacitive sensor element.

Measuring ranges of 0 to 100 % relative humidity and -10 up to +60 °C make the transducer useful in many applications. The G1/2" male thread with O-ring and glass feed through allows the integration into closed pipe systems with pressures up to 16 bar.

Specifications

Sensor Type

Humidity Sensor	Capacitive measuring element, resistant to water, resistant to thermal shock, chemical resistant, long term stable
Temperature Sensor	Pt100 Platinum Element

Measuring Range

Humidity Sensor	0 to 100 % r.H.
Temperature Sensor	-10 to +60 °C

Accuracy

Humidity Sensor	Linearity at 20-85% r.H.	< ±1% r.H.
	Temperature error 23 °C	± 0,05%/K
	Repeatabil. / hysteresis	< ±2% r.H.
Temperature Sensor	IEC751	Sensorelement Class B/3

Response T(99%)

With membrane filter	approx. 25 seconds
With sinter filter	approx. 60 seconds

Ambient Temperature Conditions

Storage:	-10 up to +60 °C humidity non condensing
Operation:	-10 up to +60 °C 0 up to 100 % r.H.

Pressure Limits

Operation:	Vacuum up to 16 bar
Burst pressure:	> 50 bar

Media Compatibility

Air or compressed air

Enclosure

Material:	Stainless Steel 1.4571
Safety Class:	IP 68
Dimensions	
Immersion depth	max. approx. 38mm (dep. on filter)
Remaining height	76 mm (without plug)
Wrench Size	27 mm
Weight:	approx. 120 g
Sensor protection:	Membrane filter with metallized plastic grid or metal sinter filter

Process Connection

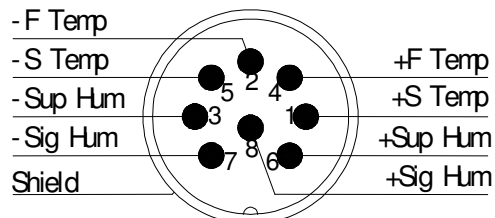
G1/2" male thread with O-Ring

Electrical Outputs / Supply

Humidity:	Supply 24 (8...28) VDC Output signal 0 up to 1 VDC
Temperature:	Four wire technique for Pt100 evaluation Current loop 1 mA Signal loop 95 up to 140 mV

Electrical Connections

8-pole connector IEC 60130-9, pin pattern SV81, IP68



Ordering Information

Temperature / Humidity Sensor

Part-No.	Model
HUMTMP-MF-G12	With membrane filter and G1/2" male thread
HUMTMP-SF-G12	With sinter filter and G1/2" male thread

Spare parts

Part-No.	Spare part
HUMTMP-ERS-MF	Membrane filter
HUMTMP-ERS-SF	Sinter filter

An exchange of the sensor element or the electronics with subsequent re-calibration is possible in our house. The temperature sensor will be calibrated in a flow channel using air with a flow speed of approx. 1,6 m/s.