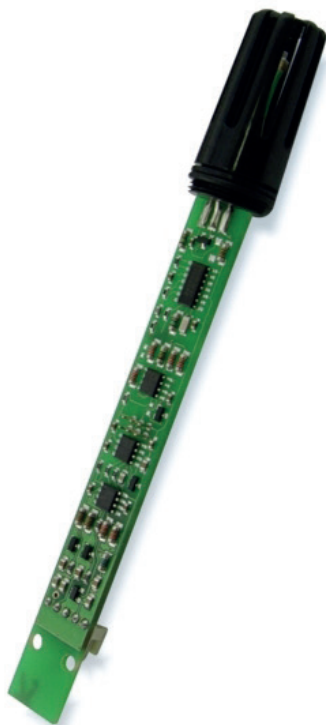


OPERATION MANUAL

Humidity probe module with voltage output 0 ... 10 V

Description



Characteristic features

- Humidity probe module with voltage output
- Output 0 ... 10 V for 0 ... 100 % RH
- Operating voltage 12.0 ... 15 V DC
- High grade, capacitive polymer sensor
- Universal and reasonably priced model
- Supplied in ready-to-connect and calibrated condition
- Stainless steel housing as accessories (optional)
- Optional with Temperature measuring part (Type -HYTE)

Areas of application

- Room climate measurement
- Building automation
- Humidity probe for air conditioning equipment
- Customised regulation device
- Humidity regulation for sanitary rooms

Technical data

Humidity measurement	
Humidity application range	10 ... 90 % RH, without condensation
Accuracy at 23°C	3 % RH (from 20 % RH to 90 % RH)
Output scaling	0 ... 10 V ~ 0 ... 100 % RH
Temperature application range	0 ... 50 °C
General	
Operating voltage	12 ... 15 V DC
Operating current	< 5 mA
Dimensions	PCB approx. 110 x 13 mm Overall approx. Ø17 x 170 mm
Protection cage	ca. Ø 17 x 30 mm
Connection	5-pin connection strip RM 2,54 mm
CE-conformance	2004/108/EG
EMV-noise emission	EN 61000-6-3:2011
EMV-noise withstanding	EN 61000-6-1:2007
Scope of supply	Humidity module, calibrated, with documentation

Range of application

The universal humidity module delivers output voltage of 0 ... 10 V proportional to relative air humidity of 0 ... 100 % RH so that it can be further processed as standard signal in regulation and measuring systems.

The humidity values are captured with the help of high grade, capacitive humidity sensors (Type KFS140). The signal processing in the module takes place with the help of a special ASIC, which corrects the linearity error and also the temperature dependence of sensor element, because of which a good measuring accuracy and stability is achieved. The power supply is through a stabilised voltage of 12.0 to 15.0 V DC. All signals are through a 5-pin plug connector with RM 2.54. The module is supplied with sensor head and plastic protection cage and is calibrated at two points.

Note

This model is used for measurement of air humidity. For simultaneous measurement of temperature at the measuring location, another product variant (type -HYTE) is available, which converts the temperature measurement range of 0 ... 50 °C into a standard signal of 0 ... 10 V.

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Mounting

The sensor holder is provided with M16x1 threads and can be screwed onto customised housings. In case there is a danger of direct water effect, the sensor head should be mounted upside down and covered with water repellent protection filters. The measuring location must show representative climate conditions. Air currents or heat radiation should be avoided

The measuring probes are digitally adjusted at works. A re-calibration by the user is not required due to long term stability of the sensor elements.

Connection layout

Pin	Color	Function
1 TEMP	brown	Unoccupied
2 HYGRO	red	Humidity voltage output
3 GND	orange	Power supply and analog ground
4 VCC12V	yellow	Operating voltage 12 ... 15 V
5 TESEN	green	Unoccupied
----	tinned	Shielding of cables

Ordering number format

Art.-No.	Article
HY-ANA-10V	Measuring probe with analog output 0..10 V Only humidity measurement
HYTE-ANA-10V	Measuring probe with analog output 0..10 V Humidity and temperature measurement

Scope of supply

The item is delivered as a ready-to-connect, calibrated module with protection cap and documentation, but without housing, connection cable and sinter filter.

Accessories (optional)

For applications, where temperature measurement is additionally required at the measuring location, a model is available with additional amplifier of 0 ... 10V for temperature signal (type HYTE).

The high grade metal housing with cable crack protection is provided with a M16x1 thread for sensor holder and augments the module to a full fledged measuring probe.

A ready-made connection cable of 2 m length is available as accessories. Special lengths are available on request.

The fine pored, hydrophobic PE sinter filter can be inserted into the protection cage and protects the sensor from dust, deposits and direct water effects.

The measuring accuracy can be cross-checked with the help of reference cells. Detailed application notes are covered in the scope of supply of reference cells. The stainless steel housing (Ø x L) 17 mm x 195 mm augments the module into a full fledged measuring probe. The PE sinter cap, to be inserted in the protection cover, is water proof and protects the sensor against dust and water splash. The 5-pin connection cable of 2 m is pluggable on the module side and the other side is with tinned strands.

Accessories	Art.-No.
Metal housing	GEH-HYANA
PE sinter filter	H555 0008
Spare-protection cap	H192 0003
Connection cable 2 m	KAB-HYTEMOD-ANA
Reference cells 33 % und 75 % RH	REFZ-M20-SET1

Attention

Please avoid extreme mechanical and inappropriate exposure.

The device/product is not suitable for potential explosive areas and medical-technical applications.

