

## SERIES RHP | HUMIDITY/TEMPERATURE TRANSMITTER

### FEATURES/BENEFITS

- 2%, 3%, or 5% accuracy models to meet project requirements
- Integral temperature sensors reduces number of devices to install
- Radiation shield option protects sensor from radiant heating effects allowing for accurate readings even when mounted in direct sunlight

### APPLICATIONS

- Air economizers
- Outdoor temperature and relative humidity reference for building systems

### DESCRIPTION

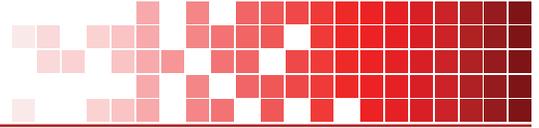
The **SERIES RHP** Temperature and Humidity Transmitter combine the voltage or current humidity transmitter output with a passive temperature thermistor or RTD output. The polymer capacitance humidity sensor reduces longterm affect of condensation, fog, or high humidity. The humidity sensors are available with 2%, 3% or 5% accuracies. Duct mounted transmitters are available with an optional two-line alpha numeric LCD display.



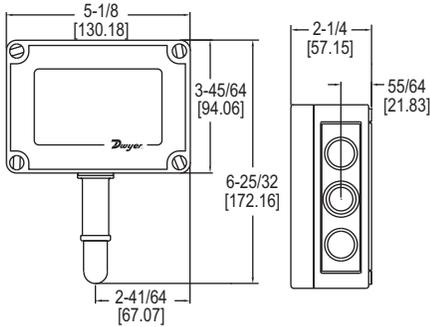
### SPECIFICATIONS

<b>Relative Humidity Range</b>	0 to 100% RH.
<b>Temperature Range</b>	-40 to 140°F (-40 to 60°C).
<b>Accuracy, RH</b>	RHP-2XXX ±2% 10-90% RH @ 25°C; RHP-3XXX ±3% 20-80% RH @ 25°C; RHP-5XXX ±5% 20-80% RH @ 25°C.
<b>Accuracy, Thermistor Temp Sensor</b>	±0.2°C @ 25°C (±0.36°F @ 77°F).
<b>Accuracy, RTD Temp Sensor</b>	DIN Class B; ±0.3°C @ 0°C (±0.54°F @ 32°F).
<b>Accuracy, Solid State Band Gap</b>	±0.9°F @ 77°F (±0.3°C @ 25°C).
<b>Hysteresis</b>	±1%.
<b>Repeatability</b>	±0.1% typical.
<b>Temperature Limits</b>	-40 to 140°F (-40 to 60°C).
<b>Storage Temperature</b>	-40 to 176°F (-40 to 80°C).
<b>Compensated Temperature Range</b>	-4 to 140°F (-20 to 60°C).
<b>4 to 20 mA Loop Powered Models</b>	Power requirements: 10 to 35 VDC; Output signal: 4 to 20 mA.
<b>0-5/10V Output Models</b>	Power requirements: 15 to 35 VDC or 15 to 29 VAC; Output signal: 0 to 10 V @ 5 mA max.
<b>Response Time</b>	15 seconds.
<b>Electrical Connections</b>	Removable screw terminal block.
<b>Conduit Connection</b>	Duct mount: 1/2" NPS; OSA: PG11 or PG16 (1/2" conduit) knockouts.
<b>Drift</b>	< 1% RH/year.
<b>RH Sensor</b>	Capacitance polymer.
<b>Temperature Sensor</b>	Types 1, 2, 3: Solid state band gap; Curves A, B, C: Thermistor; Curves D, E: Platinum RTD DIN 385.
<b>Enclosure</b>	Duct mount: PBT; OSA: Polycarbonate.
<b>Enclosure Rating</b>	Duct mount: NEMA 4X (IP66) for housing only; OSA: NEMA 4X (IP66).
<b>Display</b>	Duct mount only, optional 2-line alpha numeric, 8 characters/line.
<b>Display Resolution</b>	RH: 0.1%; 0.1°F (0.1°C).
<b>Weight</b>	Duct mount: .616 lb (.3 kg); OSA: 1 lb (.45 kg).
<b>Agency Approvals</b>	CE.

