



SUN SHIELD

Weather Proof, Relative Humidity, Thermistor

The ACI Sun Shield is a reliable solution for protecting both the temperature and relative humidity sensors when mounted in a location where an overhang or shade is unavailable. It consists of nine (9) molded, white plastic plates which are used to reduce the thermal effect of the sun and increasing the air flow between the plates. The Sun Shield also provides an added level of protection for the sensors from rain and snow. The Sun Shield is available with our +/-2% RH transmitter, any of our standard thermistors, and has field selectable outputs of 4-20mA, 0-5VDC and 0-10VDC. Three point NIST Calibration Certificates are available.

Applications: Outdoor Humidity and Temperature Monitoring

The ACI RH Thermistor Sun Shield 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.

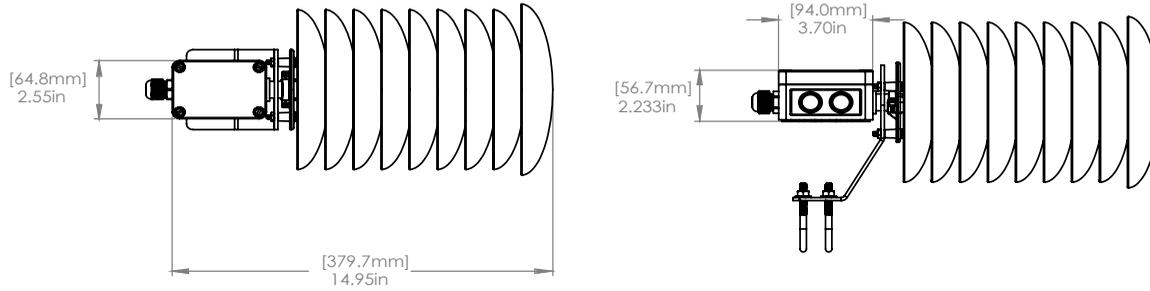
PRODUCT SPECIFICATIONS

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:	+/- 2% from 10 to 95%	
Operating RH Range:	0-100%	
Operating Temperature Range:	0 to 95% RH, non-condensing (Conformally Coated PCB's)	
Storage Temperature Range:	-40 to 140°F (-40 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:	30 Minutes (Recommended time before doing accuracy verification)	
Wire Size:	Screw Terminal Blocks (Polarity Sensitive)	
RH Terminal Block Torque Rating:	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)	
Nominal Thermistor Resistive Output @ 77°F (25°C) (Lead Wire Colors) Non-Linear NTC (Negative Temperature Coefficient):	Default Test Points: 3 Points (20%, 50% & 80%)	
Thermistor Accuracy 32-158°F (0-70°C):	1% NIST Test Points: 5 Points within selected 20% Range (ie. 30%-50% are 30, 35, 40, 45 & 50)	
Thermistor Power Dissipation Constant:	RHx-1.8K Series: 1.8KΩ (Red/Yellow)	RHx-CSI Series: 10KΩ (Green/Yellow)
Thermistor Sensor Response Time (T63):	RHx-3K Series: 3KΩ (White/Brown)	RHx-10KS Series: 10KΩ (White/Blue)
Lead Wire Length Conductor Size:	RHx-AN Series (Type III): 10KΩ (White/White)	RHx-10K-E1 Series: 10KΩ (Gray/Orange)
Insulation Rating:	RHx-AN-BC Series: 5.238KΩ (White/Yellow)	RHx-20K Series: 20KΩ (Brown/Blue)
Enclosure Specifications (Material, Flammability, Temperature, NEMA/IP Rating):	RHx-CP Series (Type II): 10KΩ (White/Green)	RHx-100KS Series: 100KΩ (Black/Yellow)
Sensing Tube Dimensions (Length x Diameter):	+/- 0.36°F (0.2°C) except 10K-E1 Series: +/- 0.54°F (0.3°C)	
Product Dimensions (L x W x D):	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)	
Product Weight:	3 mW/°C except 1.8K Series: 1 mW/°C; 10K-E1 Series: 2 mW/°C	
Agency Approvals:	10 Seconds nominal	
	14" (35.6 cm) 22 AWG (0.65 mm)	
	Etched Teflon (PTFE) Colored Leads Mil Spec 16878/4 Type E	
	"4X" Enclosure: Polystyrene Plastic; UL94-V2; -40 to 158°F (-40 to 70°C); NEMA 4X (IP 66)	





DIMENSIONAL DRAWING



Side View(s)

CUSTOM ORDERING

Model # Example: **A/** **RH2** **AN** **O-SUN** **NIST**
A. B. C. D. E. F.

MODEL #

A. Sensor Series <i>No Selection Required</i>	A/ _____ →	A/
B. Accuracy <i>No Selection Required</i>	RH2 = +/-2% _____ →	RH2
C. Temperature Sensor <i>Select One (1)</i>	1.8K 3K 10KS 10K-E1 AN (Type III) AN-BC CP (Type II) CSI 20K 100KS	
D. Configuration <i>No Selection Required</i>	O-SUN = Outside Sun Shield (NEMA 4X) _____ →	O-SUN
E. Output Signal <i>Select One (1)</i>	---- = 4 to 20 mA (Default) 0 to 10 VDC (Field Selectable) 0 to 5 VDC (Field Selectable)	
F. NIST (Temperature & RH) <i>Select One (1)</i>	---- = No NIST Certificate NIST = NIST Certificate (3 Points)	

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

