



Featured Relative Humidity Resistive Product

Duct/Euro



Outside Air/Euro



Stainless Plate



Room 2



Room 2, Setpoint



Room 2, Override

Room 2, Setpoint,  
Override

Room



Room, Setpoint



Room, Override

Room, Setpoint,  
Override

# RH Resistive

## *RH with Resistive Temperature Output*

The A/RH Series relative humidity transmitters (with resistive temperature output) utilize a capacitive sensing element to deliver a proportional analog output. This series features on board DIP switches which allow the user to select the desired output signal. In addition, field calibration can be performed by using the on board increment and decrement DIP switches. These enhancements provide increased flexibility and outstanding long-term performance. Duct and Outside Air configurations feature conformally coated circuit boards for moisture resistance. Several RTD and thermistor temperature sensing elements are available in this series.

The A/RH Series is covered by ACI's Five (5) Year Limited Warranty. The warranty can be found in the front of ACI's Sensors & Transmitters catalog, as well as on ACI's web site, [www.workaci.com](http://www.workaci.com).



## Specifications

|                                             |                                                                           |                                         |
|---------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------|
| <b>RH Supply Voltage (4 to 20 mA)</b>       | (250 Ohm Load): 15 to 40 VDC/18 to 28 VAC                                 |                                         |
| <b>RH Supply Voltage (4 to 20 mA)</b>       | (500 Ohm Load): 18 to 40 VDC/18 to 28 VAC                                 |                                         |
| <b>RH Supply Voltage (0-5 VDC)</b>          | 12 to 40 VDC/18 to 28 VAC (4K Load minimum)                               |                                         |
| <b>RH Supply Voltage (0-10 VDC)</b>         | 0-10 VDC: 18 to 40 VDC/18 to 28 VAC (4K Load minimum)                     |                                         |
| <b>Supply Current</b>                       | Voltage Output: 8 mA maximum                                              | Current Output: 24 mA maximum           |
| <b>RH Measurement Range</b>                 | 0-100%                                                                    |                                         |
| <b>RH Output</b>                            | 2-wire: 4 to 20 mA (standard)                                             | 3-wire: 0-5 VDC, 0-10 VDC or 4 to 20 mA |
| <b>Accuracy @ 77°F (25°C)</b>               | +/- 1% over 20% span (between 20 to 90%) +/- 2%, 3%, or 5% from 10 to 95% |                                         |
| <b>Long Term Stability</b>                  | Less than 2% drift/5 years                                                |                                         |
| <b>Repeatability</b>                        | 0.5% RH                                                                   |                                         |
| <b>Sensitivity</b>                          | 0.1% RH                                                                   |                                         |
| <b>Operating Environment, Duct/Outside</b>  | 0 to 100% RH -40 to 140°F (-40 to 60°C)                                   |                                         |
| <b>Operating Environment, Room</b>          | 0 to 95% RH (non-condensing)                                              | 32 to 122°F (0 to 50°C)                 |
| <b>RH Sensor Type</b>                       | Capacitive                                                                |                                         |
| <b>Product Dimensions (Duct/Euro)</b>       | Enclosure: (W) 3.60" (D) 2.25" Probe: (L) 7.15"                           |                                         |
| <b>Product Dimensions (Outside Air)</b>     | Cover: (H) 3.61" (W) 4.00" (D) 2.25" Stem: (H) 3.00" (W) 1.13"            |                                         |
| <b>Product Dimensions (Room 2)</b>          | (H) 4.50" (W) 2.75" (D) 1.12"                                             |                                         |
| <b>Product Dimensions (Room)</b>            | (H) 4.51" (W) 2.75" (D) 2.90"                                             |                                         |
| <b>Product Dimensions (Stainless Plate)</b> | Plate: (H) 4.51" (W) 2.76" (D) 0.19"                                      | Filter: (L) 1.06"                       |

## Ordering

Select one Series (A). If A/RH1 is selected, you must specify a 20% range. Choose a Temperature Sensor (B), one Configuration (C), & one RH Output (D). When selecting your Configuration (A), if "R2S", "RS", "RSO" or "R2SO," please choose a Pot Value (E), a Sticker (F) & a Pot Action (G). If "R2S", "RS", "RSO" or "R2SO" is not selected, your Part Number is finished after completing RH Output (D).

## A Accuracy

- ☐ A/RH1 (+/-1%) (Specify a 20% Range)  
☐ A/RH2 (+/-2%)  
☐ A/RH3 (+/-3%)  
☐ A/RH5 (+/-5%)

## B Temp Sensor

- ☐ 100 ☐ 1K ☐ 1K-NI  
☐ 3K ☐ 10KS ☐ 100KS  
☐ AN ☐ CP ☐ CSI  
☐ 20K ☐ 1.8K ☐ AN-BC  
☐ 10KE ☐ 10KE1

## C Configuration

- ☐ D (Duct/Euro) ☐ R2SO (Room, Setpoint, Override)  
☐ O (Outside Air/Euro) ☐ R (Room)  
☐ SP (Stainless Plate) ☐ RS (Room, Setpoint)  
☐ R2 (Room) ☐ RO (Room, Override)  
☐ R2S (Room, Setpoint) ☐ RSO (Room, Setpoint, Override)  
☐ R2O (Room, Override)

## D RH Output

- ☐ ---- (4 to 20 mA) ☐ 400 ☐ 2K ☐ 100K ☐ 8.5 ☐ 20K  
☐ 5 (0-5 VDC) ☐ 1K ☐ 3K ☐ 5K ☐ 10K ☐ Specify Pot Value  
☐ 10 (0-10 VDC)

## E Setpoint Pot Value

## F Sticker

- ☐ Blue/Red

## G Pot Action

- ☐ DA (Direct)  
☐ RA (Reverse)

## Build your part number

After completing (A), (B), (C), (D), (E), (F) & (G) from the above table, fill in the Part Number Table below. An example part number is offered.

A

B

C

D

E

F

G

EXAMPLE: A/RH3 - CP - D



The Euro enclosure has a UL94-V0 flammability rating.