



RH ROOM

Relative Humidity Room, Platinum RTD

The ACI Relative Humidity with Platinum RTD Room Series utilizes a thermoset polymer capacitive sensing element with a factory fitted hydrophobic filter to improve its moisture resistance. The sensing elements multilayer construction also provides excellent resistance in applications where dust, dirt, oils and common environmental chemicals are found. The RH room sensors include on board DIP switches which allow the user to select the desired output signal and can be powered by AC or DC power sources. Single point field calibration can be performed by using the increment and decrement calibration DIP switches to adjust your curve up or down in +/- 0.5% increments with each toggle of the corresponding switches. These enhancements provide increased flexibility and outstanding long-term reliability without the need to replace the sensors in the field. There are two enclosure options in this series which

should satisfy most commercial decors. Both enclosures feature four-way airflow to minimize self-heating. Three and Five-point NIST Calibration Certificates are available and must be ordered separately when placing your order.

Applications: Humidification, Dehumidification, Monitoring Indoor Space Humidity, Clean Rooms, Hospitals, Process Control, Laboratories, Museums, Schools, Office Buildings, Data Centers, ESD (Anti-Static) Control

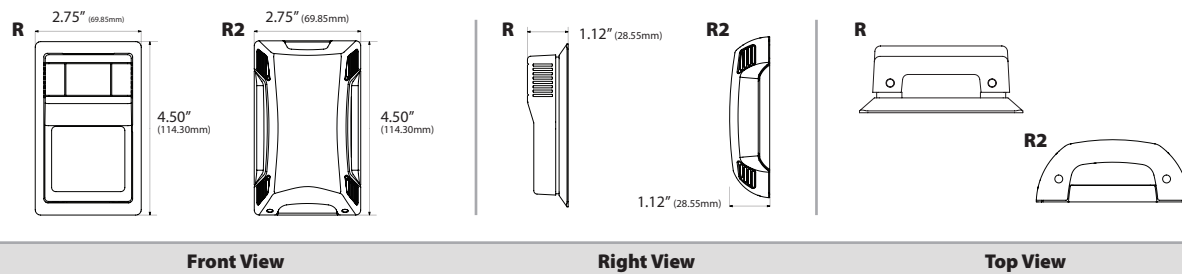
The ACI RH Platinum RTDs Room is covered by ACI's Five (5) Year Limited Warranty. The warranty can be found in the front of ACI's Sensors & Transmitters catalog, as well as on ACI's website, www.workaci.com.

PRODUCT SPECIFICATIONS

RH Supply Voltage (Reverse Polarity Protected):	4-20 mA: 250 Ohm Load: 15 - 40 VDC / 18 - 28 VAC 500 Ohm Load: 18 - 40 VDC / 18 - 28 VAC
RH Supply Current (VA):	0-5 VDC: 12 - 40 VDC / 18 - 28 VAC 0-10 VDC: 18 - 40 VDC / 18 - 28 VAC
RH Output Load Resistance:	Voltage Output: 8 mA maximum (0.32 VA) Current Output: 24 mA maximum (0.83 VA)
RH Output Signal:	4-20 mA: 700 Ohms maximum 0-5 VDC or 0-10 VDC: 4K Ohms Minimum
RH Accuracy @ 77°F (25°C):	2-wire: 4 - 20 mA (Factory Default) 3-wire: 0-5 or 0-10 VDC and 4 - 20 mA (Field Selectable)
RH Measurement Range:	+/- 1% over 20% RH Range between 20 to 90% +/- 2%, 3%, or 5% from 10 to 95%
Operating RH Range:	0-100%
Operating Temperature Range:	0 to 95% RH, non-condensing
Storage Temperature Range:	35 to 122°F (1.5 to 60°C)
RH Stability Repeatability Sensitivity:	-40 to 149°F (-40 to 65°C)
RH Response Time (T63):	Less than 2% drift / 5 years 0.5% RH 0.1% RH
RH Sensor Type:	20 Seconds Typical
RH Transmitter Stabilization Time:	Capacitive with Hydrophobic Filter
RH Connections Wire Size:	30 Minutes (Recommended time before doing accuracy verification)
RH Terminal Block Torque Rating:	Screw Terminal Blocks (Polarity Sensitive) 16 (1.31 mm ²) to 26 AWG (0.129 mm ²)
RH NIST Test Points:	4.43 to 5.31 lb-in (0.5 to 0.6 Nm)
Platinum RTD Output @ 32°F (0°C):	Default Test Points: 3 Points (20%, 50% & 80%) or 5 Points (20%, 35%, 50%, 65% & 80%)
Platinum RTD Tolerance Class:	1% NIST Test Points: 5 Points within selected 20% Range (ie. 30%-50% are 30, 35, 40, 45 & 50)
Platinum RTD Din Standard:	RHx-100-xW-R2 Series: 100 Ohms nominal RHx-1K-xW-R2 Series: 1000 Ohms nominal
Temperature Coefficient:	+/-0.06% Class A Tolerance Formula: +/-°C = (0.15°C + (0.002 * t))
Platinum RTD Stability:	DIN EN 60751 (IEC 751)
Temperature Connections Wire Size:	3850 ppm/°C
Temperature Terminal Block Torque Rating:	+/-0.03% after 1000 Hours @ 572°F (300°C)
Enclosure Material (Color):	Screw Terminal Blocks 16 (1.31 mm ²) to 26 AWG (0.129 mm ²)
Enclosure Flammability Rating:	4.43 to 5.31 lb-in (0.5 to 0.6 Nm)
Product Dimensions (L x W x D):	"R2" Enclosure: ABS (White) "-R" Enclosure: ABS (Beige)
Product Weight:	UL94-HB
Agency Approvals:	"R2" Enclosure: 4.50" (114.3 mm) x 2.75" (69.85 mm) x 1.12" (28.45 mm)
	"-R" Enclosure: 4.50" (114.3 mm) x 2.75" (69.85 mm) x 1.12" (28.45 mm)
	A/RHx-xx-xW-R2 Series: 0.17 lbs. (0.077 kg) A/RHx-xx-xW-R Series: 0.17 lbs. (0.077 kg)
	CE, RoHS2, WEEE



