

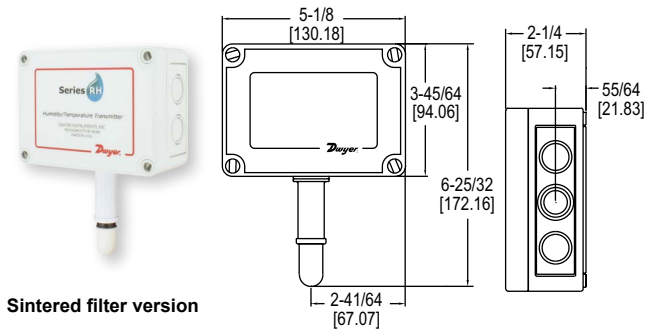
# HUMIDITY/TEMPERATURE TRANSMITTERS

Passive Temperature Outputs, Sintered Filter Options

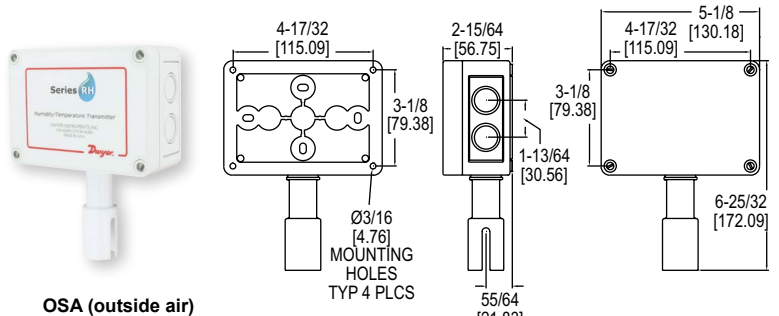
CALIBRATION SERVICES AVAILABLE



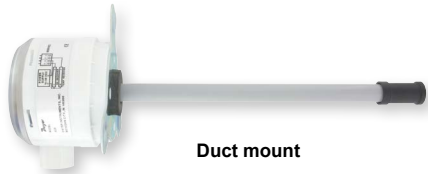
AIR QUALITY



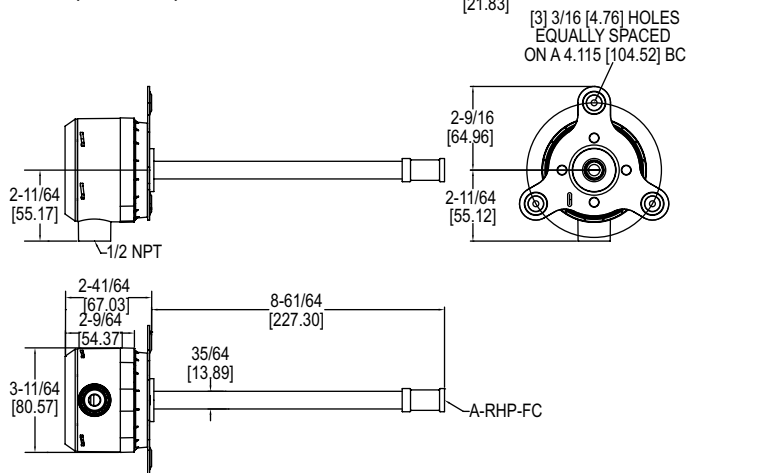
Sintered filter version



OSA (outside air)



Duct mount



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 two-line alpha numeric LCD display.

**BENEFITS/FEATURES**

- Reduced installation cost with combined humidity and temperature
- Wide application environment from a large selection of temperature sensors and 2%, 3% and 5% accuracies
- Reduced system operating costs with radiation shield protecting the sensor from radiant heat

**APPLICATIONS**

- Air economizers
- Outdoor temperature and relative humidity reference
- Pool room humidity monitoring

MODEL CHART						
Example	RHP	-2	D	1	A	-LCD RHP-2D1A-LCD
Series	RHP					RH/passive temperature sensor transmitter
Accuracy		2 3 5				2% accuracy 3% accuracy 5% accuracy
Housing Type			D O S R			Duct mount with plastic hydrophobic filter OSA (outside air) OSA with sintered filter* Radiation shield
RH Output				1 2 3		4-20 mA 0-10 V 0-5 VDC
Temperature Sensor					0 1 2 3 A B C D E F	None 4-20 mA 0-10 VDC 0-5 VDC 10K @ 25°C thermistor type III 10K @ 25°C thermistor type II 3K @ 25°C thermistor 100 Ω RTD DIN 385 1K Ω RTD DIN 385 20K Ω @ 25°C thermistor
Options						LCD display NIST traceable calibration certificate

\*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 (±0.36°F @ 77°F).  
**Accuracy, RTD Temp Sensor:** DIN Class B; ±0.3°C @ 0°C (±0.54°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).  
**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.  
**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 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 cap: Polycarbonate ABS blend-greater than UL 94 V-0; Duct mount electronics housing and cover: Makrolon® polycarbonate-UL 94V-HB; 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: .616 lb (.3 kg); OSA: 1 lb (.45 kg).  
**Agency Approvals:** CE.

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

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