Model SRH: Duct Mount

Relative Humidity Sensor

Setra's SRH duct mount humidity sensor offers optional active temperature with choice of 4 to 20 mA or user-selectable 0 to 5 and 0 to 10 VDC output and passive temperature with choice of thermistor or RTD output. The sensor is housed in a polycarbonate 94 V-0, NEMA 4 enclosure making it suitable for harsh environments. The SRH duct mount sensor gives the user the choice of 2%, 3% and 5% RH accuracy to meet the requirements of typical HVAC applications. It features a removable sensor tip, NIST traceability and a durable capacitive sensor capable of a 0 to 99% full scale RH measurement and recovery of 100% saturation.

Replaceable Sensor Tip for Easy Calibration

The SRH offers the industry's easiest replaceable sensor tip. Removing it requires no special training and can be easily replaced by the end user. No calibration is needed because each sensor module is factory calibrated before shipping, reducing downtime during service intervals.

Active & Passive Temperature Outputs

The SRH can be ordered with either a passive (RTD Thermistor) or Active (Analog) temperature output, enabling 2 measurements from 1 device. Units configured with the active temperature options feature jumper selectable Tspan ranges of 40°C, 50°C, and 60°C.

Worry Free 5 Year Warranty

The SRH comes with a 5 year warranty on the electronics and a 2 year warranty on the sensor module, giving the user peace of mind over the life of the product.

- **Passive or Active Temperature Outputs**
- **Durable Capacitive Sensor**
- **Suitable for Harsh Environments**

Model SRH Duct Features:

- Active Temperature With Jumper Selectable Range
- Robust Capacitive Sensor Design
- Low Cost of Ownership
- ±2%, ±3% and ±5% FS Accuracy
- Replaceable Sensor Tip
- Quick Mount, 2 Screw Install With Plug-In Terminal Wiring
- 5 Year Warranty on Electronics
- 2 Year Warranty on Sensor Module
- CE and RoHS Compliant

Applications:

- HVAC/R Control
- Indoor Air Quality (IAQ)
- Laboratories
- Antique Preservation

Phone: 800-257-3872 • Fax: 978-264-0292 • setra.com

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Relative Humidity Sensor

ORDERING INFORMATION

S R H 1 – [ ][ ] – D – [ ][ ] – [ ][ ] – N – [ ]

Model	Accuracy		Configuration		Outputs		Temperature Outputs		Display		Options	
SRH1 = SRH	2P	2%	D	Duct Mount	11	4 - 20 mA	T0	None (RH only)	N	None	C	NIST Certificate of Performance
	3P	3%			2C	0 -5 or 0-10 VDC[2] (user-selectable)	T1	10K ohm Type II Thermistor (Passive)				
	5P	5%[1]					T2	1000 ohm RTD (Passive)				
							T3	-58 to 140°F (-50 to 60°C [Active])[3,4]				
							T5	+14 to 140°F (-10 to 60°C [Active])[3,4]				
							T6	10K ohm Type III Thermistor [Passive]				

Ordering Example: SRH12PD11T0NC = Model SRH, 2% Accuracy, Duct Mount, 4 to20 mA Output, RH only, No Display, NIST Certificate of Conformance

REPLACEMENT SENSOR ASSEMBLY

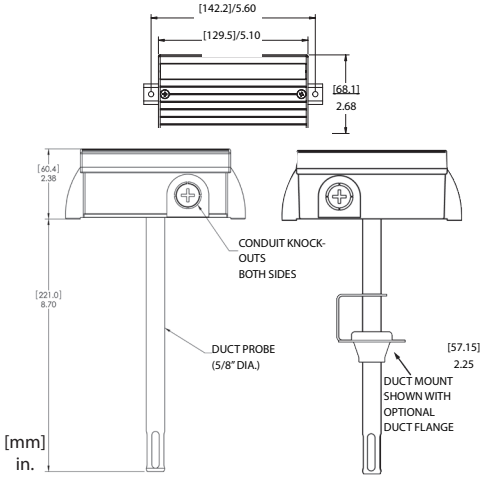
S R H G – [ ][ ] – [ ][ ]

