RH WALL PLATE

Relative Humidity, Wall Plate, Thermistor

The ACI Relative Humidity with Thermistor 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 without 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.

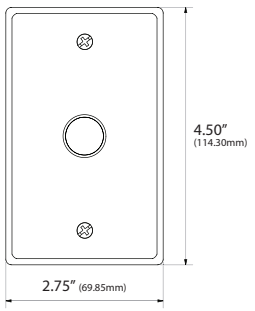
Applications: Pharmaceutical, Hospitals, Operating Rooms, Vivariums, Clean Rooms, Process Control, Wash Down Environments & Stability Chambers

The ACI RH Thermistor 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.

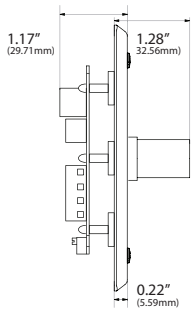
PRODUCT SPECIFICATIONS

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%)
Nominal Thermistor Resistive Output @ 77°F (25°C) (Lead Wire Colors), Non-Linear NTC (Negative Temperature Coefficient):	**RHx-1.8K Series:** 1.8KΩ (Red/Yellow) **RHx-10KS Series:** 10KΩ (White/Blue) **RHx-3K Series:** 3KΩ (White/Brown) **RHx-10K-E1 Series:** 10KΩ (Gray/Orange) **RHx-AN Series (Type III):** 10KΩ (White/White) **RHx-20K Series:** 20KΩ (Brown/Blue) **RHx-AN-BC Series:** 5.238KΩ (White/Yellow) **RHx-50K Series:** 50KΩ (Brown/Yellow) **RHx-CP Series (Type II):** 10KΩ (White/Green) **RHx-100KS Series:** 100KΩ (Black/Yellow) **RHx-CSI Series:** 10KΩ (Green/Yellow)
Thermistor Accuracy 32-158°F (0-70°C):	+/- 0.36°F (0.2°C) except 10K-E1 Series: +/- 0.54°F (0.3°C)
	1.8K Series: +/- 0.9°F (0.5°C) @ 77°F (25°C) & +/- 1.8°F (1.0°C) from 32 to 158°F (0 to 70°C)
Thermistor Power Dissipation Constant:	3 mW/°C except 1.8K Series: 1 mW/°C; 10K-E1 Series: 2 mW/°C
Thermistor Sensor Response Time (T63):	10 Seconds nominal
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

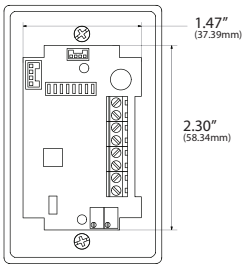
DIMENSIONAL DRAWING



Front View



Right View



Top View

CUSTOM ORDERING

Model # Example: A/ (A.) | RH2 (B.) | 1.8K (C.) | SP (D.) | 010 (E.) | NIST (F.)

		MODEL #
A. Sensor Series *No Selection Required*	**A/** ⟶	**A/**
B. Accuracy *Select One (1)*	**RH2** = +/-2% | **RH3** = +/-3%	
C. Temperature Sensor *Select One (1)*	**1.8K** | **3K** | **10KS** | **AN** (Type III) | **AN-BC** | **CP** (Type II) | **CSI** | **10K-E1** | **20K** | **50K** | **100KS**	
D. Configuration *No Selection Required*	**SP** Stainless Wall Plate ⟶	**SP**
E. Output Signal *Select One (1)*	**010 =** 0 to 10 VDC | **05 =** 0 to 5 VDC	
F. 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