

SpaceLogic Sensors

SLA Series Humidity Sensors – Analog

SLA Series Temperature Sensors – Analog



Note: A subset of models shown.

Product Description

The SpaceLogic SLA Series of humidity and temperature sensors for living space is a flexible multisensor platform for use with BAS controllers designed to accept 4 to 20mA, 0 to 5Vdc or 0 to 10Vdc outputs. Housings are available in Medium matte white and Optimum faces available in black and white. All housing types are available with three user interface options: touchscreen, LCD with three buttons and blank. Temperature sensors are included with all SLA Series humidity sensors.

Features

- Medium matte white housing or optimum glass panel housing available in white or black
- Humidity versions feature a replaceable RH element available in 1% & 2% with NIST certificate
- Temperature output on all models
- 61 mm (2.4") backlit color touchscreen and LCD, three button display options available
 - Digital temperature indication (0.1° display resolution of °F or °C)
 - Digital humidity indication (0.1% RH display resolution)
 - Selectable temp, RH and fan speed setpoint (0-10V)
 - Configurable screen/button lock and display timeout
 - Override
- Selectable 4 to 20mA, 0 to 5V and 0 to 10V analog outputs
- 18-24 AWG screw terminals

Available Products Matrix

SLA	Housing	User Interface	RH Sensor*
	☐	☐	☐
	S = Medium white matte housing	T = Color touchscreen	2 = 2% RH** and temp.
	W = Optimum white housing	L = 3-button LCD display	X = Temperature only
	B = Optimum black housing	X = None	

Example:

SLA	☐	☐	☐	☐
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*Replaceable RH module available to be ordered separately per table below.

Replaceable RH Elements

Model	RH Accuracy	Calibration Certificate	Description
SLXRHS1N	±1%	X	Replaceable RH Sensor, 1% w/NIST Cert
SLXRHS2N	±2%	X	Replaceable RH Sensor, 2% w/NIST Cert
SLXRHS2X	±2%		Replaceable RH Sensor, 2%

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Specifications

Operating Environment	
Input power	Class 2; 20 to 30 Vdc, 24 Vac, 50 to 60 Hz
Analog output	Selectable 4 to 20 mA, 0 to 5 V, 0 to 10 V
Operating temp. range	0 to 50 °C (32 to 122 °F)
Operating humidity range	0 to 95% RH non-condensing
Housing material	High impact ABS plastic
IP rating	IP 30
Mounting location	For indoor use only. Not suitable for wet locations.
Surface mount	The device can be surface mounted on Single Gang J-Box, British Standard and CE60 wall boxes
RH Sensor Option	
HS sensor	Solid state capacitive, replaceable
Accuracy*	±2% from 10 to 80% RH @ 25°C (77 °F)
Hysteresis	1.5% typical
Linearity	Included in accuracy specification
Stability	±1% @ 20°C (68 °F) annually for 2 years
Output range	0 to 100% RH
Temperature coefficient	±0.1% RH/°C above or below 25 °C (77 °F) typical
Temperature Sensor	
Sensor type	Solid state, integrated circuit
Accuracy	±0.2 °C (±0.4 °F) typical
Resolution	0.1 °C (0.1 °F)
Range	0 to 50 °C (32 to 122 °F)
Display Models	
Touchscreen	61 mm (2.4 in), color, backlit, capacitive, 240x300px Setpoint: 0-10Vdc. Temperature, humidity** or fan speed selectable*** Timeout override: Display timeout*** Lockout override: Touchscreen/button lockout***
LCD	52mm (2.05 in), segmented with 3 buttons Setpoint: 0-10Vdc. Temperature, humidity** or fan speed selectable Timeout override: Display timeout*** Lockout override: Touchscreen/button lockout***
Setpoints****	
Temperature setpoint	0 to 10V output Scale: 10 to 35 °C (50 to 95 °F) / 0 to 50 °C (32 to 122 °F)
Humidity setpoint	0 to 10V output Scale: 0 to 100% RH
Fan speed setpoint	0 to 10V output Off 0V, Auto 1.5V, Low 3.3V, Med. 6.7V, High 10.0V
Override	
Override button	Display models feature a momentary-to-ground override button

Wiring Terminals

Terminal blocks	Screw terminals, 18-24 AWG
Screw terminal torque	0.2 N-m (2.0 in-lbF) max.

