

Enthalpy Transmitter



ACI/ENT



Product Description

The ACI/ENT is a low cost Enthalpy transmitter that converts a resistive type humidity sensor into a linear 2-wire, 4 to 20 mA output signal. The 4-20 mA current output will be proportional to a scale of 0 to 50 BTU's and can be operated over a range of -40 to 140°F. The current signal may be transmitted over long distances on unshielded twisted-pair wire since the output isn't 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 recover fully 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.

Accuracy is maintained over the entire operating range, using a thermistor for temperature compensation. Precision production tolerances maintain sensor interchangeability to within +/- 5% nominal without recalibration. The additional benefits of this technology can be employed for less than many inferior types of sensors.

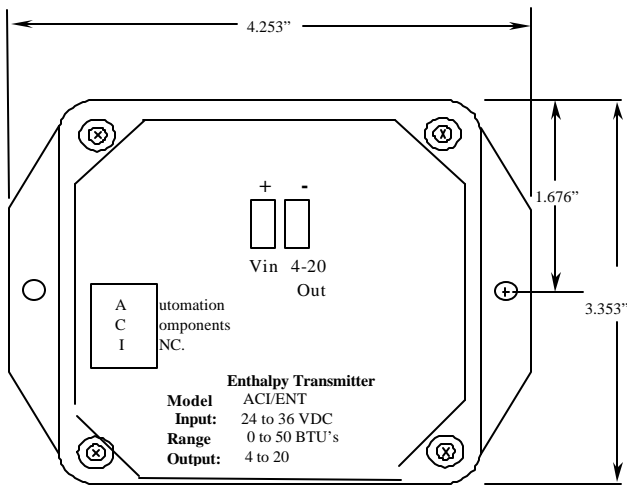
Each ACI/ENT Enthalpy transmitter is calibrated at 3 different points, using an NIST Traceable Temperature and Humidity Controlled Environmental Chamber. Special calibration may be done for elevations that are much higher than the 1000' elevation.

All ACI/ENT transmitters have a limited 2 year factory warranty.

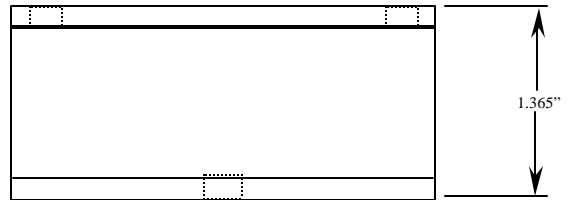
Product Specifications

Supply Voltage	24 to 36 VDC	Long Term Stability	Less than 2% RH Drift / 5 Years
Operating Range	-40 to 140°F (-40 to 60°C)	Sensitivity	0.1% RH
Output	2-wire, 4 to 20 mA Loop Powered	Repeatability	0.5% RH
Enthalpy Accuracy	+/- 1 BTU @ 77°F	Hysteresis	Less than 0.4% RH
Temperature Accuracy	+/- 0.36°F (0.2°C) from 0-70°C	Operating RH	0 to 100% RH (non-condensing)
RH Accuracy	+/- 3% @ 77°F	Elevation	1000' above sea level

Dimensions



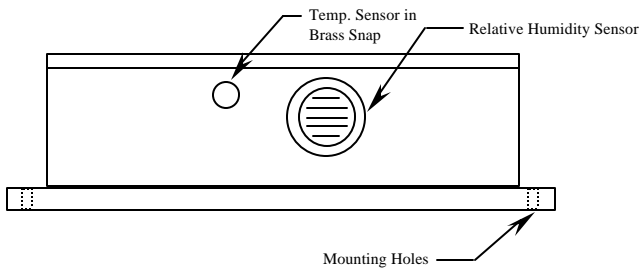
Side View



Elevation Effect Chart

Feet Above Sea Level	BTU Output	Change(BTU's)
0	29.3027	- 0.4044
250	29.4069	- 0.3002
500	29.5052	- 0.2019
750	29.6052	- 0.1019
1,000	29.7071	0.0000
1,500	29.9248	+ 0.2177
2,000	30.134	+ 0.4269
2,500	30.351	+ 0.6439
3,000	30.5762	+ 0.8691
4,000	31.0533	+ 1.3462
5,000	31.5268	+ 1.8197
6,000	32.0373	+ 2.3302
10,000	34.4084	+ 4.7013

End View



Ordering Information

ACI/ENT []
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 () 1000' Elevation (Standard)
 (2) 2000' Elevation
 (3) 3000' Elevation
 (4) 4000' Elevation
 (5) 5000' Elevation
 (6) 6000' Elevation
 (7) Please Specify Elevation

Example: ACI/ENT or ACI/ENT-2 or ACI/ENT-7 (15,000)