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OPERATION MANUAL

TEMPERATURE / HUMIDITY SENSOR HUMTMP

*** VERSION 1.01 ***
UPDATE: 17.01.2008

Application

The combination transducer HUMTMP is applicable for precise and simultaneous measurement of temperature and humidity. The temperature is measured by a passive Pt100 platinum-element. The humidity is measured by a capacitive sensor element.
Measuring ranges of 0 to 100 % relative humidity and -10 to +60 ℃ 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, chemically resistant, long term stable
Temperature Sensor	Pt100 Platinum Element

Measuring Range

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

Accuracy

Humidity Sensor	Linearity deviation	< 1% in the range from 30% to 70%
	Remaining error temperature compensation	± 0,05%/K
	Measurement Error	± 2% r.H. in the range from 20% to 85% r.H. at 23℃
Temperature Sensor	EC751, Class B/3	
	approximatively (T in ℃):	±(0,1℃ + 0,0017 |T|)

Response T(99%)

With membrane filter	approximatively 25 seconds
With sinter filter	approximatively 60 seconds

Ambient Conditions

Storage:	-10 to +60 ℃, humidity non condensing
Operation:	-10 to +60 ℃, 0 to 100 %r.H.

Pressure Limits

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

Media Compatibility

Air or compressed air

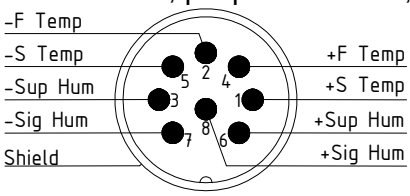
Enclosure

Material:	Stainless steel 1.4571
Safety Class:	IP 68
Dimensions:	See drawing
Weight:	approximatively 120 g
Sensor protection:	Membrane filter with metallized plastic grid or metal sinter filter

Supply

Humidity Sensor	8 to 28V, app. 2 mA
Temperature Sensor	1 mA, four wire technique

Connector plug

Humidity:	Three wire technique Supply 24 (7...28) VDC Output signal 0 to 1 VDC Currency consumption 2 mA typically
Temperature:	Four wire technique for Pt100 evaluation Current loop 1 mA Signal loop 95 to 140 mV
Type	IEC 60130-9, pin pattern SV81, IP68
Pin assignment	

Mechanical dimensions