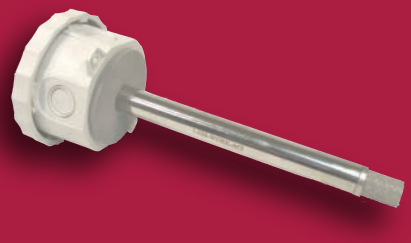
Product Data

A/RH-TEMP Series

Relative Humidity/ Temperature Combinations

RH-TEMP



Product Description

The A/RH-TEMP Series Relative Humidity transmitters, convert a resistance to a linear 4 to 20 mA, 0 to 5 VDC, or 0 to 10 VDC output. The current signal may be transmitted over long distances on unshielded twisted-pair wire and will not be affected by the lead wire resistance or electrical noise.

The Advanced Ceramic Technology design overcomes the limitations of other resistance-based humidity sensors that utilize water soluble polymer coatings. The Advanced Ceramic Technology enables these sensors to recover fully from condensation. This allows the sensor to maintain its accuracy over a longer period of time. Despite its accuracy, the Advanced Ceramic Technology sensor and related circuitry is economical.

Accuracy is maintained over the entire operating range, using a thermistor for temperature compensation.

Each A/RH-TEMP Series humidity transmitter is calibrated using an NIST Traceable Temperature and Humidity Chamber.

Any ACI thermistor, RTD, or temperature transmitter may be ordered with the A/RH transmitter. All A/RH-TT Room combination units will have a board mounted on the back of the enclosure. All A/RH-Temp Series transmitters have a limited 2 year warranty.

Attributes:

- Low Drift
- Highly Repeatable
- Temperature Sensor Ouput
- Field Selectable Output Signals
- Single Point Field Calibration using DIP Switches
- Lowers Inventory Cost

Applications:

- Light Industrial
- Pharmaceutical
- Humidity Chambers
- Pool Environments
- Process Control

Product Specifications

Supply Voltage	250 Ohm Load: +15 to 36 VDC / 24 VAC 500 Ohm Load: +18 to 36 VDC / 24 VAC
Power Conumption	1 VA max.
RH Measurment Range	0 to 100% RH
RH Output Signal **Temperature Sensor Output** **Temperature Transmitter Output**	2-wire, 4-20mA, 3-wire 0-5 or 0-10 VDC 2-Wire Resistive, or 2-wire uA Output 2-wire, 4 to 20mA, or 3-wire, 1-5, 2-10 VDC
Accuracy @ 77°F (25°C)	+/- 1% over 20% Span between 20-95% RH +/- 2, 3, or 5% from 20 to 95% RH
Repeatability	0.5% RH
Hysteresis	Less than 0.4% RH
Long Term Stability	Less than 2% RH Drift / 5 Years
Response Time	110 seconds for 63% Step
Saturated Response Time	10 minutes for 63% Step
Operating Temp. Range	-10 to 122°F (-23.3 to 50°C)
Operating RH Range	0 to 100% RH

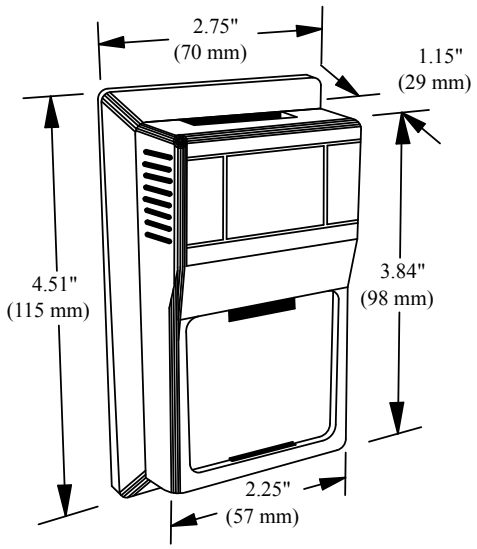
Wiring Diagrams available at www.workaci.com/instructions.htm

