

# Temperature / Humidity Sensor HUMTMP

(Update 2008-02-12)

**TetraTec**<sup>®</sup>  
Instruments



- Combination 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

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 °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, chemically 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	< ±1 %r.H. linearity < ±2 %r.H. meas. uncert.
Temperature Sensor	IEC751, Class B/3

### Response T(99%)

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

### Temperature Conditions

Storage:	-10 to +60 °C humidity non condensing
Operation:	-10 to +60 °C 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	
Immersion depth	max. app. 38mm (dep. on filter)
Remaining height	76 mm (without plug)
Wrench Size	27 mm
Weight:	app. 120 g
Sensor protection:	Membrane filter with metallized plastic grid or metal sinter filter

### Process Connection

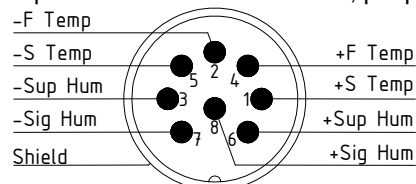
G1/2" male thread with O-Ring

### Electrical Outputs / Supply

Humidity:	Supply 24 (8...28) VDC Output signal 0 to 1 VDC
Temperature:	Four wire technique for Pt100 evaluation Current loop 1 mA Signal loop 95 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 new calibration is possible in our house.