



## Product Data

### A/RH Series Relative Humidity Transmitters

## Product Description

The A/RH Series Relative Humidity transmitters convert a resistance to a proportional 4 to 20 mA, 0 to 5 VDC, or 0 to 10 VDC output. Accuracy is maintained over the entire operating range using a thermistor for temperature compensation. This series is offered in accuracies of 5%, 3%, 2% and 1% and in mounting configurations of room, duct, outside, and wall plate.

The A/RH Series uses an Advanced Ceramic Technology design which overcomes the limitations of other resistance-based humidity sensors that utilize water-soluble polymer coatings. The Advanced Ceramic Technology enables these sensors to fully recover 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.

Each A/RH Series humidity transmitter is calibrated using a NIST Traceable Temperature /Humidity Chamber. Three and five point NIST certificates are available for both 1% and 2% RH accuracies but must be ordered separately.

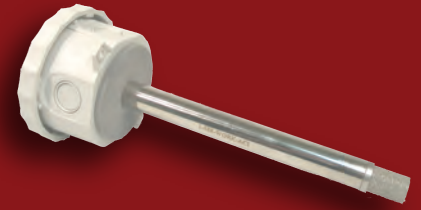
The A/RH Series is covered by ACI's Five (5) Year Limited Warranty, which Limited Warranty is located in the front of ACI'S SENSORS & TRANSMITTERS CATALOG or can be found on ACI's Website, which is: [www.workaci.com](http://www.workaci.com).

## Product Specifications

<b>Supply Voltage</b>	4 to 20mA (250 Ohm Load): 15 to 40 VDC / 18 to 28 VAC 4 to 20mA (500 Ohm Load): 18 to 40 VDC / 18 to 28 VAC 0-5 VDC: 12 to 40 VDC / 18 to 28 VAC (4K Load Min.) 0-10 VDC: 18 to 40 VDC / 18 to 28 VAC (4K Load Min.)
<b>Supply Current (Voltage Output)</b> <b>Supply Current (Current Output)</b>	8 mA Max. 24 mA Max.
<b>RH Measurement Range</b>	0 to 100%
<b>RH Output</b>	2-wire, 4 to 20mA (Factory Standard) 3-wire, 0-5, 0-10 VDC or 4 to 20mA
<b>Accuracy @ 77°F (25°C)</b>	+/- 1% over 20% span (between 20 to 90%) +/- 2%, 3%, or 5% from 20 to 95%
<b>Long Term Stability</b>	Less than 2% drift / 5 years
<b>Hysteresis</b>	Less than 0.4% RH
<b>Repeatability</b>	0.5% RH
<b>Sensitivity</b>	0.1 % RH
<b>Response Time</b>	110 seconds for 63% Step
<b>Saturation Response Time</b>	10 minutes for 63% Step
<b>Operating Humidity Range</b>	0 to 95 % RH non-condensing
<b>Operating Temperature Range</b>	Duct / Outside: -10 to 122°F Room: 32 to 122°F

Wiring Diagrams available at [www.workaci.com](http://www.workaci.com)

## Relative Humidity



### Attributes:

- Single point field calibration
- Field selectable output signals
- 1%, 2%, 3%, and 5% Accuracies
- Low Drift
- Highly Repeatable
- Coated PCBs for duct and outdoor air configurations
- RoH's Compliant
- CE approved

### Applications:

- Building automation systems
- Light Industrial
- Pharmaceutical
- Humidity Chambers
- OEM