DIMENSIONAL DRAWING



CUSTOM ORDERING

Model # Example:

A/

RH2

1K

2W

R50

0 Ohms

1K Ohms

DA

+ to -

MODEL

A. Sensor Series No Selection Required

A/

B. Accuracy Select One (1)

RH1 = +/-1% (Specify a 20% Range between 20 to 90% RH)

RH2 = +/-2% | RH3 = +/-3% | RH5 = +/-5%

C. Model Series Select One (1)

100 = 100 Ohm Platinum RTD | 1K = 1K Ohm Platinum RTD

D. Number of Wires Select One (1)

2W = Two Wires | 3W = Three Wires

E. Configuration Select One (1)

R = Room

R2 = Room

RO = Room with Override

R2O = Room with Override

RS = Room with Setpoint

R2S = Room with Setpoint

R50 = Room with Setpoint and Override | R250 = Room with Setpoint and Override

F. Output Signal Select One (1)

---- = 4 to 20 mA (Default) | 0 to 10 VDC (Field Selectable) | 0 to 5 VDC (Field Selectable)

Setpoint Configuration Options Select Options below if RS, R50, R2S or R250 was selected as a Configuration (C)

1. Offset Resistor Select One (1)

0 Ohms | 51.1 Ohms | 499 Ohms | 750 Ohms | 806 Ohms | 1K Ohms | 2K Ohms
2.49K Ohms | 4.75K Ohms | 6.19K Ohms | 7.87 Ohms | 10K Ohms | 20K Ohms

2. Potentiometer Select One (1)

400 Ohm | 1K Ohms | 2K Ohms | 5K Ohms | 8.5K Ohms | 10K Ohms
20K Ohms | 100K Ohms

3. Setpoint Direction Select One (1)

DA = Direct Acting (Bottom to Top (Smaller to Larger))

RA = Reverse Acting (Bottom to Top (Larger to Smaller))

4. Setpoint Indication Select One (1)

+ to - | Cool | Warm | 55 to 85F | 10-30C (R Only)

Blue | Red (R2 Only)

Note: Outputs are field selectable between 4-20 mA, 0-5 VDC & 0-10 VDC

ACCESSORIES ORDERING

Model # Example:

A/MOUNTING PLATE BEIGE R

-OR-

106821

Model #	Item #	Description
A/MOUNTING PLATE BEIGE R	106821	Wall Mounting Back Plate, Plastic, Beige ("R")
A/MOUNTING PLATE WHITE R2	143369	Wall Mounting Back Plate, Plastic, White ("R2")
LOCKING COVER	107370	Clear Thermostat Guard, Locking Cover, Low Profile
A/ROOM-FOAM-PAD	125690	1/8" Foam Insulation Pad with Adhesive (3" x 2", Black)

ACCESSORIES ORDERING (NIST)

Model # Example:

NIST RH CERT

Model #	Description
NIST RH CERT	RH Calibration Certificate (Specify 3 Point or 5 Point NIST)

Note: When ordering NIST certificates, please add an additional line item under the corresponding A/RHx-xx-R/R2 Model Number