



ENTHALPY

Outside Stand Alone & Inside/Outside Differential

The A/ENT-CTRL and A/DIFF-ENT are enthalpy controllers which are used to measure temperature and humidity before converting them into a sourced relay output. The supply voltage to the A/ENT-CTRL or A/DIFF-ENT is common to both the N/O or N/C contacts of the 10A Form 1C Relay. (The A/ENT-CTRL-F1C's output acts as a dry contact rather than sourcing the supply voltage). Typically used in conjunction with the A/DIFF-ENT, the A/ENT converts a capacitive type humidity sensor into a linear 2-wire, 4 to 20 mA output. Its signal is proportional to a scale of 0 to 50 BTU's and is geared towards OEMs of economizers and other devices that require an enthalpy input or economizer control. Each unit in this series features a coated circuit board and jumper selectable elevation settings.

The ACI Enthalpy Series 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 web site, www.workaci.com.



SPECIFICATIONS

Supply Voltage	+24 to 36 VDC or 24 VAC +/- 10%	(A/ENT-CTRL & A/DIFF-ENT) +24 to 36 VDC (A/ENT)
Supply Current	70 mA max (A/ENT-CTRL & A/DIFF-ENT), 25 mA maximum (A/ENT)	
External Input (A/DIFF-ENT only)	4-20 mA (0 to 50 BTU's) from A/ENT	
Enthalpy Measurement Range	0-50 BTU's (A/ENT)	
Output/Contact Rating	4-20 mA (A/ENT) 10A @ 250 VAC (A/ENT-CTRL & A/DIFF-ENT)	
Relay Deadband	1 BTU or 0.5°F (0.27°C)	
Enthalpy Accuracy	+/- 1 BTU @77°F (25°C)	
Long-term Stability	Less than 2% RH Drift/5 years	
Sensitivity	0.1% RH	
Repeatability	0.5% RH	
Operating RH Range	0 to 95% RH (non-condensing)	
Operating Temperature Range	-40°F to 140°F (-40°C to 60°C)	
Standard Elevation	1000' above sea level (standard)	
Product Dimensions (All Enthalpy types)	(H) 3.35" (W) 4.25" (D) 1.37"	

ORDERING

Please select an Enthalpy Type (A). If A/ENT-CTRL, A/ENT-CTRL-F1C, A/DIFF-ENT is selected, only Complete Elevation (B) & Curve (C). If A/ENT is selected as an Enthalpy Type (A), complete Elevation (B) & Slope (D). **NOTE:** The A/ENT is designed for use in conjunction with the A/DIF-ENT for Indoor/Outdoor Differential Enthalpy. It is typically installed inside return air ducts.

A Enthalpy Type	B Elevation	C Curve	D Slope
<input type="radio"/> A/ENT-CTRL (Only Complete B&C)	<input type="radio"/> -- (0-2K' Above Sea Level)	<input type="radio"/> -- (28 BTU/lb 75°F) (Standard)	<input type="radio"/> ---- (Direct/Positive Slope)
<input type="radio"/> A/ENT-CTRL-F1C (Only Complete B&C)	<input type="radio"/> 3K (2-4K' Above Sea Level)	<input type="radio"/> A (No Curve, A/DIFF-ENT Only)	<input type="radio"/> R (Reverse/Negative Slope)
<input type="radio"/> A/DIFF-ENT (Only Complete B&C)	<input type="radio"/> 5K (4-6K' Above Sea Level)	<input type="radio"/> B (24 BTU/lb 70°F)	
<input type="radio"/> A/ENT (Only Complete B&D)	<input type="radio"/> 7K (6-8K' Above Sea Level)	<input type="radio"/> C (23 BTU/lb or 67°F)	
	<input type="radio"/> 9K (8-10K' Above Sea Level)	<input type="radio"/> D (21.5 BTU/lb or 63°F)	
	<input type="radio"/> 11K (10K+ Above Sea Level)		

BUILD PART NUMBER

After completing (A), (B), (C)/(D) from the above table, fill in the Part Number Table below. An example part number is offered.

A	B	C OR D

EXAMPLE: A/ENT - 3K - R

The Enthalpy Series enclosure has a UL94-5VA flammability rating.

