

Relative Humidity/Temperature Combinations



**ACI/RH-TEMP
Sensor Series**



Product Description

The ACI/RH Series Relative Humidity transmitters, convert a resistance to a linear 4 to 20 mA, 0 to 5 VDC, or 0 to 10 VDC output. The current signal may be transmitted over long distances on unshielded twisted-pair wire, since it will not be affected by the lead wire resistance or electrical noise.

The Advanced Ceramic Technology design overcomes the limitations of other resistance-based humidity sensors that utilize water soluble polymer coatings. The Advanced Ceramic Technology enables these sensors to fully recover from condensation. This allows the sensor to maintain its accuracy over a longer period of time. Despite its accuracy, the Advanced Ceramic Technology sensor and related circuitry is economical.

Field calibration is achieved by toggling either the increment or decrement dip switch. Each

toggle will allow for a +/- 0.5% RH increase or decrease. Calibration of the 4-20mA transmitter can also be done using the Zero and Span potentiometers.

Accuracy is maintained over the operating range, using a thermistor for temperature compensation. Precision production tolerances maintain sensor interchangeability to within +/- 3% nominal without recalibration.

The ACI/RH Series humidity transmitter is calibrated at 3 different points, using an NIST Traceable Temperature/Humidity chamber.

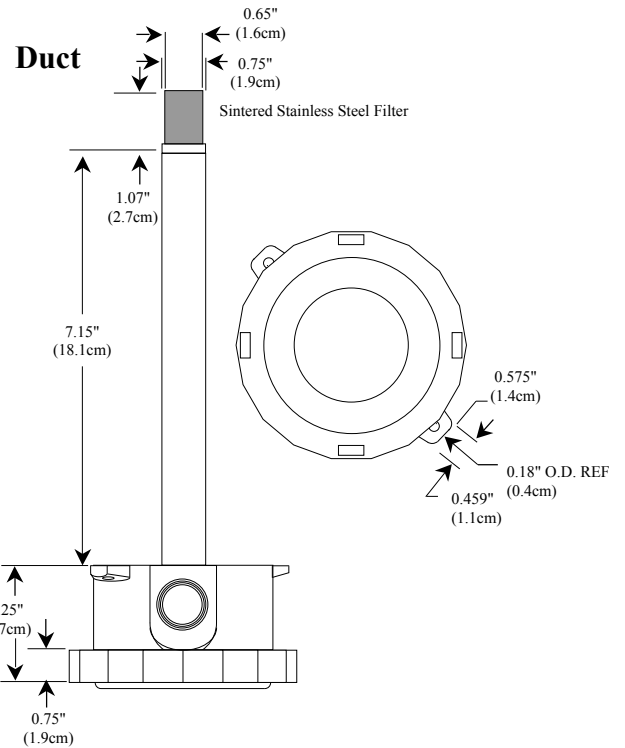
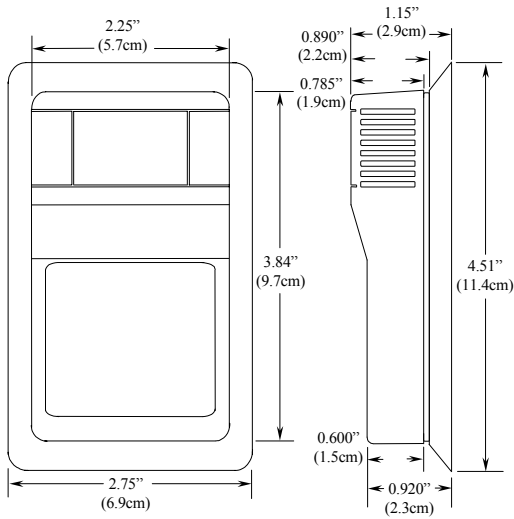
Any ACI thermistor, RTD, and a few semiconductor type sensors may be ordered with the ACI/RH transmitter.

All ACI/RH-Temp Sensor Series transmitters come with a two year factory warranty. Please contact ACI for more information regarding any of these products.