C0000106 Rev 2.pdf

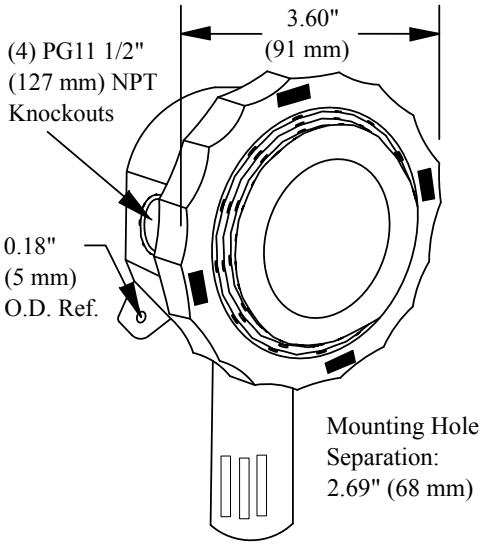
Automation Components, Inc.
2305 Pleasant View Rd.
Middleton, WI 53562
PH: (608) 831-2585
FAX: (608) 831-7407

Dimensions

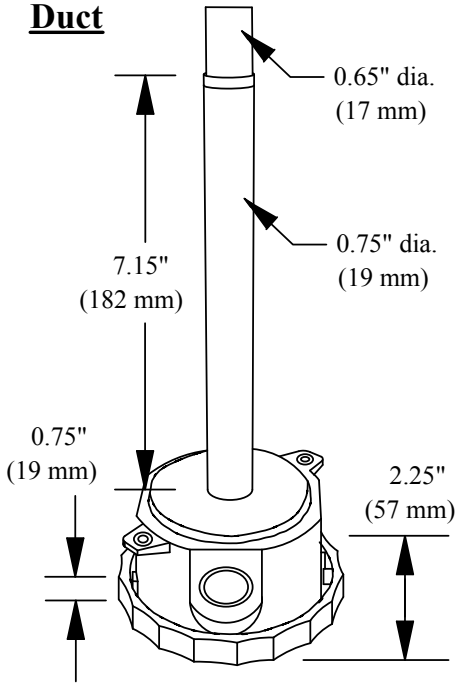
Room



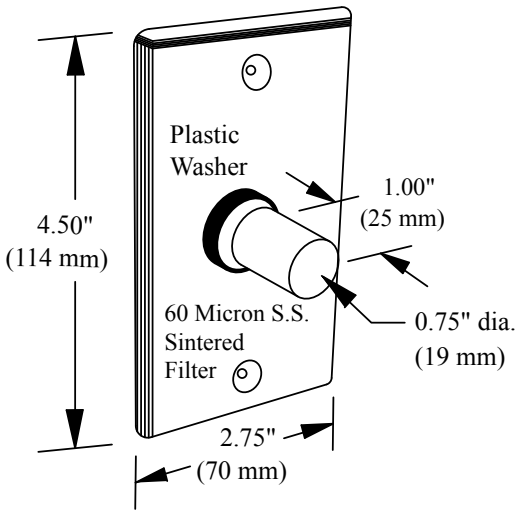
Outside



Duct



Stainless Plate



Ordering Information

A/ [ ] (Accuracy)

- **RH1** (+/- 1%)*
- **RH2** (+/- 2%)
- **RH3** (+/- 3%)
- **RH5** (+/- 5%)

[ ] (Temp Sensor)

- **100 1K 1.8K**
- **2.2K ASI 3K**
- **AN(Type III)**
- **CP(Type II)**
- **CSI 20K 100K**
- **1K Nickel**
- **TT1K** TT100****

[ ] (Configuration)

- **(R)** Room
- **(RO)** Room w/Override
- **(RS)** Room w/Set Point*
- **(RSO)** Room w/Set Point &Override*
- **(D)** Duct
- **(O)** Outdoor Air
- **(SP)** Stainless Plate

[ ] (Temp Transmitter Output (if needed))

- **(4)** 4 to 20mA Output
- **(1)** 1-5 VDC Output
- **(2)** 2-10VDC Output

* See Temperature Cut sheet for additional information on setpoint specs

***Specify a 20 % RH Range when ordering an A/RH1%**
****Specify a Temperature span for TT100 and TT1K Units**

2305 Pleasant View Rd. Middleton Industrial Park Middleton, WI 53562
PH: (608) 831-2585 FAX: (608) 831-7407