Made in the USA

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

TEMPERATURE

RELATIVE HUMIDITY

PRESSURE

CURRENT

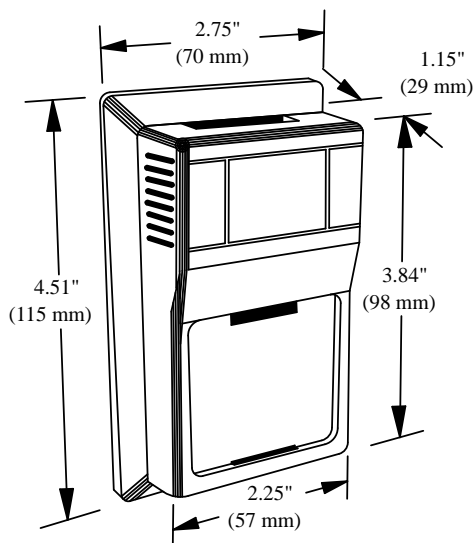
GAS SENSORS

ACCESSORIES

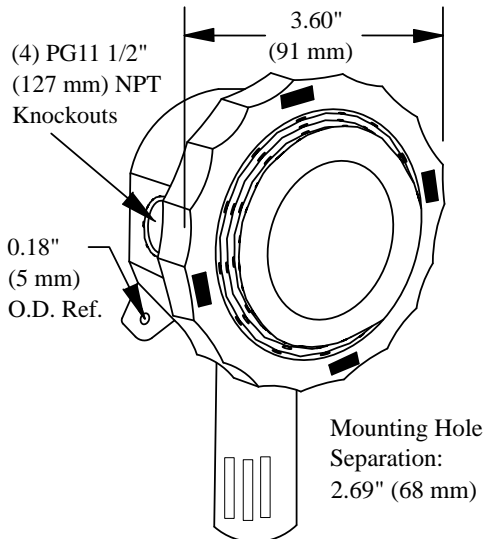
INTERFACE DEVICES

### Dimensions

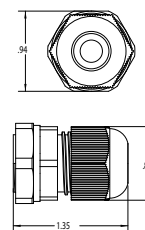
#### Room



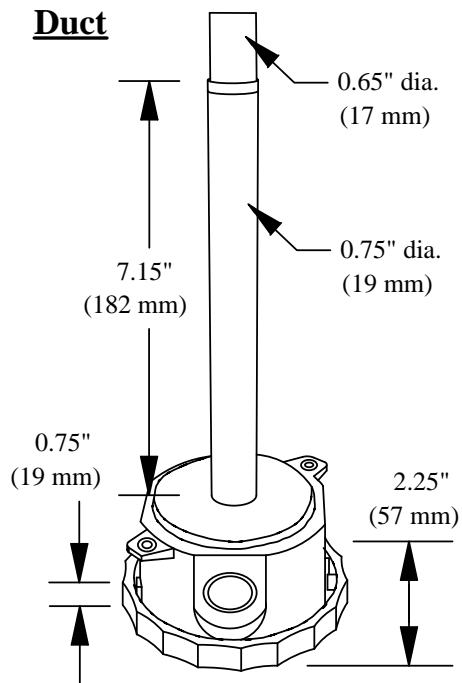
#### Outside



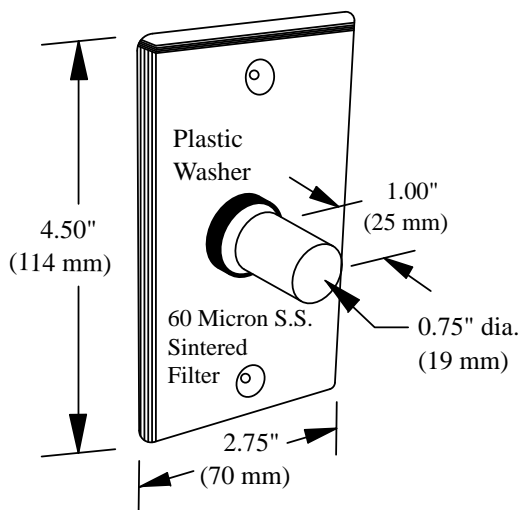
#### Water Tight Fitting Included with Outside



#### 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<br>[ ]  | Range if 1%<br>-[ ]                            | Configuration<br>-[ ]                             | Optional LCD (Available on Room units only)<br>-[ ] |
|    | ↑  | ↑  | ↑   | ↑   |
|    | <b>RH1</b> (+/- 1%)  | <b>Please Specify a 20% Span (i.e. 40-60%)</b> | <b>(R)</b> Room                                   | <b>(LCD)</b> LCD Display (Not available on 1%)      |
|    | <b>RH2</b> (+/- 2%)  |  | <b>(D)</b> Duct                                   |   |
|    | <b>RH3</b> (+/- 3%)  |  | <b>(O)</b> Outdoor Air                            |   |
|    | <b>RH5</b> (+/- 5%)  |  | <b>(SP)</b> Stainless Plate (Not available on 1%) |   |
|    | <b>3 PT NIST Certificate</b> (3 point Calibration Certificate @ 20, 50 and 80% RH)             |  |   |   |
|    | <b>5 PT NIST Certificate</b> (5 point Calibration Certificate w/standard points chosen by ACI) |  |   |   |

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

2305 Pleasant View Road Middleton, WI 53562  
PH: (888) 967-5224 www.workaci.com