# Model SRH300

Humidity and Temperature Transmitter

## Features

- Excellent long-term stability
- BACnet MS/TP and Modbus RTU compatible
- Sensor coating protects sensing element and extends performance
- Display with selectable layout
- Wall, duct, and remote probe options available

## Applications

- HVAC
- Cleanrooms
- Operating rooms
- Patient isolation rooms
- Pharmaceutical labs
- Industrial manufacturing
- Compounding pharmacies

The Setra Model SRH300 meets the highest requirements in demanding climate control applications. In addition to the accurate measurement of relative humidity (RH) and temperature (T), the Model SRH300 calculates various RH related parameters such as dew point, absolute humidity and mixing ratio.

## Compatible on multiple protocols

All measured and calculated values are available through analog, BACnet MS/TP or Modbus RTU communication. Up to three of these values can be shown simultaneously on the customizable display.

## Suitable for harsh environments

Excellent performance of the Model SRH300 in aggressive or polluted environments is ensured by encapsulating the measurement electronics inside the sensing probe with a proprietary coating.

The Model SRH300 is available in wall or duct mounted versions as well as with remote probe. The IP65/NEMA4 enclosure minimizes installation costs and provides outstanding protection against contamination and condensation.

With the optional configuration accessories (SETRAPCA1 and SETRAPCA3), the user can set RS485 interface parameters, custom output scaling, and perform one or two-point adjustment of RH and temperature on any SRH300 unit.

800.257.3872 | www.setra.com

# Ordering information

## General

**Power Supply**

| | |
|---|---|
| *for 4-20 mA, 2-wire:* | $10\,V + R_L \times 20\,mA < V+ < 30\,VDC$ |
| *for 0-20 mA, 3-wire:* | 15-30 VDC or 24 VAC ±20% |
| *0-5 V, 0-10 V, RS485:* | 15-30 VDC or 24 VAC ±20% |

**Current consumption at 24 V**

| | |
|---|---|
| *Voltage output:* | DC supply max: 12 mA; w/display max: 23 mA<br>AC supply max: 34 $mA_{rms}$; / display max: 49 $mA_{rms}$ |
| *Current output (2-wire):* | DC supply max: 40 mA; w/display max: 40 mA |
| *Current output (3-wire):* | DC supply typ: 33 mA; w/display max: 44 mA<br>AC supply typ: 65 $mA_{rms}$; / display max: 84 $mA_{rms}$ |
| *Digital interface:* | DC supply typ: 5 mA; w/display max: 20 mA<br>AC supply typ: 15 $mA_{rms}$; / display max: 35 $mA_{rms}$ |

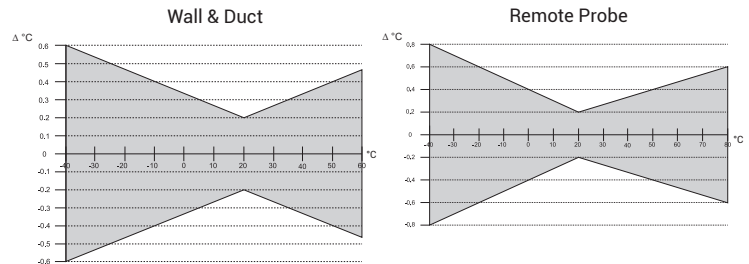| | |
|---|---|
| **Display** | 1, 2 or 3 lines, user configurable |
| **Connection** | Screw terminals, max. wire 16 AWG |
| **Housing material** | Housing: Polycarbonate, UL94V-0<br>Faceplate: Polycarbonate UL94HB |
| **Protection class** | IP65/ NEMA 4 |
| **Gland fitting** | PG9 |
| **Remote probe cable** | PVC, Ø 4.3mm, 4 x 23 AWG;<br>Length: 1.5 or 3 m (4.9 or 9.8 ft.) |
| **Electromagnetic compatibility** | EN61326-1 EN61326-2-3 Industrial Environment |
| **Temperature ranges** | Operating: -4 to 122°F (-20 to 50°C)<br>Storage: -4 to 140°F (-20 to 60°C) |

Specifications subject to change without notice.

