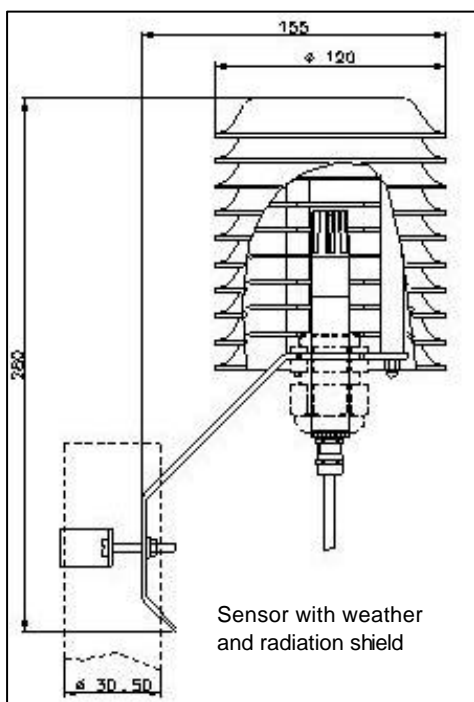# „xPC"
Temp.- & Humidityprobe
Order No. P647x - Temperature
Order No. P683x - Temp. & Humidity

- **Compact meteorological sensors**
- **Low power, high precision**
- **Range –30 .. +70°C and 0 .. 100% RH**

Sensor with weather
and radiation shield

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.

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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 mm^2

Cable type for P6830: LiYCY 7 x 0,25 mm^2

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