Regulatory Information

Agency approvals	UL 916, European conformance CE: EN61000-6-2 EN61000-6-3
	EN61000 Series - industrial immunity EN 61326-1
	FCC Part 15 Class B, REACH, RoHS, Green Premium, RCM (Australia), ICES-003 (Canada), EAC (Russia), UKCA (UK)

* Humidity sensor measurement uncertainty should include: accuracy, hysteresis, temperature coefficient and stability.

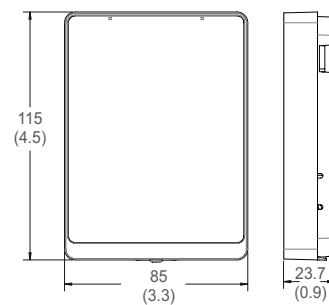
** DIP switch selectable.

*** Does not appear on temperature-only models.

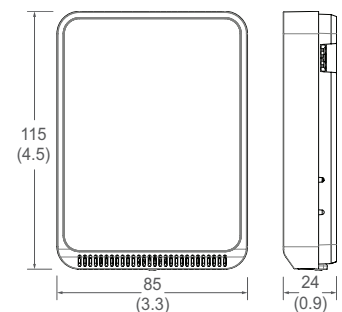
**** One setpoint type is selectable via DIP switch on display models only.

Dimensions mm (in.)

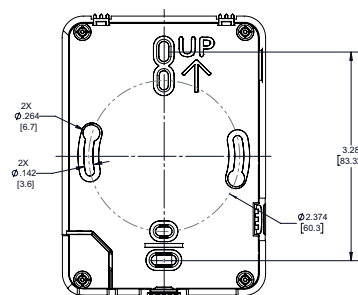
Optimum Housing



Medium Housing



Base Hole Measurement



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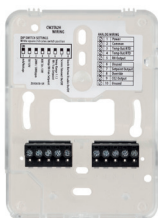
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Installation

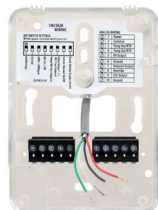
1. Remove the cover from the base at the bottom of the device.



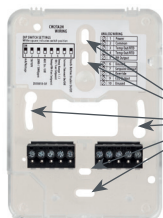
2. Position the sensor base vertically on the wall 1.35 m (4.5 ft.) above the floor with the "UP" arrow facing upward. Locate away from windows, vents and other sources of draft. If possible, do not mount on an external wall, as this may cause inaccurate temperature readings.



3. Pull 18 or 22 AWG cable(s) through the hole in the backplate.

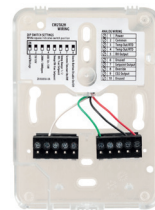


4. Mount the backplate onto the wall using the screws provided.

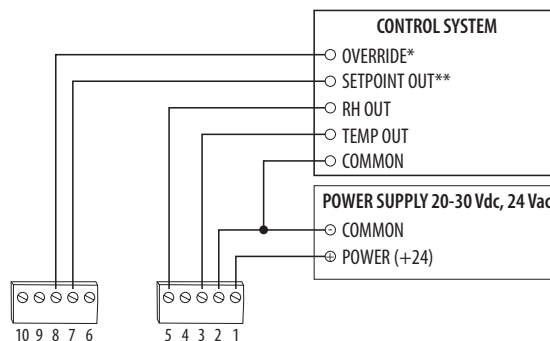


Six screw holes available. Use a minimum of two for secure mounting.