## Measured values

| | |
|---|---|
| **Working range (RH)** | 0-100% RH |
| **Accuracy including non-linearity, hysteresis, and repeatability at 5 to 105°F ; 50% RH** | ±1.45% RH |
| **Remote probe:** accuracy including non-linearity, hysteresis, and repeatability at 68°F | ±2.5% RH |

**T-accuracy**



Wall & Duct          Remote Probe

## Outputs

**Analog output**

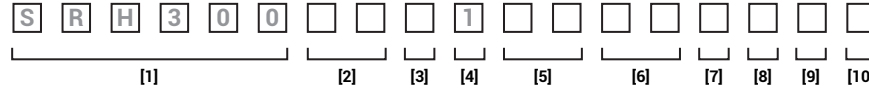| | |
|---|---|
| *0-5 V, 0-10 V:* | $-1\,mA < I_L < 1\,mA$ |
| *4-20 mA (2-wire):* | $R_L \le 500\,\Omega$ |
| *0-20 mA (3-wire):* | $R_L \le 500\,\Omega$ |

| | |
|---|---|
| **Digital output** | RS485 (BACnet MS/TP or Modbus RTU),<br>max. 32 SRH300 units on one bus |

# Ordering information

Example part number (base unit): SRH30011D105SSNAAA;
*Model SRH300 humidity transmitter, 4-20 mA output, duct mount, one sensor port, 50mm probe length, SST sintered filter, non-metric units, Analog*

| S | R | H | 3 | 0 | 0 | | | | 1 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | [1] | | | | [2] | [3] | [4] | [5] | | [6] | [7] | [8] | [9] | [10] |

| [1] | | [2] | | [3] | | [4] | | [5] | | [6] | | [7] | | [8] | | [9] | | [10] | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Model** | | **Output** | | **Type** | | **Number of sensor ports** | | **Probe length** | | **Filter type** | | **Units** | | **Baud rate** | | **Parity** | | **Stop bits** | |
| **SRH300** | | **11** | 4 to 20 mA | **W** | Wall mount | **1** | One | **05**[1] | 50 mm long | **SS** | Sintered | **M** | Metric | **A** | Analog unit | **A** | Analog unit | **A** | Analog unit |
| | | **2C** | 0 to 10 V | **D** | Duct mount | | | **20** | 200 mm long | | | **N** | Non-metric | **1** | 9600 | **B** | BACnet unit | **B** | BACnet |
| | | **A2** | BACnet | **N** | Duct mount (no display) | | | **1R** | Remote probe 1.5M cable | | | | | **2** | 19200 | **1** | Odd | **1** | 1 stop bit |
| | | **M3** | Modbus | | | | | **3R**[3] | Remote probe 3.5M cable | | | | | **3** | 38400 | **2** | Even | **2** | 2 stop bits |
| | | | | **M** | Wall mount (no display) | | | | | | | | | **4**[2] | 51600 | **N** | No parity | | |
| | | | | | | | | | | | | | | **5**[2] | 76800 | | | | |
| | | | | | | | | | | | | | | **6**[2] | 115200 | | | | |

[1] Wall mount probe only available in 50mm length.
[2] Only available with output option "A2".
[3] Configuration codes 6 through 10 can be re-configured after purchase
If ordering a remote probe unit, the "Type" [3] configuration selects the mounting hardware for the probe.
     (wall mount configuration includes (SRHWMC)
     (duct mount configuration includes (SRHMFG)

# Accessories

## Filters

| | |
|---|---|
| **SRHMF** | Membrane filter |
| **SRHSS** | SST sintered filter |
| **SRHPG** | Plastic grid filter |
| **SRHPF** | PTFE filter |
| **SRHMG** | Metal grid filter |
| **SRHHP** | $H_2O_2$ filter |

## Probe configuration adapter

| | |
|---|---|
| **SETRAPCA1** | Configuration transmitter, RS232/USB |
| **SETRAPCA3** | Configuration cable, SRH300 analog/digital & SRH200 digital |

## Flanges

| | |
|---|---|
| **SRHPMFB** | Plastic duct mounting flange, black |
| **SRHPMFG** | Plastic duct mounting flange, grey |
| **SRHWMC** | Wall mounting clip |

## Replacement probe & cable assembly

| | |
|---|---|
| **SRP300HTMFPE** | 1.5 meter assembly with membrane filter |
| **SRP300HTMFPT** | 3 meter assembly with membrane filter |

## Calibration

| | |
|---|---|
| **SRH300SCAL** | SRH300 calibration to ISO standard |
| **SRH300NCAL** | SRH300 calibration to NIST standard |

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