

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

FEATURES/BENEFITS

- Field selectable relative humidity or dew point output allows for application specific information
- Field replaceable relative humidity and temperature sensor elements mean that transmitters are replaced less frequently
- Universal analog outputs can be used with almost any building management system
- Integral or service tool LCD display options for cost-effective alternatives
- Two housing designs to match North American and European mounting patterns

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.



European Style

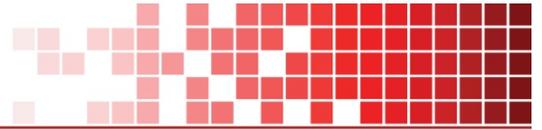


North American Style

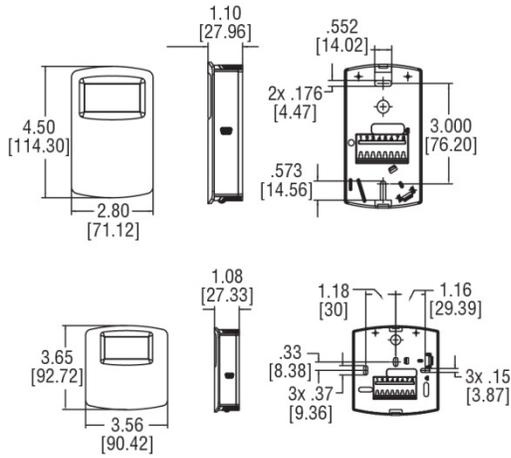
SPECIFICATIONS

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	±1%.
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).
4 to 20 mA Loop Powered Options	Power requirements: 10 to 35 VDC; Output signal: 4 to 20 mA, 2 channels for humidity/temperature models (loop powered on RH). Switch selectable RH/dew point. Switch selectable normal/reverse output.
0 to 5 / 10 VDC Outputs	Power requirements: 15 to 35 VDC or 15 to 29 VAC; Output load: 5 mA max, 2 channels for humidity/solid state temperature sensor models. Switch selectable 0-10/2-10 V or 0-5/1-5 V output. Switch selectable RH/dew point. Switch selectable normal/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	15 seconds.
Electrical Connections	Screw terminal block.
Drift	<1% 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.

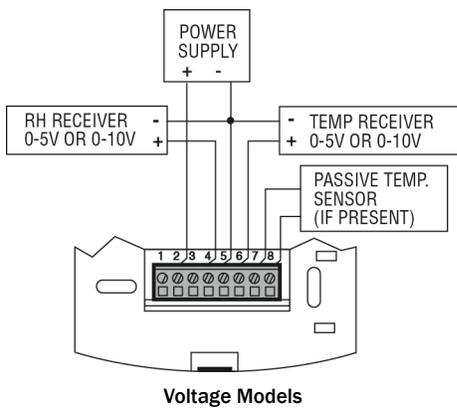
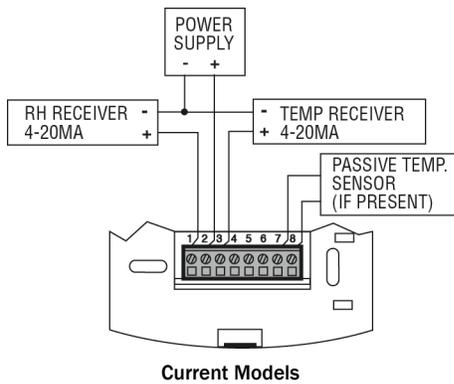




DIMENSIONS



WIRING DIAGRAM



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 to 20 mA / 0 to 10 V						
TEMPERATURE SENSOR/OUTPUT TYPE 0 - None 4 - IV combo 4 to 20 mA / 0 to 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 to 240 VAC/VDC to 24 VDC power supply

Important Notice: Dwyer Instruments, Inc. reserves the right to make changes to or discontinue any product or service identified in this publication without notice. Dwyer advises its customers to obtain the latest version of the relevant information to verify, before placing any orders, that the information being relied upon is current.

