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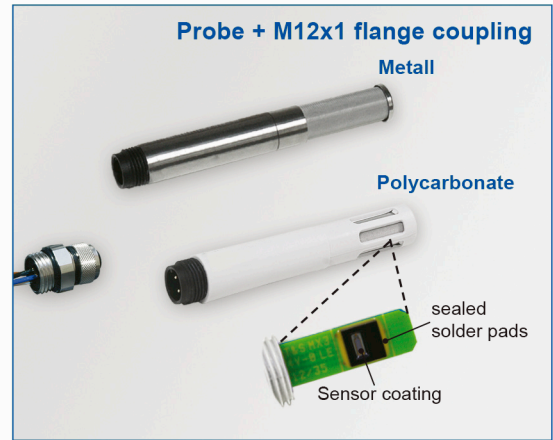


Low Power Humidity and Temperature Probe with Modbus Interface

The probe is optimized for use in demanding applications. Beside humidity and temperature measured values calculated variables like dew point and mixing ratio are also available at the output. The standard modbus RTU protocol is implemented on the RS485 interface.

The humidity sensor element is perfectly protected against dust and dirt by the proprietary coating and all solder pads are completely sealed to withstand corrosion. Together with the choice of appropriate filter cap the probe offers outstanding long term stability in harsh, polluted environment.

Due to extremely low power consumption the probe is ideal for use in battery-powered devices. The M12 connector allows easy installation and replacement within seconds.



Typical Applications

stables, incubators, hatchers
 storage rooms
 wireless transmitters
 data loggers and handhelds

Key Features

highest accuracy
 excellent protection against pollution
 outstanding long term stability
 temperature compensation
 calculated parameters like dew point and mixing ratio

Technical Data

Measured values

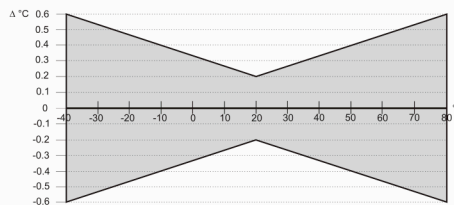
Relative Humidity

Modbus output range	0.00...100.00% RH
Accuracy incl. hysteresis and nonlinearity	±2% RH (0...90% RH) ±3% RH (90...100% RH)
Temperature dependence	< (0.025 + 0.0003 x RH) [% rH/°C]

Temperature

Sensor element	Pt1000 (tolerance class B, DIN EN 60751)
Modbus output range	output value: -40.00...+80.00°C (-40...176°F)
Accuracy:	

±0.2°C at 20°C
 ±0.6°C at the end of range



General

Supply voltage	4 - 18V DC
Current consumption	typ. 0.4mA at a measuring rate of 1 sec.
Current pulse during power-up (with serial resistance 100 Ohm)	at UB 7V: I _{max} 60mA; current draw drops below 10mA within 350µs at UB 12V: I _{max} 110mA; current draw drops below 10mA within 400µs
Warmup Time	< 300ms
Output load	no bus termination no pullup or pulldown resistor } within probe
Interface	RS485 / Modbus in slavemode
Housing	polycarbonate / IP65
Sensor protection	PTFE filter
Electromagnetic compatibility ¹⁾	EN613216-1 EN61326-2-3 Industrial Environment FCC Part 15 Class B ICES-003 Issue 5 ClassB
Working and storage temperature	-40...80°C (-40...176°F)
Max. cable length	100m (328.1ft)

¹⁾ Not protected against surge

Dimensions in mm (inch)