5. Connect the wires to the screw terminals. Do not over-tighten the screws.



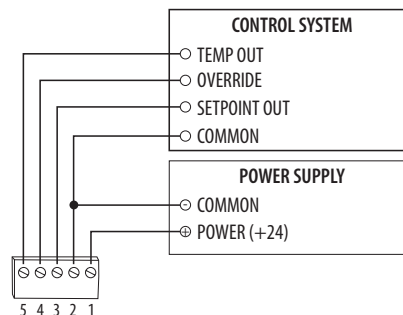
Wiring for models with RH and Temperature:



* Momentary to ground.

** 0-10V DIP switch selectable for temperature, RH (if equipped) or fan speed (Off 0V, Auto 1.5V, Low 3.3V, Medium 6.7V or high 10V).

Wiring for models with LCD and Temperature transmitter only (SLASLXX, SLABLXX and SLAWLXX):



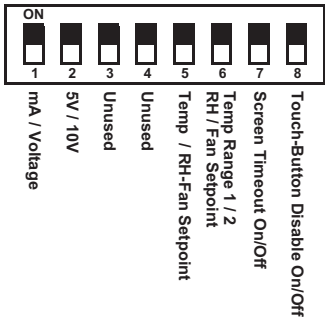
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Installation (cont.)

Set the DIP switches.



Switch	Function	Description
1	Output mode	ON - 4-20mA output mode enabled OFF - Voltage output mode enabled
2	Voltage output range*	ON - 0-5V output range enabled OFF 0-10V output range enabled
3	Unused	Unused
4	Unused	Unused
5	Setpoint output type	ON - Temperature setpoint enabled (temp range selected on DIP switch 6) OFF** - RH or Fan Speed setpoint enabled (specific setpoint output type to be selected on DIP switch 6) Models without RH option select only temp or fan setpoint
6	Setpoint output temperature range or RH/Fan Speed output type	Temperature setpoint (must be enabled on DIP switch 5) ON - Temp range 1, 50 to 95 °F (10 to 35 °C) enabled OFF - Temp range 2, 32 to 122 °F (0 to 50 °C) enabled RH or Fan Speed setpoint (must be enabled on DIP switch 5)*** ON - RH setpoint enabled OFF - Fan Speed setpoint enabled Models without RH option, set to OFF
7	Display times out and turns off after 6-10 seconds of touchscreen/button press	ON - Display Timeout enabled OFF - Display Timeout disabled
8	Touchscreen touch functions and buttons are disabled	ON - Touchscreen touch/button functions disabled OFF - Touchscreen touch/button functions enabled

* Only used with voltage output mode enabled. Not applicable to setpoint output. Setpoint is 0-10V fixed.
** Models without RH: OFF is for fan setpoint type.
*** No selection needed on non-RH models.

6. With sensor base fully installed, align top of cover to mounting tabs on top of sensor base. Swing cover downward until it latches at the bottom.

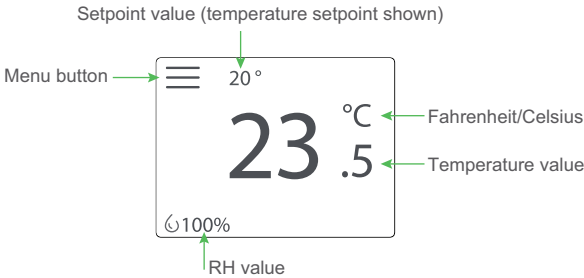


7. Install locking screw to secure cover in closed position.



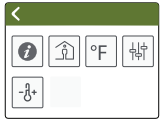
Touchscreen Operation
Main Screen

The touchscreen user interface displays applicable sensor output values (temperature and RH), setpoint value and menu button.

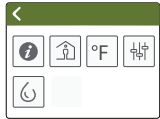


Menu Screen

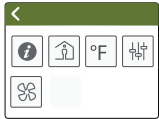
The menu screen opens when pressing the Menu button on the main screen. Integrator's submenu, occupancy/override, Fahrenheit/Celsius, settings and setpoint submenu (temp, RH or fan, determined by DIP switch settings) are displayed on the menu screen.



