Humidity and Temperature Probe

S9276

- **Relative humidity, dew point and temperature measurement**
- **Integrated data acquisition and calibration history**
- **AT Accuracy: +/- <0.2 °C**
- **RH Accuracy; +/- <2%**

Factory Adjustment
Three different adjustment profiles are available from the factory; this means that measurement accuracy can be matched to the application need. The custom adjustment profile consists of 20 Humidity values at 3 Temperatures to ensure optimum performance over a required working range. Calibration data is stored within the probe and can be retrieved later for audit purposes.

Probe Output Signal
When connected to a PC this probe can be rescaled with different ranges to suit the application need. It is also possible to assign the internally calculated dew or frost point value to one of these outputs; thus converting this into a dew point probe.

Sensor Diagnostics
Should the RH sensor deviate from factory defined parameters (for example because of chemical contamination) measurement values can be automatically compensated and a digital alarm triggered. This probe can also be programmed to generate an alarm in the form of pre-defined analog output signals in the event of a problem with either the RH or temperature sensor.

Data Logging and Alarm Generation
Up to 2,000 measurement values can be stored in this probe; the user is able to configure the measurement interval, set alarm limits, scale the output signal and download data. The probe can be programmed with set limits to generate an alarm which is available when the probe is communicating with a PC or compatible device. Thus, this probe can be integrated in any application.

Technical Specifications

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Accuracy with «Standard» adjustment profile	at 23 °C and 10, 35, 80 %rh ± 0.8%rh / ± 0.1 K
Accuracy with «High Precision» adjustment profile	at 23 °C and 10, 20, 30, 40, 50, 60, 70, 80, 90 % rh ± 0.5%rF / 0.1 K
Accuracy with custom adjustment profile	at 3 freely selectable temperatures between -10 and 70 °C and 20 freely selectable %rh values (10…90%rh) ± 0.5 %rh / 0.1 K
Resolution RH	Typically 0.2 %rh, 0.01 K
Long-term stability	< 1 %rh, 0.1 °C / year
Humidity response time t 63	3….12 seconds, depending on probe type
Measurement range	0…100 %rh, -50…200 °C depending on probe type
Electronics operating range	-50…100 °C and 0…100 %rh
Analog output signals (standard, user scaleable)	0…1 V = 0...100 %rh 0…1 V = -40...60 °C
PC interface UART (standard)	with ROTRONIC interface cable HW4 compliant
Sensor diagnosis function	Yes (programmable, factory default = off)
Alarm function	Yes, analogue & digital, programmable
Audit Trail & Electronic Records	FDA 21CFR Part 11 and GAMP compliant
Power supply & consumption	3.2…5 VDC ±0 % / typically 4 mA
Housing/probe material	Polycarbonate or stainless steel (depends on probe type)
Filter	Polyethylene insert, polycarbonate cage
Norms	CE-compliant 2007/108/EG