



Standard Duct Humidity Sensors

HED Series



HED

2%, 3%, and 5% Accuracies

FEATURES

- Monitor humidity and temperature with a single device...reduce installation costs
- Semiconductor temperature transmitter, or popular thermistor/RTD sensors available
- Tool-less gasketed entry lid...no more lost screws
- Large cage clamp terminal blocks...easy hook-up with no wire nuts
- Circuitry is embedded in the probe for durability and protection

DESCRIPTION

HED Standard Series duct mount humidity transmitters offer high performance in an easy to install housing at an affordable price. The thin-film capacitive sensor element provides high accuracy and performance, great long-term stability, and full recovery from saturation. Temperature sensing options are also available.

The duct-mounted HED includes a rugged all plastic housing with a tool-less gasketed entry lid, large cage clamp terminal blocks, and sturdy ABS material. All Standard models come with a standard one-year warranty.

APPLICATIONS

- HVAC economizer control
- Managing energy systems
- Facilitating ASHRAE standards for environmental control

SPECIFICATIONS

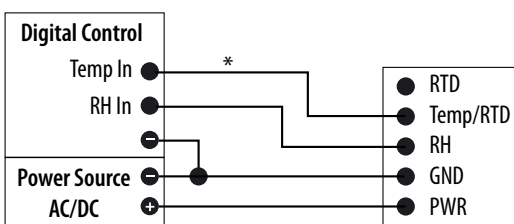
1 Year
Warranty

INPUT POWER	
Voltage Version	Class 2; 12-24VDC or 24VAC
mA Version	Class 2; 12-24VDC
AC Voltage Tolerance	±10%
AC Frequency	50-60 Hz
Max. Inrush Current after 1 msec (mA version)	25mA
OUTPUT	
mA Output	4-20mA, 2-wire, not polarity sensitive
mA Max. Loop Resistance	500Ω at 24VDC input voltage; 250Ω at 12VDC input voltage
Voltage Output	0-5V or 0-10V (jumper selectable), observe polarity
Voltage Min. Load Resistance	5kΩ
Voltage Min. Sinking Current	0.2mA
HUMIDITY	
RH Element	Digitally profiled thin-film capacitive, non-removable
Accuracy	±2%, 3%, or 5% (10-90% RH, 20° to 30°C)
Temp Effect (Outside 20° to 30°C)	≤0.1% RH per °C
Response Time (to 90% change at 20°C)	110 sec
Annual Drift	≤1%
Output Scaling	0-100% RH
TEMPERATURE OPTION	
Active Output Accuracy	±0.5°C (±.9°F)
Active Output Temperature Scaling	Type 1: -40° to 50°C (-40° to 122°F); Type 2: 0° to 50°C (32° to 122°F)
Self-Heating Error (Resistive Temperature Only)	≤±0.5°C at 20° to 30°C (68° to 86°F); ≤±0.75°C outside of 20° to 30°C (68° to 86°F)
OPERATING ENVIRONMENT	
Operating Temperature	-40° to 50°C (-40° to 122°F)
Operating Humidity	0-100% RH noncondensing (Unit will recover from saturation)
HOUSING	
Material	ABS plastic with UL V-0 5VA Flame Class

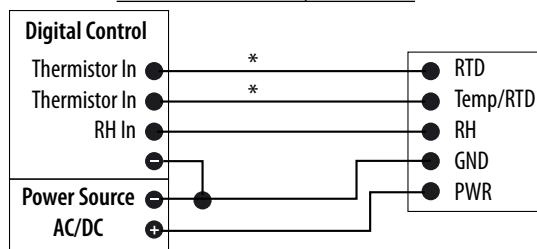
EMC Conformance: EN61000-6-3:2007+A1:2011 Class B; Low Voltage Directive 2006/95/EC and EMC Directive 2004/108/EC. Meets UL requirements for plenum rating.

WIRING DIAGRAMS

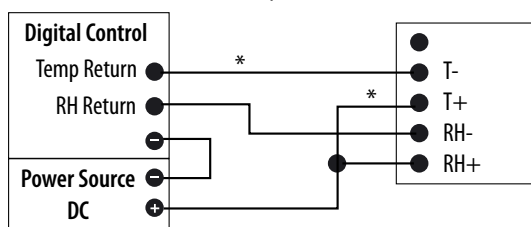
0-5V/0-10V Models, Temperature Transmitter



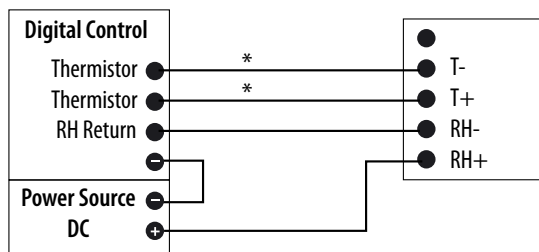
0-5V/0-10V Models, Thermistor



4-20mA Models, Temperature Transmitter

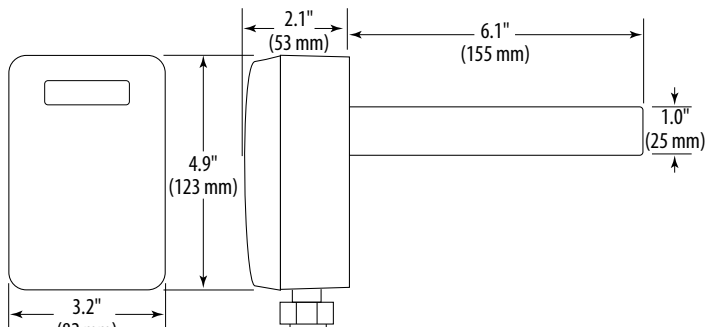


4-20mA Models, Thermistor



*Temperature models.

DIMENSIONAL DRAWING



ORDERING INFORMATION

Accuracy	Output	US or EU	Temp.
HED <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 = 2%	M = 4-20mA	S = Standard	T = Temp
3 = 3%	V = 0-5VDC/0-10VDC		X = No Temp (Stop here)
5 = 5%			



Sensor Type	Temp Range	Temp Cert
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
= Temp. transmitter	1 = -40° to 50°C (-40° to 122°F) 2 = 0° to 50°C (32° to 122°F)	Blank = None 1 = 1 pt cal 2 = 2 pt cal

Sensor Type	Temp Cert
<input type="checkbox"/>	<input type="checkbox"/>
B = 100R Platinum, RTD C = 1k Platinum, RTD D = 10k T2, Thermistor E = 2.2k, Thermistor F = 3k, Thermistor G = 10k CPC Thermistor H = 10k T3, Thermistor J = 10k Dale, Thermistor K = 10k with 11k shunt, Thermistor M = 20k NTC, Thermistor N = 1800 ohm TAC, Thermistor R = 10k US, Thermistor S = 10k 3A 221 Thermistor T = 100k, Thermistor U = 20k "D", Thermistor W = 10k T2 high accuracy, Thermistor Y = 10k T3 high accuracy, Thermistor Z = 10k E1, Thermistor	Blank = None 1 = 1 pt cal 2 = 2 pt cal

Example:				
With Temp				
HED	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3	M	S	T C
Without Temp				
HED	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3	V	S	X Stop Here