

SpaceLogic Sensors

SHO2 Series Outdoor Humidity Sensors



Product Description

SpaceLogic SHO2 Series Humidity Transmitters provide an ideal solution for measuring relative humidity in a wide range of humidity conditions. All models are equipped with a solid state capacitive humidity sensor that is easy to replace in the field. The housing is weatherproof and intended for outdoor mounting.

The SHO2 is an all-in-one device combining humidity and temperature sensing. The device ensures a building's optimum temperature and humidity levels, resulting in greater energy efficiency.

Each device is an active sensor that converts a humidity or temperature measurement into an analog output: current output (4-20 mA) or voltage output (0 to 5 Vdc or 0 to 10 Vdc).

Different models are available based on application requirements for lower-cost installations.

Features

- Easy to install:
 - Latch-on sensor cover
 - Screwless terminal block wiring with spring actuator
 - Mounting accessory adjusts probe length in duct
- Quick to commission with selectable outputs:
 - Analog DIP switch selectable output: 4 to 20 mA, 0 to 5 Vdc, 0 to 10 Vdc
 - 2-wire, 4-20 mA version for flexible system compatibility, saves time in the field
- 2% with NIST certificate, 2% RH module – field replaceable
- All passive temperature thermistor sensors include a 1-point measurement for offset correction
- Solid state temperature sensor providing high accuracy measurements
- Multiple temperature thermistors and transmitter options, compatible with a wide range of controllers
- 2-point calibration certificate available for humidity and temperature or temperature-only replaceable module
- Key component for the LEED green building program and WELL Building Standard*

*Leadership in Energy and Environmental Design (LEED) is a registered trademark of the US Green Building Council. The WELL Building Standard is a trademark of the International WELL Building Institute in the United States and other countries.

Available Products

SHO2	User Interface <input type="checkbox"/> X	Output <input type="checkbox"/> A	RH Sensor <input type="checkbox"/> 2	Temperature <input type="checkbox"/>
	X = None	A = Analog output	2 = 2%	A = Transmitter only C = 1000 PT RTD H = 10K T3 thermistor

Example:

SHO2 X A 2 A

Note: Replaceable RH and temperature modules available to be ordered separately per table below.

USA: +1 888-444-1311
 Europe: +46 10 478 2000
 Asia: +65 6484 7877
www.schneider-electric.com

Life Is On



Replaceable RH Elements & Temperature and Humidity Calibration Modules

Part Number	Description
SLXRHS2N	Replaceable RH sensor, 2% with NIST certificate
SLXRHS2X	Replaceable RH sensor, 2%
SLXXT2*	Replaceable temperature module with 2-point calibration certificate
SLXRHT2*	Replaceable temperature and humidity module with 2-point calibration certificate

*For temperature transmitter models only.

Specifications

Operating and Storage Environment	
Operating temperature	-40 to 55 °C (-40 to 131 °F)
Operating humidity	0 to 95% RH (non-condensing)
Storage temperature	-40 to 60 °C (-40 to 140 °F)
Storage humidity	0 to 95% RH (non-condensing)
Power supply	3-wire volt mode: 20 to 30 Vdc, 24 Vac, 50 to 60 Hz; loop powered 20 to 30 Vdc
Output	Selectable 4 to 20 mA, 0 to 5 Vdc, 0 to 10 Vdc
Power consumption	0.8VA @ 24VAC Voltage Mode 0.96W @ 24V DC Current Mode
Output load	Voltage mode \geq 5K Ohms Current mode \leq 250 Ohms
Medium	Neutral gas, air
Housing material	Polycarbonate; Flammability rating UL 94 V0
Mounting location	For outdoor use
IP rating	IP 65
Protection class	Class III
Humidity Sensor	
Sensor type	Solid state capacitive, replaceable
Accuracy*	\pm 2% from 10 to 80% RH @ 25 °C (77 °F) \pm 2% NIST and 2% replaceable option
Hysteresis	1.5% typical
Linearity	Included in accuracy specification
Stability	\pm 1% @ 20°C (68 °F) annually for 2 years
Output range	0 to 100% RH
Temperature coefficient	\pm 0.1% RH/°C above or below 25 °C (77 °F) typical
Temperature Sensor	
Sensor type	Solid state, integrated circuit
Temp. sensing element**	10K T3 thermistor, 1000 PT RTD
Time constant	Air velocity 1.5 m/s. approx. 72 s; Air velocity 3.0 m/s. approx. 52 s
Accuracy***	\pm 0.2 °C (\pm 0.4 °F) typical
Resolution	0.1 °C (0.1 °F)

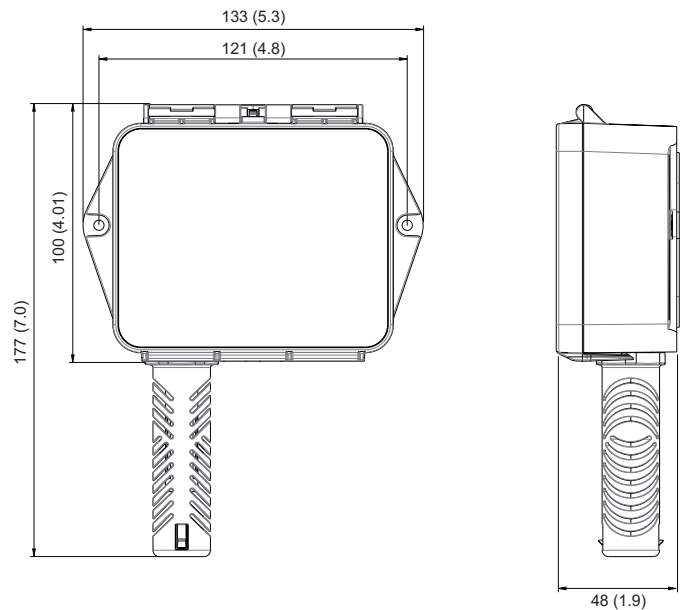
Range	-40 to 55 °C (-40 to 131 °F)
Wiring Terminals	
Wiring	Screwless terminal block with spring actuator, 16-24 AWG
Warranty	
Limited warranty	2 years
Regulatory Information	
Agency approvals	UL 916 European conformance CE: EN61000-6-2, EN61000-6-3, EN61000 Series immunity, EN 61326-1 FCC Part 15 Class A Green Premium (REACH, RoHS), RoHS 2 (China), RCM (Australia), ICES-001 (Canada), UKCA (UK)

* Humidity sensor measurement uncertainty should include: accuracy, hysteresis, temperature coefficient and stability. Humidity accuracy range up to -20 °C.

** See thermistor table GEX9732701 for accuracy.

*** \pm 0.5 °C accuracy from 0 to 55°C, \pm 1°C accuracy from -40 to 0 °C.

Dimensions mm (in.)



USA: +1 888-444-1311
Europe: +46 10 478 2000
Asia: +65 6484 7877
www.schneider-electric.com

Life Is On

Schneider
Electric