Automation Components, Inc.

RH WALL PLATE
Relative Humidity, Wall Plate, Platinum RTD

Stainless Plate

Vinyl Pull Cap

The ACI Relative Humidity with Platinum RTD Wall Plate Series utilizes a thermoset polymer capacitive sensing element with a factory applied hygroscopic filter to deliver a proportional analog voltage output signal. The hygroscopic filter provides added resistance to moisture, dust, and other chemicals for greater long term reliability. The RH Stainless Plate transmitter features integral DIP switches for field selection of the proper output signal and supply voltage to meet your applications requirements. Each unit also contains 0%, 50%, and 100% test options to verify that the transmitter is both working and properly installed. Field calibration can be performed by using the increment and decrement calibration DIP switches witho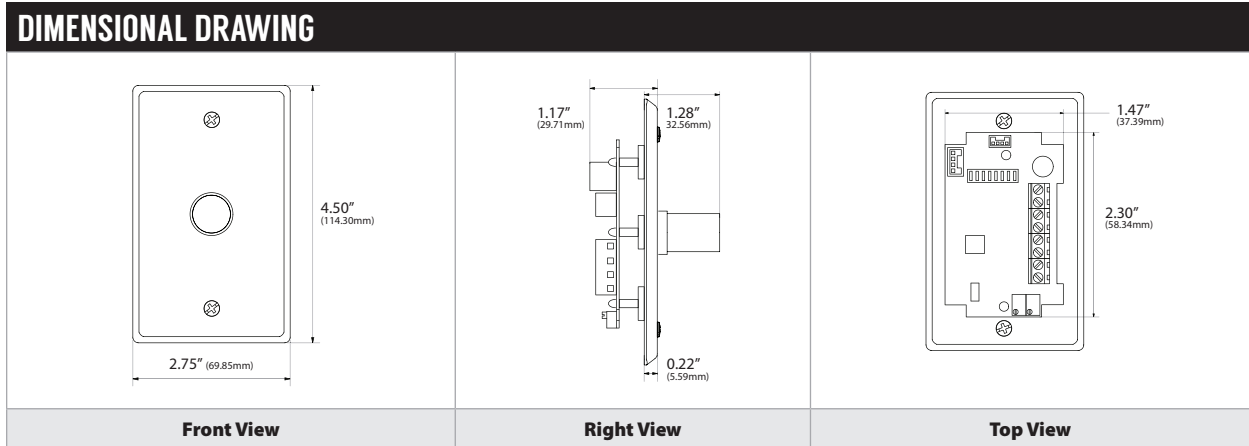ut the need to replace the sensing element. These enhancements provide increased flexibility and outstanding long-term reliability. All RH Stainless Plate transmitters come standard with an attractive brushed finish stainless steel, single gang wall mounting plate and are designed to mount over a single gang junction box in the wall. The PCBs are conformally coated for added protection from moisture and other contaminants. A temporary plastic sensor cover is included to provide protection for the RH sensor from chemicals used in wash down applications. Three point NIST Calibration Certificates are available.

Applications: Pharmaceutical, Hospitals, Operating Rooms, Vivariums, Clean Rooms, Process Control, Wash Down Environments & Stability Chambers

The ACI RH Platinum RTD Wall Plate 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, workaci.com.

