ACI
Automation Components Inc.

Product Data

Relative Humidity Transmitters

ACI/RH 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 and will not be affected by 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 technology also 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.

Accuracy is maintained over the operating range using a thermistor for temperature compensation. Precision production tolerances maintain sensor interchangeability to within +/- 3%.

The ACI/RH transmitter is extremely versatile using on board dip switches to select both the supply voltage and output signal range. Field calibration can also be done by using the on board increment and decrement dip switches. 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.

The additional benefits of this technology can be employed for less than many inferior types of sensors.

Each ACI/RH Series humidity transmitter is calibrated using an NIST Traceable Temperature /Humidity Chamber.

All ACI/RH 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)	**Saturation Response**	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 or 4 to 20 mA	**Interchangeability**	< +/- 3% RH nominal
Accuracy @ 77°F	+/- 1% over 20% span (Between 20 to 95%)	**Repeatability**	0.5% RH
Accuracy @ 77°F	+/- 2%, 3% or 5% from 20 to 95%	**Hysteresis**	Less than 0.4% RH
Long Term Stability	Less than 2% RH Drift / 5 Years		

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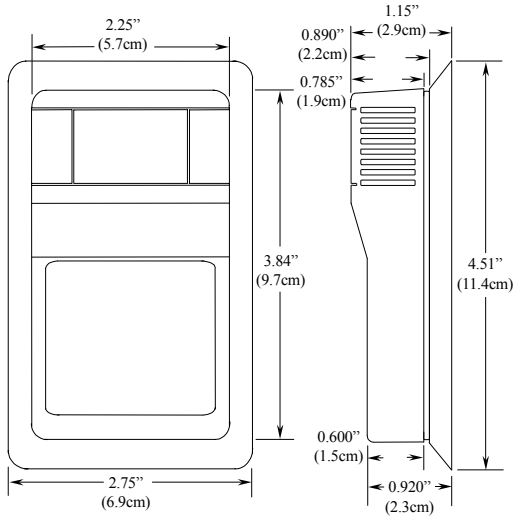
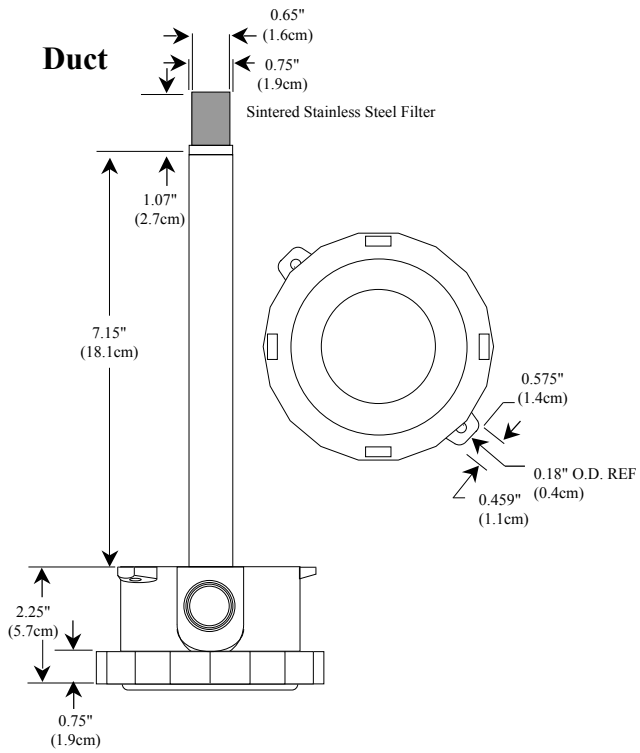
Dimensions

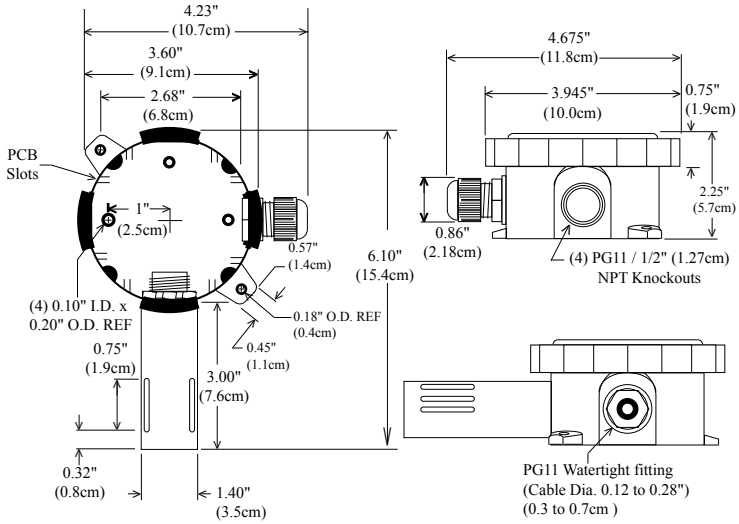
Room



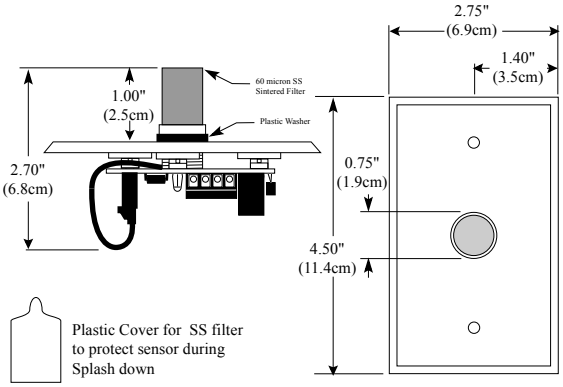
Duct



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

	Accuracy	Range if 1%	Configuration
A/	**[ ]**	**[ ]**	**[ ]**
	RH1 (+/- 1%)	Over a 20 % span	**(R)** Room
	RH2 (+/- 2%)		**(D)** Duct
	RH3 (+/- 3%)		**(O)** Outdoor Air
	RH5 (+/- 5%)		**(SP)** Stainless Plate

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

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