

Hygrocontrol Typ 86 EX Transmitter

High-Precision Humidity and Temperature Transmitter EX Applications

Applications

Type 86 was developed for critical humidity and temperature measurements in ducts or process lines with hazardous area classification 1/2 G/D, E Ex ia II C T4. The robust sensor is suitable for applications in the ripening, packaging and storage of food products, pharmaceutical processes, drying processes and other material processes, where humidity and temperature are critical parameters.

Construction

The transmitter housing is polycarbonate and the probe head is aluminum. Probe tubes are stainless steel and available with different standard length. Two analog current or voltage outputs for humidity and temperature are linear to the selected engineering units. The transmitter is to be located in a safe area but is connected to the intrinsically safe probe head through safety barriers.

Features

- High system accuracy.
- Flexible modular design.
- Pre-calibrated pluggable probes.
- Simple operation and maintenance
- User configurable
- Result indication in relative, absolute as well as dew point units.
- Excellent price/performance ratio.

Operating principle

The instrument uses a capacitive polymer sensor for humidity and a Pt-1000 RTD (DIN-IEC 751) for temperature. The software driven multi-point calibration procedure can be performed by the user and leads to high accuracy of the measurement.

Type 86 Ex



H *Hygrocontrol COSA Xentaur GmbH*

Moselstrasse 2 B, D-63452 Hanau Tel.: +49 (0) 6181- 92790 Fax.: -927930, Email: info@hygrocontrol.de

WWW.hygrocontrol.de

Technical Specifications:

Sensoren:

Humidity (capacitive polymer)SE-02
Temperature (4-wire)Pt-1000

Measurement range:

Relative Humidity:..... 0 bis 100% rF
Dew point:.....-60°C bis 150 °C
Temperature range from -50 to 150°C

System Accuracy Class A / B

Humidity at 0...50 °C:±1,5 / 2,5 % rF
Humidity at -25...+100 °C±2,0 / 3,0 %rF
Humidity at -50...+150 °C±2,5 / 4,0 %rF
Temperature:±0,3 / 0,5°C

Repeatability / Resolution

Repeatability:..... 0,5% rF / 0,15% rF
Hysteresis0,5%rF / 0,1 °C
Resolution.....0,1%rF / 0,1 °C

Operating temperatures:

Transmitter housing:-20 bis +60 °C
Sensor-50 bis +150 °C

Power supply / Outputs

.....85 - 240 VAC or 9-25 VAC / 10 - 36VDC
Power consumption ca.. 5VA
Outputs:0/4-20mA.... Last max. 300 Ohm
.....0/2 - 10 V, 0/1...5V, Ri = 100 Ohm

Materials and dimensions:

Transmitter housing: Polycarbonate 160x80x55 mm
Probe head: Alu-Gehäuse 65x65x40
Probe tubes: Stainless steel 1.4541,
Probe lengths = 100, 150, 250, 350, 500, 750 and 1000 mm

Cable

2x2x0,5mm2 in lengths up to 100 meters

Sensors

Precious metal polymer sensor for highest measurement accuracy, stability and reliability.

Probes

Simultaneous measurement of humidity and temperature by pluggable pre-calibrated stainless steel probes.

Exchangeable filters made from PTFE and stainless steel are available with different pore sizes to protect the sensor from dust particles and aerosols.

Transmitter

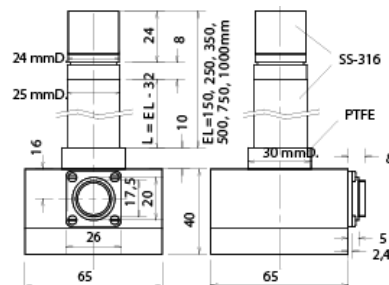
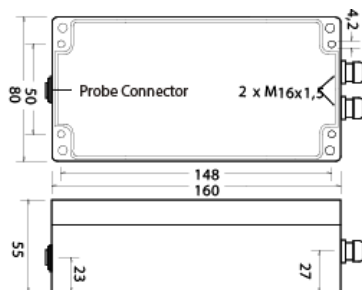
Two current or voltage outputs for humidity and temperature are linear to selectable engineering units and temperature compensated. Output range, signal limits and signal behavior in cases of "sensor open" and "sensor short" are user configurable. Digital outputs are optionally available. Engineering units for humidity and temperature are user selectable (%rF, g/kg, °C_{td}, °F_{td}, °C, °F).

Calibration

Software-guided procedure with up to eleven (11) calibration points lead to high system accuracy. Partial range calibrations for application optimization as well as temperature calibrations are possible.

Service

Factory calibration certificates and DKD or NAMAS certificates are optionally available upon request. Quick-return calibration and repair service. Rental units are available. Probes are guaranteed for six (6) month if used appropriately.



Moselstrasse 2 B
D-63452 Hanau
Tel: +49 (0) 6181-92790
Fax: +49 (0) 6181-927930
Email: info@hygrocontrol.de