PRODUCT SPECIFICATIONS

RH Supply Voltage (Reverse Polarity Protected):	**0-5 VDC:** 12 - 40 VDC / 18 - 28 VAC | **0-10 VDC:** 18 - 40 VDC / 18 - 28 VAC
RH Supply Current (VA):	8 mA maximum (0.32 VA)
RH Output Load Resistance:	4K Ohms Minimum
RH Output Signal:	**3-wire:** 0-5 or 0-10 VDC
RH Accuracy @ 77°F (25°C):	+/- 2% or 3% from 10 to 95%
RH Measurement Range:	0-100%
Operating RH Range:	0 to 95% RH, non-condensing (Conformally Coated PCB's)
Operating Temperature Range:	-40 to 140°F (-40 to 60°C)
Storage Temperature Range:	-40 to 149°F (-40 to 65°C)
RH Stability | Repeatability | Sensitivity:	Less than 2% drift / 5 years | 0.5% RH | 0.1% RH
RH Response Time (T63):	20 Seconds Typical
RH Sensor Type:	Capacitive with Hydrophobic Filter
RH Transmitter Stabilization Time:	30 Minutes (Recommended time before doing accuracy verification)
RH Connections | Wire Size:	Screw Terminal Blocks (Polarity Sensitive) | 16 (1.31 mm^2) to 26 AWG (0.129 mm^2)
RH Terminal Block Torque Rating:	4.43 to 5.31 lb-in (0.5 to 0.6 Nm)
RH NIST Test Points:	**Default Test Points:** 3 Points (20%, 50% & 80%)
Platinum RTD (PTC) | Number Wires (Wire Colors):	**RHx-100-2W Series:** (Brown/Brown) & **RHx-2W-1K Series:** (Black/Black) **RHx-100-3W Series:** (Brown/Brown/Black) & **RHx-3W-1K Series:** (Black/Black/White)
Platinum RTD Output @ 32°F (0°C):	**RHx-100-xW-SP Series:** 100 Ohms nominal | **RHx-1K-xW-SP Series:** 1000 Ohms nominal
Platinum RTD Tolerance Class:	+/-0.06% Class A | Tolerance Formula: +/-°C = (0.15°C + (0.002 * |t|)
Platinum RTD Din Standard:	DIN EN 60751 (IEC 751)
Temperature Coefficient:	3850 ppm/ °C
Platinum RTD Stability:	+/-0.03% after 1000 Hours @ 572°F (300°C)
Lead Wire Length | Conductor Size:	14" (35.6 cm) | 22 AWG (0.65 mm)
Insulation | Rating:	Etched Teflon (PTFE) Colored Leads | Mil Spec 16878/4 Type E
Wall Plate Material:	430 Stainless Steel (Brushed Stainless Steel Finish)
Foam Material | Foam Thickness:	Cross-linked LPDE (White) | 0.25" (6.35 mm)
Foam Flammability Rating:	FMVSS-302
Sintered Filter Material:	304 Series Stainless Steel
Product Dimensions (L x W x D):	4.51" (114.56 mm) x 2.76" (70.10 mm) x 1.25" (31.75 mm)
Product Weight:	0.235 lbs. (0.107 kg)
Agency Approvals:	CE, UKCA, RoHS, WEEE

DIMENSIONAL DRAWING

Front View	Right View	Top View

Front View dimensions: 4.50" (114.30mm), 2.75" (69.85mm)

Right View dimensions: 1.17" (29.71mm), 1.28" (32.56mm), 0.22" (5.59mm)

Top View dimensions: 1.47" (37.39mm), 2.30" (58.34mm)

CUSTOM ORDERING

Model # Example:

	A/	RH2	100	2W	SP	05	NIST
	A.	B.	C.	D.	E.	F.	G.

		MODEL #
A. Sensor Series *No Selection Required*	A/ ➝	A/
B. Accuracy *Select One (1)*	**RH2** = +/-2% │ **RH3** = +/-3%	
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 *No Selection Required*	**SP** = Stainless Wall Plate ➝	**SP**
F. Output Signal *Select One (1)*	**010** = 0 to 10 VDC │ **05** = 0 to 5 VDC	
G. NIST (Temperature & RH) *Select One (1)*	**----** = No NIST Certificate │ **NIST =** NIST Certificate (3 Points)	

Note*: Outputs are field selectable between 0-5 VDC & 0-10 VDC

ACCESSORIES ORDERING

Model # Example: A/SINTERED FILTER -OR- 143433

Model #	Item #	Description
A/SINTERED FILTER	143433	3/8" Sintered Filter for RH Duct/Stainless Plate/Remote Probes
A/1" VINYL PULL CAP	143462	1" EZ Vinyl Filter Cover for RH Stainless Plates & Remote Probes