SERIES RHP-E/N | HUMIDITY/TEMPERATURE/DEW POINT TRANSMITTER

European style

North American style

BENEFITS/FEATURES

- **Reduced installation cost with combined humidity/dew point and temperature sensing**
- **Wide application environments from a large selection of temperature sensors and 2% and 3% accuracies**
- **Reduced inventory with field selectable output**

APPLICATIONS

- Air economizers
- Room comfort monitoring
- Greenhouse monitoring

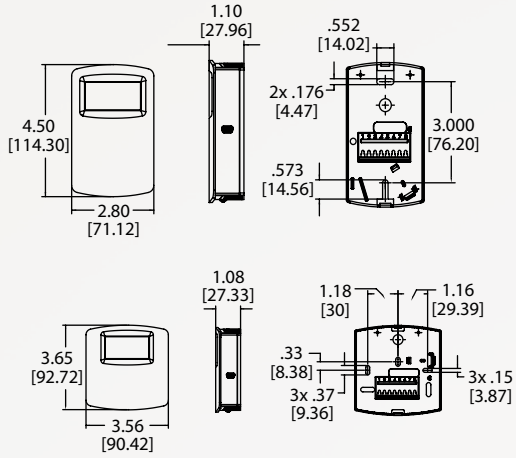
DESCRIPTION

The **Series RHP-E/N Wall Mount Humidity/Temperature/Dew Point Transmitter** is the most versatile room transmitter on the market. The stylish housing is well vented to provide air flow across the sensor to improve measurement accuracy. The humidity and the dew point are measured using a capacitive polymer sensor that completely recovers from 100% saturation. The humidity and dew point can have either a current or voltage output, while the optional temperature output can be a current, voltage, RTD, or thermistor. For models with current or voltage for the temperature output, the temperature range is field selectable.

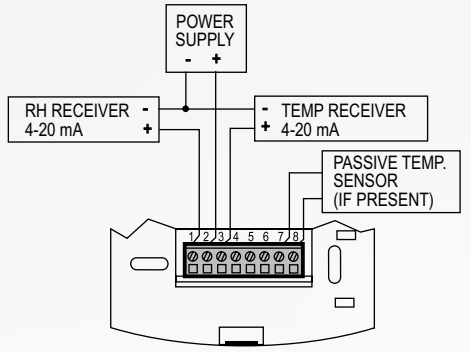
SPECIFICATIONS

Relative Humidity Range	0 to 100% RH.
Temperature Range	-40 to 140°F (-40 to 60°C) for thermistor and RTD sensors; -20 to 140°F (-28.9 to 60°C) for analog outputs.
Dew Point Temperature Range	-20 to 140°F (-28.9 to 60°C); 0 to 100°F (-17.8 to 37.8°C); 40 to 90°F (4.4 to 32.3°C); -4 to 140°F (-20 to 60°C) field selectable ranges.
Accuracy	RH: Model RHP-2XXX: ±2% (10 to 90% RH @ 25°C), Model RHP-3XXX: ±3% (20 to 80% RH @ 25°C), Model RHP-5XXX: ±5% (20 to 80% RH @ 25°C); Thermistor temperature sensor: ±0.36°F @ 77°F (±0.2°C @ 25°C); RTD temperature sensor: DIN Class B, ±0.54°F @ 32°F (±0.3°C @ 0°C); Analog outputs: ±0.9°F @ 77°F (±0.3°C @ 25°C).
Hysteresis	±0.8%.
Repeatability	±0.1% typical.
Temperature Limits	Operating: -40 to 140°F (-40 to 60°C); Storage: -40 to 176°F (-40 to 80°C).
Compensated Temperature Limits	-4 to 140°F (-20 to 60°C).
Power Requirements	4-20 mA loop powered outputs: 10-35 VDC; 0-5/10V outputs: 15-35 VDC or 15-29 VAC.
Output Signals	4-20 mA loop powered outputs: 4-20 mA, 2 channels for humidity/solid state temperature sensor models (loop powered on RH). Switch selectable RH/dew point. Switch selectable normal or reverse output; 0-5/10V outputs: 5 mA max., 2 channels for humidity/solid state temperature sensor models. Switch selectable 0-10 V/2-10 V or 0-5 V/1-5 V output. Switch selectable RH/dew point. Switch selectable normal or reverse output.
Solid State Band Gap Temperature Sensor Output Ranges	Switch selectable, -20 to 140°F (-28.9 to 60°C); 0 to 100°F (-17.8 to 37.8°C); 40 to 90°C (4.4 to 32.3°C); -4 to 140°F (-20 to 60°C).
Response Time	8 s.
Electrical Connections	Screw terminal block.
Drift	<0.25% RH/year.
RH Sensor	Capacitance polymer.
Enclosure Material	White polycarbonate (European); Warm gray polycarbonate (North American).
Enclosure Rating	IP20.
Display	Optional LCD; Switch selectable %RH or dew point, °F/°C.
Display Resolution	RH: 1%; Temp: 0.1°F (0.1°C); Dew Point: 1°F (1°C).
Weight	4.4 oz (125 g).
Agency Approvals	CE.

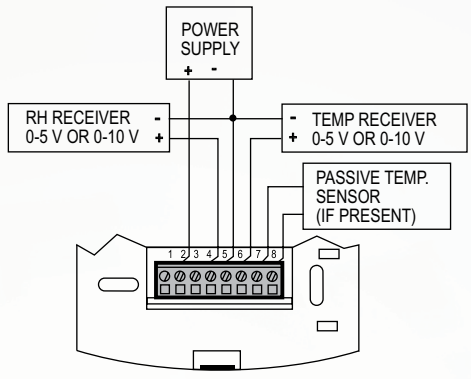
DIMENSIONS



WIRING DIAGRAM



Current models



Voltage models

HOW TO ORDER

Use the **bold** characters from the chart below to construct a product code.

RHP **-2** **E** **4** **0** **-COC**

SERIES
RHP: Wall mount
RH/temp/DP transmitter

ACCURACY
-2: 2%
-3: 3%
-5: 5%

MOUNTING TYPE
E: European
N: North American

RH OUTPUT
4: IV combo 4-20 mA / 0-10 V

TEMPERATURE SENSOR/OUTPUT TYPE
0: None
4: IV combo 4-20 mA / 0-10 V
A: 10K Ω thermal curve A
B: 10K Ω thermal curve B
C: 3K Ω thermal curve C
D: 100 Ω RTD
E: 1K Ω RTD
F: 20K Ω thermal curve F

OPTIONS
-COC: Certificate of calibration
-FC: Factory calibration certificate
-LCD: Liquid crystal display
-NIST: NIST traceable calibration certificate

ACCESSORIES

Model	Description
A-449	Remote LCD display
SCD-PS	100-240 VAC/VDC to 24 VDC power supply

Hitma Instrumentatie
www.hitma-instrumentatie.nl
info@hitma-instrumentatie.nl
+31 (0)297 - 514 833

België / Belgique
www.hitma-instrumentatie.be
info@hitma-instrumentatie.be
+32 (0)2 - 387 28 64

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