

Model SRH: Wall Mount Relative Humidity Sensor

Setra's SRH low profile wall mount humidity sensor offers both humidity and temperature with multiple options for accuracy, temperature and outputs. It features a removable sensor tip, NIST traceability and a durable capacitive sensor that is capable of a 0 to 99% full scale RH measurement and recovery from 100% saturation. The SRH offers accuracies of 2%, 3% and 5% to meet the most stringent HVAC applications. The SRH can be ordered with either a passive (RTD Thermistor) or Active (Analog) temperature output, enabling 2 measurements from the same device.

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 measurement 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.



- Low Profile
- Durable Capacitive Sensor
- 0 to 99% Full Scale RH Measurement

Model SRH Features:

- Active Temperature With Jumper Selectable
- Excellent Reliability Through ASIC Technology
- 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

Model SRH: Wall Mount

Relative Humidity Sensor



ORDERING INFORMATION

S R H 1 - [] - W - [] - [] - N - []

| Model | Accuracy | | Configuration | | Outputs | | Temperature Outputs | | Display | | Options |
|------------|----------|----|---------------|------------|---------|--|---------------------|--|---------|------|--------------------------------------|
| SRH1 = SRH | 2P | 2% | W | Wall 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 ¹ (user-selectable) | T1 | 10K Ω Type II Thermistor (Passive) | | | |
| | 5P | 5% | | | | | T2 | 1000 ohms RTD (Passive) | | | |
| | | | | | | | T3 | -58 to 140°F (-50 to 60°C [Active]) ^{2,3} | | | |
| | | | | | | | T5 | +14 to 140°F (-10 to 60°C [Active]) ^{2,3} | | | |
| | | | | | | | T6 | 10K Ω Type III Thermistor [Passive] | | | |

Ordering Example: SRH12PW11TONC = Model SRH, 2% Accuracy, Wall Mount, 4 to 20 mA Output, RH only, No Display, NIST Certificate of Conformance

S R H 3 - [] - []

| Model | Accuracy | | Temperature Outputs | |
|------------|----------|----|---------------------|--|
| SRH3 = SRH | 2P | 2% | T0 | None (RH only) |
| | 3P | 3% | T1 | 10K ohms Type II Thermistor (Passive) |
| | 5P | 5% | T2 | 1000 ohms 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 ohms Type III Thermistor [Passive] |

Replacement Sensor Assembly:

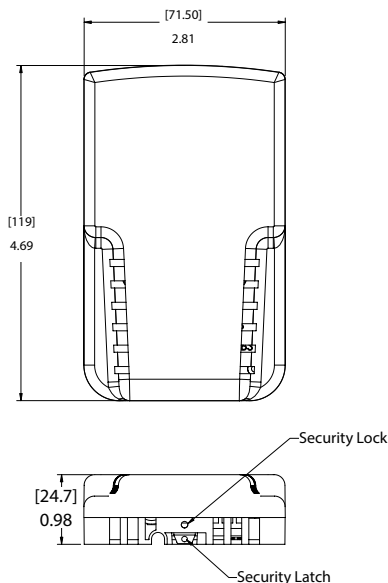
¹ Voltage outputs (2C) are factory configured for 0 to 5 VDC operation. User-selectable jumper for 0 to 10 VDC operation.

² Tspan jumper factory configured for 60°C. User-selectable Tspan for 40°C and 50°C option provided.

³ SRH1 units originally ordered with either a T3 or T5 temperature option Must be replaced with the same T(x) version.

Ordering Example: SRH32PT0 = 2% Accuracy, RH only.

DIMENSIONS



[mm]
in.

GENERAL SPECIFICATIONS

| RH Performance Data | | Temperature Sensing Options (Passive) | |
|-----------------------------------|---|--|--|
| Sensing Element | Capacitive Polymer | T1: Thermistor | NTC 10K Ω 77°F/25°C (Direct Connect) Type II |
| Humidity Operating Range | 0 to 99% RH (non-condensing) | T2: RTD Output | 1000 Ω 32°F/0°C (Direct Connect) |
| Accuracy @ 68°F (20°C) | 2%, 3%, 5% ¹ | T6: Thermistor | NTC 10K Ω 77°F/25°C Type III |
| Non-Repeatability | 0.05% FS | Temperature Sensing Options (Active) | |
| Long Term Stability | <1%/Year @ 68°F (20°C), 50% RH | T3: Ranges °F (°C) Accuracy @ 68°F (20°C) | -58 to +140 (-50 to +60) Typ @ 50% ±1.1 (±0.6) ² |
| Electrical Data | | T5: °F (°C) Accuracy @ 68°F (20°C) | +14 to +140 (-10 to +60) Typ @ 50% ±0.7 (±0.4) ² |
| Signal Outputs | | Signal Output Options (includes humidity output) | |
| Current (2-Wire) | 4 to 20mA | Current | 4 to 20mA |
| Field-Selectable Voltage (3-Wire) | 0 to 5 VDC, 0 to 10 VDC | Field-Selectable Voltage | 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) | Physical Description | |
| Maximum Load (Current Only) | =(Supply - 10) - 0.02 | Enclosure Materials | |
| Electrical Termination | Pluggable Terminal Block (5mm Pitch) | Wall Mount | VA 94-V0 |
| Wiring Protection | Reverse Excitation | Duct & Outside Air | Polycarbonate 94-V0 |
| CE Compliance | EMC Directive 2004/108/EC | Probe (Duct & Outside Air) | Aluminum |
| Environmental Data | | Weather Shield | Porous Polyethylene |
| Operating Temperature °F (°C) | -40 to 140 (-40 to 60) | Sensor Tip Filter | 70 Micron Polypropylene |
| Storage Temperature °F (°C) | -40 to 158 (-40 to 70) | Dimensions | See Dimensions Drawings |
| Moisture Resistance | IP65, NEMA-4 (Duct & Outside Air) | ¹ 5% units available only with passive temperature option. ² Excitation 24 VDC ±10% | |
| Solar | UV Resistant (Outside Air) | Specifications subject to change without notice. | |
| Flammability Rating | 94-V0 | | |
| Compliance | RoHS Compliant, CE Compliant | | |