Humidity Temperature Sensor

Order-No: P 6311 - Temperature TP
P 6312 - Temperature & Humidity KP
P 6300 - Weather and Radiation Shield

- Compact meteorological sensors
- Low power, high precision
- Range - 30 ... +70°C and 0 ... 100 % RH
- Combined humidity-temperature sensor optional

Measurement principle

The temperature-humidity-transmitter series „xP" are compact sensors in stick version with fixed connected cable. The relative humidity is measured by a capacitive sen-sing element and the value will be placed at the output as analogue signal. The temperature measurement is made by a PT100-resistor (1/3 DIN). The signal is available as an analogue output as well.

The sensors are obtainable as single temperature probe or as combined sensor for temperature and humidity measurement.

Mounting

The sensors are to be mounted at a climate representative spot. For protection against rain and direct radiation a weather and radiation shield should be used, which can be simply fixed to a mast.
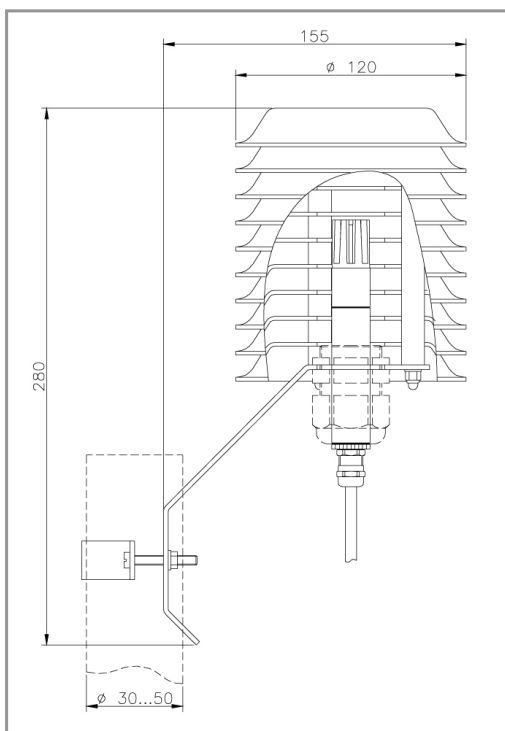
Please order this shield separately!

Take care of a good ventilation of the sensing element. Any mounting position is possible. Avoid penetration of water. Dew-formation doesn't do any harm to the element, but faulty measurements will occur until total drying.

Maintenance

The temperature sensing element is maintenance free. Only check the output after long use with a precise reference thermometer.

It is possible to make functional gauging of the humidity sensor. To do this the probe has to be exposed to a known reference humidity, e.g. the available „humidity-standard" calibration set. If you unscrew the protection filter, keep in mind never to touch the element with fingers or any tool.

Specification Humidity-Temperature Sensor: P6300 / P6311 / P6312

Type	Temperature	Humidity
Measurement range	-30 ... +70°C	0 ... 100% r.H.
Slope (Data Logger Meteo-32)	100	100
Offset (Data Logger Meteo-32)	30	0
Accuracy	± 0.2K	5 ... 95% r.H. at 10 ... 40°C; ± 2% r.H.
Additional error	± 0.004%/K (<10°C, >40°C)	< 0.1%/K (<10°C, >40°C)
Resolution	0.1K	1% r.F.
Response time	5 min	5 min
Measurement principle	PT100 - 1/3 DIN	capacitive
Output signal	0V ... 1V	0V ... 1V
Operation supply	9 ... 30 VDC - approx. 1 mA / 2 mA	
Minimum air speed (across the sensor)	≥ 0.5 m/s	
Ambient Temperature	-40 ... +80°C	
Protection Sensor / Electronic	IP 30 / IP 65	
Weight	Sensor without cable: 0.350 kg, weather and radiation shield 1 kg	
Manufacturer	Galltec	

Cables and wire colours

Cable <15m

Sensor	Temperature Sensor	Temperature Humidity Sensor	Data Logger Meteo-32	
			Plug Meteo Pin	Plug Xtend Pin
Temperature Output Voltage	white	white	2	1 ... 4
Humidity Output Voltage	-	brown	1	1 ... 4
Supply	green	green	5	
Ground	yellow	yellow	Main Ground	

Cable type: LiYCY 4 x 0.25mm²

Cable >15m

Sensor	Temperature Sensor	Temperature Humidity Sensor	Data Logger Meteo-32	
			Plug Meteo Pin	Plug Xtend Pin
Temperature Output Voltage	white	white	2	1 ... 4
Humidity Output Voltage	-	brown	1	1 ... 4
Supply	green	green	5	
Ground	yellow, grey pink blue	yellow, grey pink blue	Main Ground	

Cable type: LiYCY 7 x 0.25mm²