The SERIES RHP Temperature and Humidity Transmitter combine the voltage or current humidity transmitter output with a passive temperature thermometer 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**
- Air economizers
- Outdoor temperature and relative humidity reference
- Pool room humidity monitoring

**FEATURES/BENEFITS**
- 2%, 3%, or 5% accuracy models
- Optional LCD display on duct mount models
- Radiation shield option for outdoor installation in direct sunlight

**MODEL CHART**

<table>
<thead>
<tr>
<th>Example</th>
<th>RH-2D1A-LCD</th>
<th>RHP-2D1A-LCD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RH</strong></td>
<td>RH/Passive temperature sensor transmitter</td>
<td></td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>2% accuracy</td>
<td>3% accuracy</td>
</tr>
<tr>
<td><strong>Housing Type</strong></td>
<td>Duct mount w/ membrane filter</td>
<td>Duct mount w/ SS sintered filter</td>
</tr>
<tr>
<td></td>
<td>OSA (outside air)</td>
<td>OSA w/sintered filter*</td>
</tr>
<tr>
<td><strong>RH Output</strong></td>
<td>4 to 20 mA</td>
<td>0 to 10 V</td>
</tr>
<tr>
<td><strong>Temperature Sensor</strong></td>
<td>None</td>
<td>4 to 20 mA</td>
</tr>
<tr>
<td></td>
<td>0 to 5 VDC</td>
<td>10K @ 25°C thermistor type III</td>
</tr>
<tr>
<td></td>
<td>10K @ 25°C thermistor type II</td>
<td>100Ω RTD DIN 385</td>
</tr>
<tr>
<td></td>
<td>20KΩ @ 25°C thermistor</td>
<td></td>
</tr>
<tr>
<td><strong>Options</strong></td>
<td>LCD display</td>
<td>NIST traceable calibration certificate</td>
</tr>
</tbody>
</table>

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

**SPECIFICATIONS**

- **Relative Humidity Range:** 0 to 100% RH.
- **Temperature Range:** -40 to 140°F (-40 to 60°C).
- **Accuracy, RH:** RHP-2XXX ±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 (±0.3°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).
- **4 to 20 mA Loop Powered Models:** Power requirements: 10 to 35 VDC; Output signal: 4 to 20 mA.
- **0-5/10V Output Models:** Power requirements: 15 to 35 VDC or 15 to 29 VAC; Output signal: 0 to 10 V @ 5 mA max.
- **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°F (4.4 to 32.3°C); -4 to 140°F (-20 to 60°C).
- **Response Time:** 15 seconds.
- **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:** Duct mount: PBT; OSA: Polycarbonate.
- **Enclosure Rating:** Duct mount: NEMA 4X (IP66) for housing only; 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: 0.16 lb (3 kg); OSA: 1 lb (.45 kg).
- **Agency Approvals:** CE.
- **Warranty:** 5 year limited warranty.