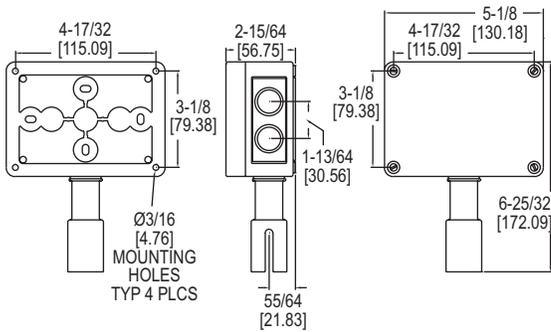




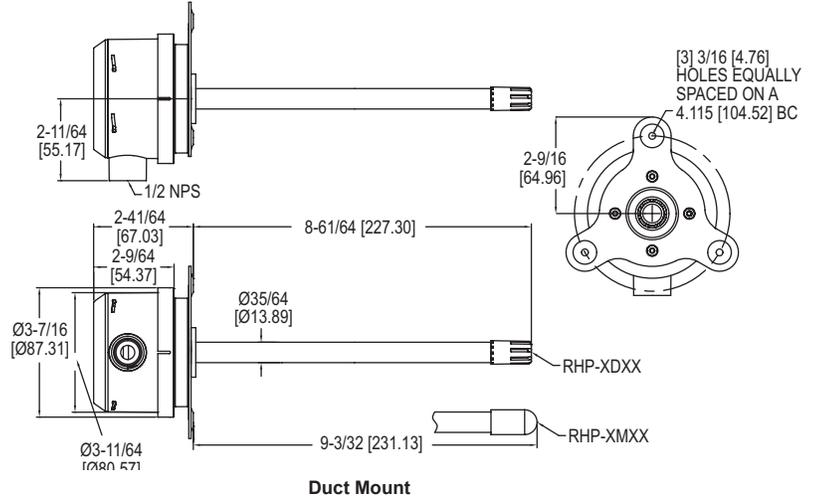
## DIMENSIONS



OSA (Outside Air) with Sintered Filter



OSA (Outside Air)



Duct Mount

## HOW TO ORDER

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

<p><b>SERIES</b></p> <p><b>RHP</b> - RH/passive temperature sensor transmitter</p> <p><b>ACCURACY</b></p> <p><b>-2</b> - 2% accuracy</p> <p><b>-3</b> - 3% accuracy</p> <p><b>-5</b> - 5% accuracy</p> <p><b>HOUSING TYPE</b></p> <p><b>D</b> - Duct mount w/ membrane filter</p> <p><b>M</b> - Duct mount w/ HDPE filter</p> <p><b>O</b> - OSA (outside air)</p> <p><b>S</b> - OSA w/sintered filter*</p> <p><b>R</b> - Radiation shield</p> <p>*Use OSA with sintered filter models when purchasing Series RHRS separately.</p>	<p><b>RHP</b>   <b>-2</b>   <b>D</b>   <b>1</b>   <b>A</b>   <b>-LCD</b></p>	<p><b>OPTIONS</b></p> <p><b>-LCD</b> - LCD display</p> <p><b>-NIST</b> - NIST traceable calibration certificate</p> <p><b>TEMPERATURE SENSOR</b></p> <p><b>0</b> - None</p> <p><b>1</b> - 4 to 20 mA</p> <p><b>2</b> - 0 to 10 VDC</p> <p><b>3</b> - 0 to 5 VDC</p> <p><b>A</b> - 10K @ 25°C thermistor type III</p> <p><b>B</b> - 10K @ 25°C thermistor type II</p> <p><b>C</b> - 3K @ 25°C thermistor</p> <p><b>D</b> - 100 Ω RTD DIN 385</p> <p><b>E</b> - 1K Ω RTD DIN 385</p> <p><b>F</b> - 20K Ω @ 25°C thermistor</p> <p><b>RH OUTPUT</b></p> <p><b>1</b> - 4 to 20 mA</p> <p><b>2</b> - 0 to 10 V</p> <p><b>3</b> - 0 to 5 VDC</p>
---	--	--

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.