The Series RHP Humidity/Temperature Transmitters combine the voltage or current humidity transmitter output with a passive temperature thermistor or RTD output. Featuring polymer capacitance humidity sensors, models are available with 2%, 3% or 5% accuracies. Duct mounted transmitters are available with an optional output. Featuring polymer capacitance humidity sensors, models are available with current humidity transmitter output with a passive temperature thermistor or RTD.

**APPLICATIONS**
- Pool room humidity monitoring
- Outdoor temperature and relative humidity reference
- Air economizers
- Radiant heat
- Reduced system operating costs with radiation shield protecting the sensor from radiant heat
- Reduced installation cost with combined humidity and temperature

**BENEFITS/FEATURES**
- Two-line alpha numeric LCD display.

**SPECIFICATIONS**
- Relative Humidity Range: 0 to 100% RH.
- Temperature Range: -40 to 140°F (-40 to 60°C).
- Accuracy, RH: RHP-2XX ±2% 10-90% RH @ 25°C; RHP-3XXX ±3% 20-80% RH @ 25°C; RHP-5XXX ±5% 20-80% RH @ 25°C.
- Accuracy, Thermistor Temp Sensor: ±0.2°C @ 25°C (±0.3°F @ 77°F).
- Accuracy, RTD Temp Sensor: DIN Class B ±0.3°C @ 0°C (±0.5°F @ 32°F).
- Accuracy, Solid State Band Gap: ±0.9°F @ 77°F (±0.5°C @ 25°C).
- Hysteresis: ±1%.
- Repeatability: ±0.1% typical.
- Temperature Limits: -40 to 140°F (-40 to 60°C).
- Storage Temperature: -40 to 176°F (-40 to 80°C).
- Compensated Temperature Range: -4 to 140°F (-20 to 60°C).
- Power Requirements: 4-20 mA loop powered models: 10-35 VDC; 0-5/10 V output models: 15-35 VDC or 15-29 VAC.
- Output Signal (Model Dependent): 4-20 mA; 0-5/10V @ 5 mA max.
- Response Time: 15 s.
- Electrical Connections: Removable screw terminal block.
- Conduit Connection: Duct mount: 1/2˝ NPS; OSA: 1/2˝ (22.3 mm).
- Drift: <1% RH/year.
- RH Sensor: Capacitance polymer.
- Temperature Sensor: Types 1, 2, 3: Solid state band gap; Curves A, B, C: Thermistor: Curves D, E: Platinum RTD DIN 385.
- Enclosure Material: Duct mount sensor tube: PVC-UL 94 V-0; Duct mount sensor: Polycarbonate ABS blend-greater than UL 94 V-0; OSA: Polycarbonate.
- Enclosure Rating: Duct mount: NEMA 4X (IP68); OSA: NEMA 4X (IP66).
- Display: Duct mount only, optional 2-line alpha numeric, 8 characters/line.
- Display Resolution: RH: 0.1%; 0.1°F (0.1°C).
- Weight: Duct mount: .616 lb (.3 kg); OSA: 1 lb (.45 kg).
- Compliance: CE.

**ACCESSORIES**
- A-RHP-FC: Replacement plastic hydrophobic filter
- A-RHP-RT: Retrofit tool for fitting O-ring on RHP-D/M models for new filter

**MODEL CHART**

<table>
<thead>
<tr>
<th>Example</th>
<th>RHP</th>
<th>2</th>
<th>D</th>
<th>A</th>
<th>LCD</th>
<th>RHP-2D1A-LCD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>2% accuracy</td>
<td>3% accuracy</td>
<td>5% accuracy</td>
</tr>
<tr>
<td>Housing Type</td>
<td>D</td>
<td>O</td>
<td>S</td>
<td>R</td>
<td>Duct mount with plastic hydrophobic filter</td>
<td>OSA (outside air)</td>
</tr>
<tr>
<td>RH Output</td>
<td>T</td>
<td>U</td>
<td>G</td>
<td>4-20 mA</td>
<td>0-10 V</td>
<td>0-5 V DC</td>
</tr>
<tr>
<td>Temperature Sensor</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4-20 mA</td>
<td>0-10 VDC</td>
</tr>
<tr>
<td>Options</td>
<td>LCD</td>
<td>LCD display</td>
<td>NIST traceable calibration certificate</td>
<td>NIST traceable calibration certificate</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*D Use OSA with sintered filter models when purchasing Series RHRS radiation shield separately.

**Enclosure**
- Duct mount: NEMA 4X (IP68) for housing only; OSA: NEMA 4X (IP66).

**Display Resolution**
- 223 characters

**Calibration Services Available**

**Warranty**
- 5 Year Limited Warranty

**Sintered Filter Version**

**OSA (outside air)**

**Duct Mount**

**Makrolon®** is a registered trademark of Covestro AG.

**Retention**
- Revision 10/05/2021

**CE**
- CE mark

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233