



Series  
RHP

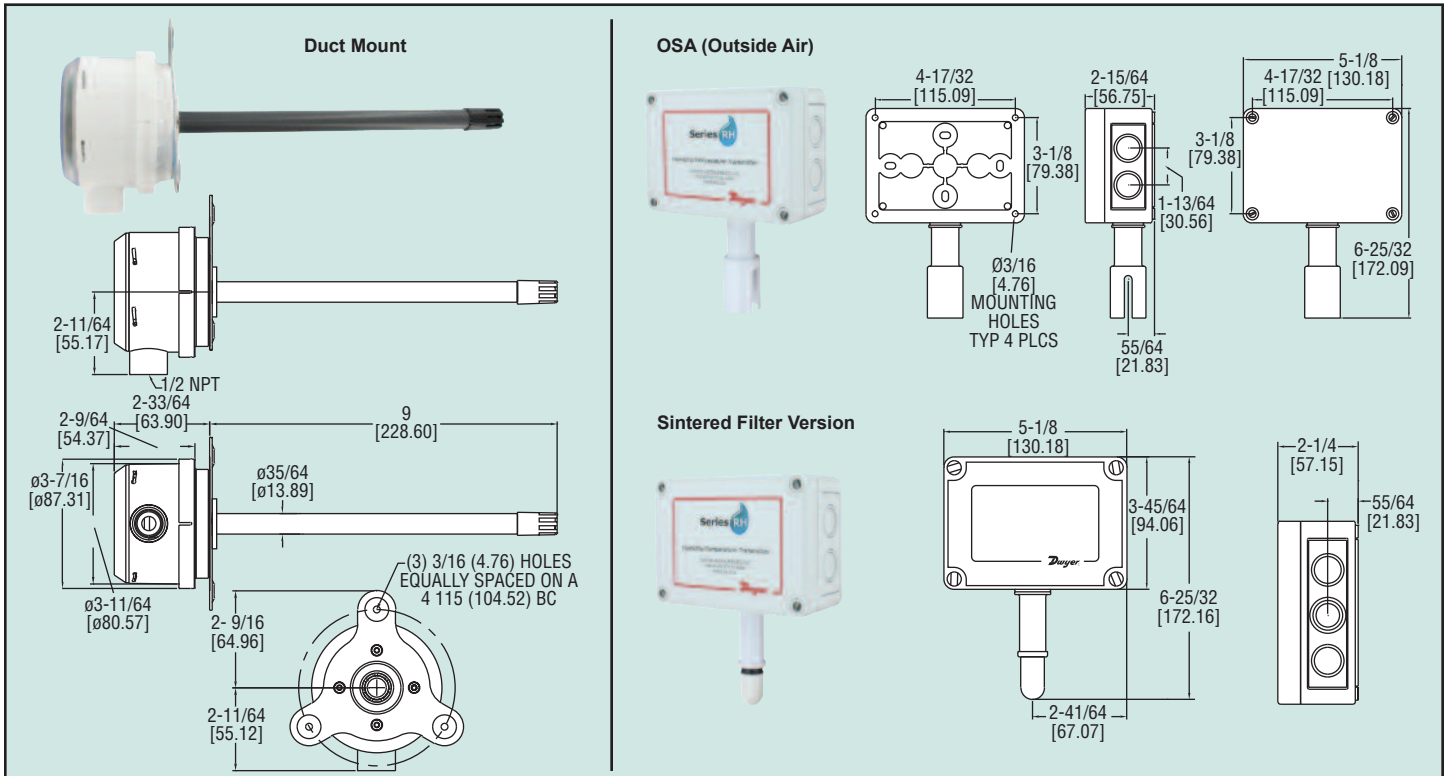
# Humidity/Temperature Transmitter

Passive Temperature Outputs, Sintered Filter Options



AIR QUALITY

Humidity/Temperature Transmitters



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 is not affected by condensation, fog, high humidity, or contaminants. 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. The Series RHP is available with interchangeable filter options as well as replaceable sensors.

<b>Example Series</b>	RHP	2	D	1	A	LCD	RHP-2D1A-LCD
<b>Accuracy</b>	RHP	2					RH/Passive Temperature Sensor Transmitter
		3					2% Accuracy
		5					3% Accuracy
<b>Housing Type</b>			D				Duct Mount w/Membrane Filter
			F				Duct Mount w/Sintered Filter
			O				OSA (Outside Air)
			S				OSA w/Sintered Filter*
			R				Radiation Shield
<b>RH Output</b>				1			4 to 20mA
				2			0 to 10V
				3			0 to 5 VDC
<b>Temperature Sensor</b>				0			None
				1			4 to 20mA
				2			0 to 10 VDC
				3			0 to 5 VDC
				A			10K @ 25°C Thermistor Type III
				B			10K @ 25°C Thermistor Type II
				C			3K @ 25°C Thermistor
				D			100Ω RTD DIN 385
				E			1KΩ RTD DIN 385
				F			20KΩ @ 25°C Thermistor
<b>Option</b>						LCD	LCD Display
						NIST	NIST traceable calibration certificate (Humidity)

\*Model RHRS Radiation Shield is required for sintered filter OSA models.

## 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).

**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 10V @ 5 mA max.

**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:** NEMA 4X (IP66) for OSA mount only.

**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.