



## Product Data

### A/RH Series Relative Humidity Transmitters

#### Product Description

The A/RH Series Relative Humidity transmitters, convert a resistance change 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 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 also allows the sensor to maintain its accuracy over a longer period of time. Despite its high 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 Series humidity transmitter is calibrated using a NIST Traceable Temperature /Humidity Chamber. Both three and five point calibration certificates are available for 1% and 2% RH accuracies but they must be ordered separately.

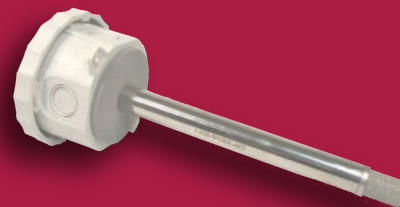
All A/RH Series transmitters have a limited five year warranty.

#### Product Specifications

Supply Voltage	250 Ohm Load: +15 to 36 VDC / 21.6-26.4 VAC 0-5VDC: +15-36 VDC / 21.6-26.4 VAC 500 Ohm Load: +18 to 36 VDC / 21.6-26.4 VAC 0-10VDC: +18-36 VDC / 21.6-26.4 VAC
Power Consumption	1 VA max.
RH Measurement Range	0 to 100%
RH Output	2-wire, 4 to 20mA (Factory Standard) 3-wire, 0-5, 0-10 VDC or 4 to 20mA
Accuracy @ 77°F	+/- 1% over 20% span (between 20 to 90%) +/- 2%, 3%, or 5% from 20 to 95%
Long Term Stability	Less than 2% drift / 5 years
Hysteresis	Less than 0.4% RH
Repeatability	0.5% RH
Sensitivity	0.1 % RH
Response Time	110 seconds for 63% Step
Operating Temperature Range	-10 to 122°F (-23.3 to 50°C)
Operating Humidity Range	0 to 95 % RH non-condensing
Saturation Response Time	10 minutes for 63% Step

Wiring Diagrams available at [www.workaci.com/instructions.htm](http://www.workaci.com/instructions.htm)  
C0000105 rev 3.pdf

## Relative Humidity



#### Attributes:

- Single point Field Calibration
- Field selectable output signals
- 1%, 2%, 3%, and 5% Accuracies
- Low Drift
- Highly Repeatable
- Calibration Certificates Available

#### Applications:

- Building Automation Systems
- Light Industrial
- Pharmaceutical
- Humidity Chambers
- Data acquisition
- OEM



Made in the USA

**Automation Components, Inc.**  
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DISPLAYS

TEMPERATURE

RELATIVE HUMIDITY

PRESSURE

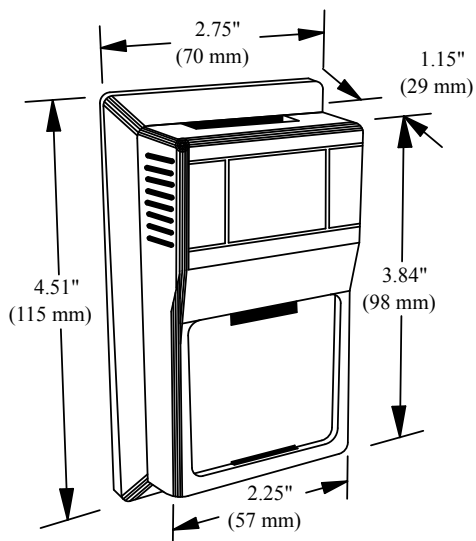
CURRENT

AIR QUALITY

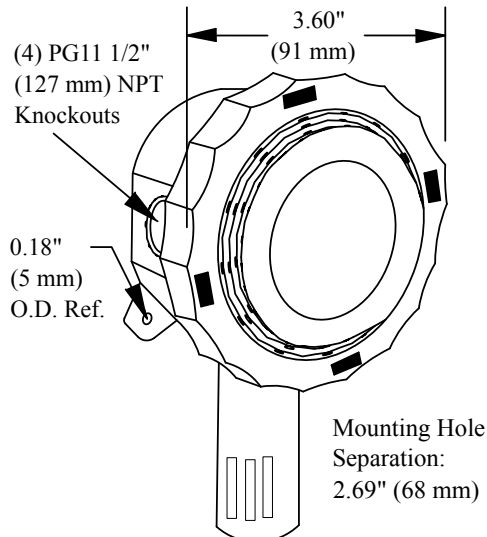
ACCESSORIES

## Dimensions

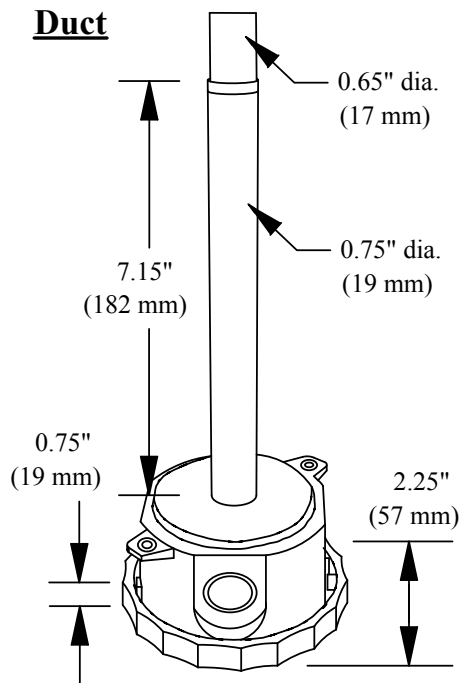
### Room



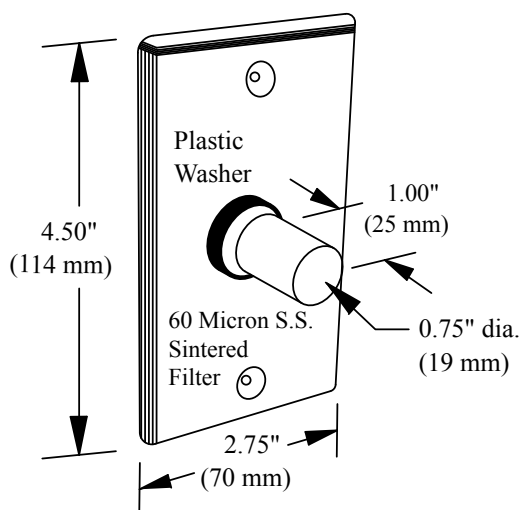
### Outside



### Duct



### Stainless Plate



ACI's RH series have field selectable outputs and they are preset to 4 to 20 mA by default. However, you can have them factory preset to 0 to 5 or **0 to 10 VDC** by adding a (-5) or (-10), respectively, to the end of the part number.

## Ordering Information

**A/**

Accuracy

[ ]

**RH1** (+/- 1%)

**RH2** (+/- 2%)

**RH3** (+/- 3%)

**RH5** (+/- 5%)

**3 PT NIST Certificate** (3 point Calibration Certificate @ 20, 50 and 80% RH)

**5 PT NIST Certificate** (5 point Calibration Certificate w/standard points chosen by ACI)

Range if 1%

[- ]

**Please Specify a 20% Span (i.e. 40-60%)**

Configuration

[- ]

**(R)** Room

**(D)** Duct

**(O)** Outdoor Air

**(SP)** Stainless Plate

Optional LCD (Available on Room units only)

[- ]

**(LCD)** LCD Display (Not available on 1%)

**Example:** A/RH3-R or A/RH5-D or A/RH2-O or A/RH1-(40 to 60%)-SP

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