Temperature setpoint
DIP switch selected



RH setpoint*
DIP switch selected

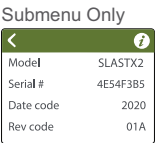


Fan Speed setpoint
DIP switch selected

* Does not appear on temperature-only models.

Menu Button Functions

 **Integrator's Submenu**
Press this icon to access the Integrator's menu.



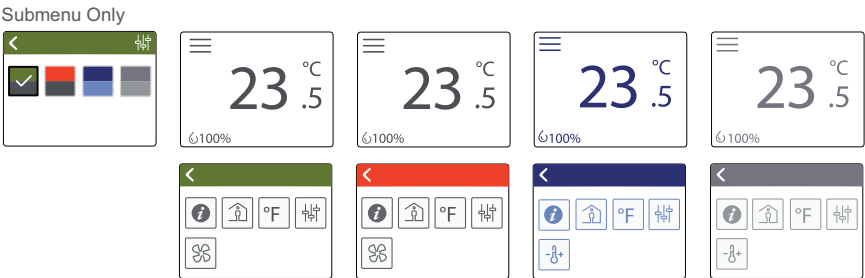
 **Occupied Override Button**
Press this icon to provide momentary ground output to the controller

Single Press Only
 Signals occupied/override call to controller.

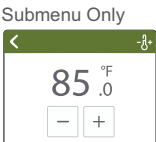
 **Fahrenheit/Celsius Switch**
Press this icon to display either °C or °F.

Single Press Only
 Changes units to Fahrenheit when pressed.
 Changes units to Celsius when pressed.

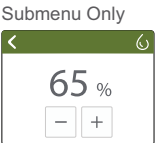
 **Settings**
This icon provides the ability to change the color scheme of the display.



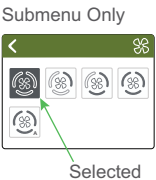
 **Temp Setpoint Adjustment**
Click this icon to access the setpoint change menu. Mutually exclusive with fan speed, set by DIP switch.



 **Humidity Setpoint Adjustment**
Click this icon to access the setpoint change menu. Mutually exclusive with humidity and fan speed. Set by DIP switch.*

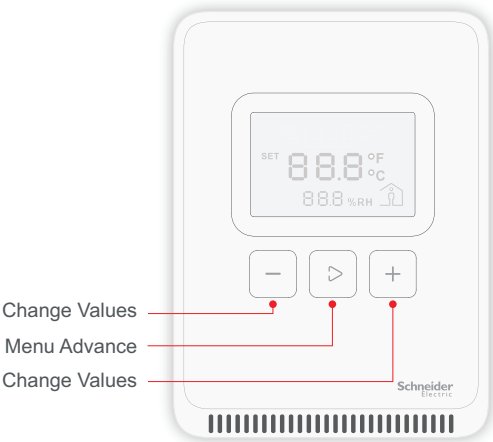


 **Fan Speed**
Click this icon to access the fan speed menu. Mutually exclusive with humidity and fan speed. Set by DIP switch.

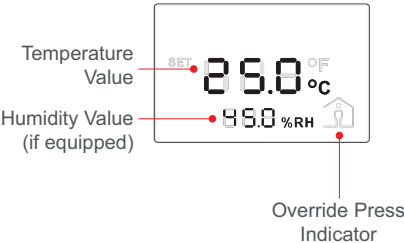


* Does not appear on temperature-only models.

LCD Display Operation
Button Functions

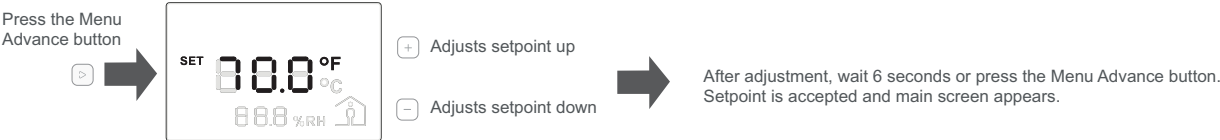


Display Icons
The main screen displays sensor values for RH (if equipped), temperature and Celsius/Fahrenheit.