Model	Accuracy		Temperature Outputs	
SRHG = SRH	2P	2%	T0	None (RH only)
	3P	3%	T1	10K ohm Type II Thermistor (Passive)
	5P	5%	T2	1000 ohm RTD (Passive)
			T3	-58 to 140°F (-50 to 60°C [Active])[3]
			T5	+14 to 140°F (-10 to 60°C [Active])[3]
			T6	10K ohm Type III Thermistor [Passive]

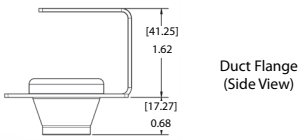
Ordering Example: SRHG2PT0 = 2% Accuracy, RH only.

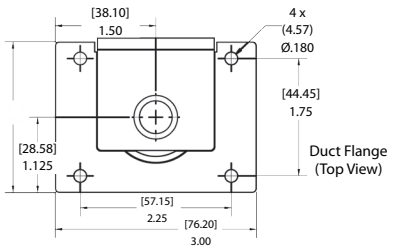
[1] 5% units available only with passive temperature option
[2] Voltage outputs (2C) are factory configured for 0 to 5 VDC operation. User-selectable jumper for 0 to 10 VDC operation.
[3] Tspan jumper factory configured for 60°C. User-selectable Tspan for 40°C and 50°C option provided.
[4] SRH1 units originally ordered with either a T3 or T5 temperature option must be replaced with the same T(x) version.

DIMENSIONS



Optional Duct Flange
Mates with Duct Mount Unit





GENERAL SPECIFICATIONS

RH Performance Data	
Sensing Element	Capacitive Polymer
Humidity Operating Range	0 to 99% RH (non-condensing)
Accuracy @ 68°F (20°C)	±2%, ±3%, ±5% FS[1]
Hysteresis	<1.5%
Non-Repeatability	0.5% FS
Long Term Stability	<1%/Year @ 68°F (20°C), 50% RH
Electrical Data	
Signal Outputs	
Current (2-Wire)	4 to 20mA
Field-Selectable Voltage (3-Wire)	0 to 5 VDC, 0 to 10 VDC
Excitation	13.5 to 30 VDC (10 VDC Output) 12 to 30 VDC (4 to 20 Ma, 5 VDC Output) 24 VAC ±20%
Maximum Load (Current Only)	=(Supply - 10) - 0.02
Electrical Termination	Pluggable Terminal Block (5mm Pitch)
Wiring Protection	Reverse Excitation
Environmental Data	
Operating Temperature °F (°C)	-40 to 140 (-40 to 60)
Storage Temperature °F (°C)	-40 to 158 (-40 to 70)
Moisture Resistance	IP65, NEMA-4 (Duct & Outside Air)
Solar	UV Resistant (Outside Air)
Flammability Rating	94-V0
Compliance	RoHS Compliant, CE Compliant

Temperature Sensing Options (Passive)	
T1: Thermistor	NTC 10K ohm 77°F/25°C (Direct Connect) Type II
T2: RTD Output	1000 ohm 32°F/0°C (Direct Connect)
T6: Thermistor	NTC 10K ohm 77°F/25°C Type III
Temperature Sensing Options (Active)	
T3: Ranges °F (°C) Accuracy @ 68°F (20°C)	-58 to +140 (-50 to +60) Typ @ 50% ±1.1 (±0.6)[2]
T5: °F (°C) Accuracy @ 68°F (20°C)	+14 to +140 (-10 to +60) Typ @ 50% ±0.7 (±0.4)[2]
Signal Output Options (includes humidity output)	
Current	4 to 20mA
Field-Selectable Voltage	0 to 5 VDC, 0 to 10 VDC
Physical Description	
Enclosure Materials	
Wall Mount	VA 94-V0
Duct & Outside Air	Polycarbonate 94-V0
Probe (Duct & Outside Air)	Aluminum
Weather Shield	Porous Polyethylene
Sensor Tip Filter	70 Micron Polypropylene
Dimensions	See Dimensions Drawings

[1] Long term exposure to high humidity may temporarily offset the RH signal (e.g. +3% RH after 60H at >80% RH)
[2] Excitation 24 VDC

Specifications subject to change without notice.

