

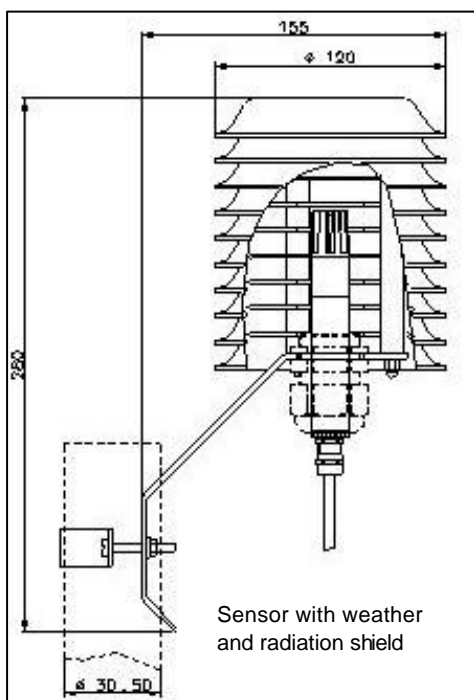
„xPC“

Temp.- & Humidityprobe

Order No. P647x - Temperature

Order No. P683x - Temp. & Humidity

- Compact meteorological sensors
- Low power, high precision
- Range $-30 \dots +70^{\circ}\text{C}$ and $0 \dots 100\% \text{ RH}$



Measurement principle

The temperature-humidity-transmitter series „xPC“ are compact sensors in stick version with fixed connected cable. The relative humidity is measured by a capacitive sensing 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 directly (4-wire-connection) or 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.

Technical Data

Type	Temperature	Humidity
Range	-30..+70°C	0..100% r.H.
Accuracy	± 0.2 K	± 2% r.H.
Additional error	± 0.004%/K (<10°C, >40°C)	< 0.1%/K (<10°C, >40°C)
Resolution	0.1°C	1% r.H.
Response time	5 min.	5 min.
Measurement principle	Pt100 – 1/3 DIN	capacitive
Output signal	4-wire-connection or 0..1 V	0..1 V
Operation supply	9 - 30 V DC – approx. 1 mA	
Ambient temperature	-40 °C ... + 80 °C	
Protection Sensor/Electronic	IP 30 / IP 65	
Weight without cable	0.350 kg	
Manufacturer, type	Mela, series TPC and KPC	

Order numbers

Sensors:	Temperature (TPC)	Temp. & Humidity (KPC)
Pt100, 4-wire-connection	P6470	P6830
Pt100, active signal	P6471	P6831
Accessories:		
Weather and radiation shield	P 6823	

Cables and core colours

	P6470	P6471	P6830	P6831
Connection	Colours			
1 – Supply	-	green	grey	green
2 – Ground	-	yellow	blue	yellow
3 Temperature	T1: white, brown T2: green, yellow	white	T1: white, brown T2: green, yellow	white
4 – Humidity	-	-	pink	brown

Cable type for P6470, P6471, P6831: LiYCY 4 x 0,25 mm²

Cable type for P6830: LiYCY 7 x 0,25 mm²