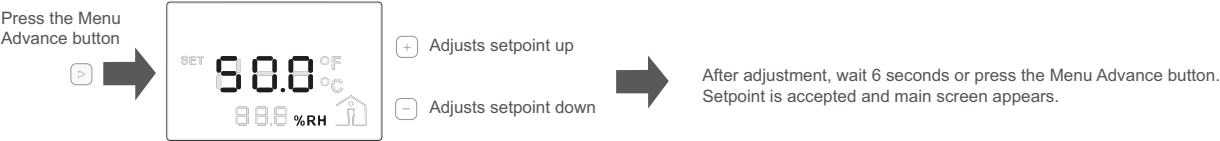
Setpoint Function
A single 0-10V setpoint (temperature, RH (if equipped) or fan speed) can be selected via DIP switch.

Temperature Setpoint Adjustment



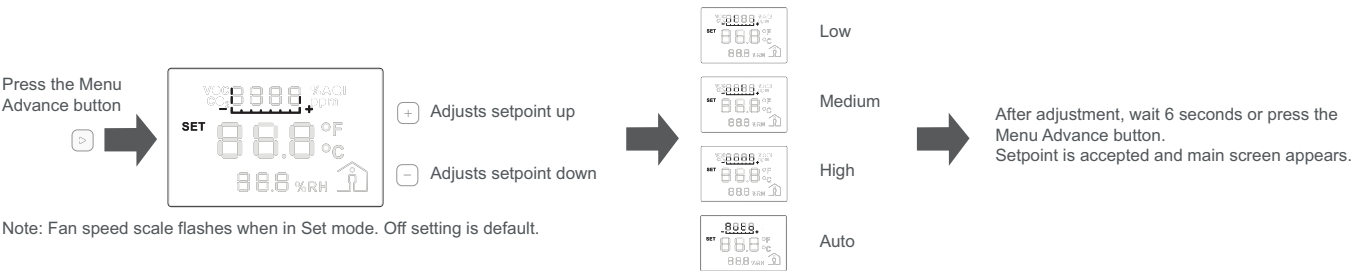
Note: Numeric information will flash while in Set mode.

RH Setpoint Adjustment



Note: Numeric information will flash while in Set mode.

Fan Speed Setpoint Adjustment



Note: Fan speed scale flashes when in Set mode. Off setting is default.

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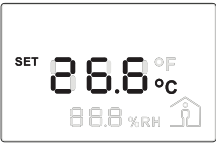
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Setpoint Function (cont.)

Changing Celsius and Fahrenheit Scales

Press the Menu Advance button





 Adjusts from °F to °C

 Adjusts from °C to °F

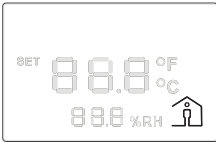
After adjustment, wait 6 seconds or press the Menu Advance button to return to the main screen.

Note: °F or °C text will flash while in Set mode.

Occupied/Override Button

Press and hold the Menu Advance button for 1 second





Override Press Indicator illuminates for 6 seconds.

China RoHS Compliance Information
Environment-Friendly Use Period (EFUP) Table

部件名称		有害物质 - Hazardous Substances				
Part Name	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
电子件 Electronic	X	O	O	O	O	O

本表格依据SJ/T11364的规定编制。

O: 表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572规定的限量要求以下。

X: 表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572规定的限量要求。

(企业可在此处，根据实际情况对上表中打“X”的技术原因进行进一步说明。)

This table is made according to SJ/T 11364.

O: indicates that the concentration of hazardous substance in all of the homogeneous materials for this part is below the limit as stipulated in GB/T 26572.

X: indicates that concentration of hazardous substance in at least one of the homogeneous materials used for this part is above the limit as stipulated in GB/T 26572

Z000057-0B

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