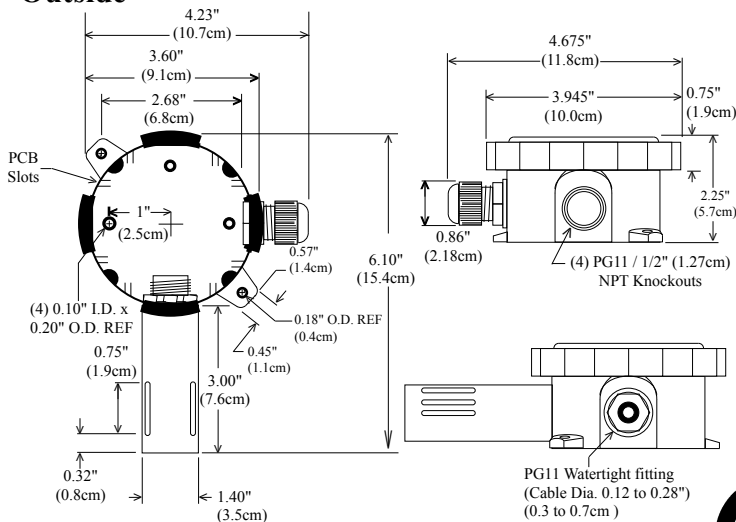
Product Specifications

Supply Voltage	250 Ohm Load: +15 to 36 VDC / 24 VAC 500 Ohm Load: +18 to 36 VDC / 24 VAC	Response Time	30 seconds for 63% Step
Operating Temp	-10 to 160°F (-23.3 to 71°C)	Saturated Response Time	10 minutes for 63% Step
Operating RH	0 to 100% RH	Sensitivity	0.1% RH
Output	2-wire, 4 to 20 mA 3-wire 0-5, 0-10 VDC	Repeatability	0.5% RH
Accuracy @ 77°F	+/- 1% over 20% Span between 20-95% RH	Interchangeability	< +/- 3% RH nominal
Accuracy @ 77°F	+/- 2, 3, or 5% from 20 to 95% RH	Hysteresis	Less than 0.4% RH
Long Term Stability	Less than 2% RH Drift / 5 Years		

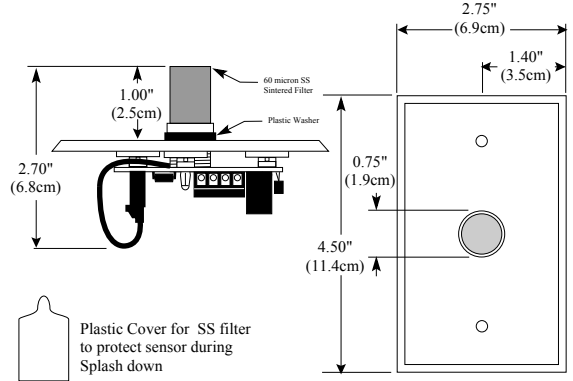
Dimensions Room



Outside



Stainless Plate



For CE compliance, sensor leads must be no longer than 3 meters in length. Additionally, certain product variations may not be CE compliant. Contact ACI for further details

Ordering Information

A/	Accuracy	Range if 1%	Temp Sensor	Configuration
	[]	[]	[]	[]
	↑	↑	↑	↑
	RH1 (+/- 1%)	Specify a 20 % Range	LM335 5K	(R) Room
	RH2 (+/- 2%)		AD592 10K-CSI	(RO) Room w/Override
	RH3 (+/- 3%)		100-2W 10K-AN (TYPE III)	(D) Duct
	RH5 (+/- 5%)		1K-2W 10K-CP (TYPE II)	(O) Outdoor Air
			1.8K 20K	(SP) Stainless Plate
			2K 100K	
			3K	

Example: A/RH3-R or A/RH5-D or A/RH2-O or A/RH1-(40-60%)-10K-CP-SP

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RH-4

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