

Environment Sensor Probe – (Humidity & Temperature Transmitter)

RhT21

FEATURES

This Probe is meant for industry-proven quality and reliability in measurement of humidity and temperature sensors and constant accuracy over a large measurement range.

The probe uses Capacitive humidity sensor with a bandgap temperature sensor, calibration data memory, D/A converter. The sensor covers a humidity measurement range of 0 to 100 %RH and a temperature measurement range of - 40 °C to 125 °C with a typical accuracy of $\pm 2\%$ RH and $\pm 0.2^\circ\text{C}$.

APPLICATION

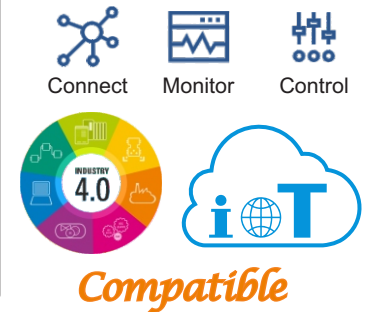
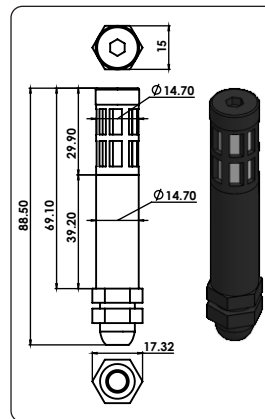
Can be used in Industrial Automation in Chemical Plants, Pharma, Engineering industries and commercial applications. The sensor shall be compatible to Indicator Controllers, SCADA, Industry 4.0 standards and IoT compatible.



Dimension Details

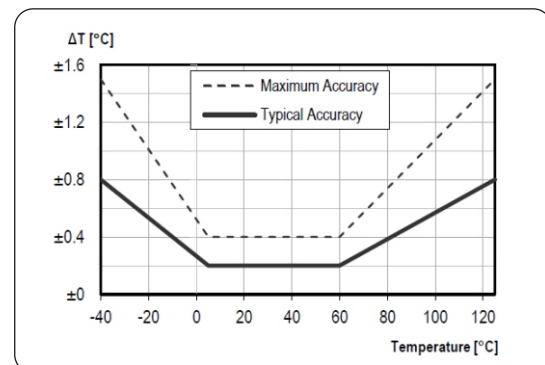
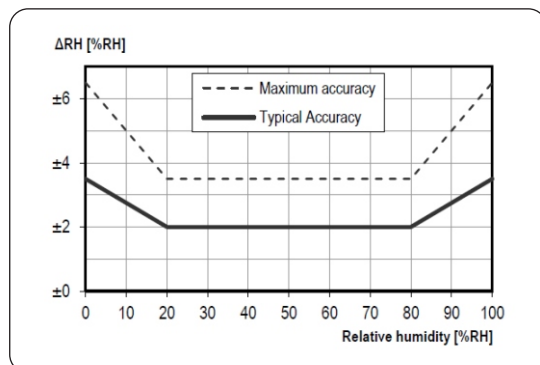
TECHNICAL SPECIFICATION

| Model | Environmental Sensor |
|------------------------|---|
| Operating Range | |
| Humidity | 0% ~ 100% RH |
| Temperature | -40°C ~ 125°C RH |
| Accuracy | $\pm 2\%$ RH, $\pm 0.2\%^\circ\text{C}$ |
| Response Time | $\tau 63\%$ 8 Sec |
| Cable | PTFE / 1 Metre |
| Operating Voltage | 12 ~ 30VAC |
| Output | Humidity: 4~20mA Temperature: 4~20mA |



| Parameter | Condition | Value | Unit |
|--------------------|-----------------------|-------------|-------|
| Accuracy tolerance | Typ. | ± 2.0 | %RH |
| | Max. | Below Graph | %RH |
| Repeatability | - | 0.1 | %RH |
| Resolution | - | 0.01 | %RH |
| Hysteresis | - | ± 1 | %RH |
| Specified range | extended ⁵ | 0 to 100 | %RH |
| Response time | $\tau 63\%$ | 8 | S |
| Long-term drift | Typ. | < 0.25 | %RH/y |

| Parameter | Condition | Value | Unit |
|---------------------------------|-------------|-------------|---------------------------|
| Accuracy tolerance ¹ | Typ. | ± 0.2 | $^\circ\text{C}$ |
| | Max. | Below Graph | $^\circ\text{C}$ |
| Repeatability ² | - | 0.1 | $^\circ\text{C}$ |
| Resolution ³ | - | 0.01 | $^\circ\text{C}$ |
| Specified range ⁴ | - | -40 to +125 | $^\circ\text{C}$ |
| Response time ⁸ | $\tau 63\%$ | < 5 to 30 | s |
| Long-term drift ⁹ | Typ. | < 0.02 | $^\circ\text{C}/\text{y}$ |



Discrete
Probe & Electronics
Current Output - RH & Temperature

Duct Mount
Current Output - RH & Temperature

Wall Mount
Current Output - RH & Temperature

Display Logger
Relay Output - Threshold
RH & Temperature

Mote
Log / Wifi - RH & Temperature

Specifications are subject to change without Prior notice