SpaceLogic Sensors
SXWS LCD Temperature Sensors

Product Description

SXWS sensors are a family of living space sensors for use with MP and RP Series controllers that use the EcoStruxure Building Operation software user interface. These sensors use an RJ-45 Sensor Bus which provides communication and power from the controller.

The SXWS LCD Temperature Sensor includes the sensor base and cover. This cost-effective living space sensor displays temperature and mode status on the LCD display. The three front cover buttons allow the user to adjust temperature setpoint, fan speed, heating and cooling mode, occupancy/override mode and Celsius/Fahrenheit temperature scales.

Features

- Medium matte white housing or optimum glass panel housing available in white or black
- Digital temperature indication (selectable for 0.1 or 1 degree display resolution of °F or °C).
- Pushbutton override capability allows occupants to switch to timed occupied mode for after hours operation
- Displays selected system values such as setpoints, outdoor air temperature, and operating mode
- Provides the ability to change operating modes
- Directly connects to MP or RP Sensor Bus with EcoStruxure Building Operation software version 2.0 or greater
- Sensor bus provides power and communication via RJ-45 over Cat 5/6 cable (22 to 26 AWG)

Applicable Documentation

Title	Description
SXWS Living Space Sensor Base	Installation instructions for all base variants
SXWS Living Space Sensor Blank Cover	Installation instructions for blank cover without occupancy sensor
SXWS Living Space Sensor Button and Occupancy Covers	Installation instructions for 3-button covers with and without occupancy sensors and blank cover with occupancy sensor
SXWS Living Space Sensor Touchscreen Cover	Installation instructions for touchscreen models with and without occupancy sensors
SXWS Living Space Resistive Temperature Sensor	Non-communicating temperature sensor installation instructions

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Available Products

Combination Base/Cover Sensors

Model Number	Temp	RH	CO_2	Cover	IP Controller System Bus	Resistive Only (10K T3)
SXWSATXXXSLX*	X			Included - Medium White	X	
SXWSATXXXSLW*	X			Included - Optimum White	X	
SXWSATXXXSLB*	X			Included - Optimum Black	X	
SLASXXX	X			Included - Medium White		X
SLAWXXX	X			Included - Optimum White		X
SLABXXX	X			Included - Optimum Black		X

SXWS Sensor Bases

Model Number	Description	Temp	RH	CO_2	Cover	IP Controller System Bus (Communicating)
SXWSBTXXXSXX	Sensor Base, Temperature	X			Not Included	X
SXWSBTHXXSXX	Sensor Base, Temperature, Humidity	X	X		Not Included	X
SXWSBTXCXSXX	Sensor Base, Temperature, CO_2	X		X	Not Included	X
SXWSBTHCXSXX	Sensor Base, Temperature, Humidity, CO_2	X	X	X	Not Included	X

SXWS Covers**

Model Number	61mm (2.4") Color Touchscreen with Light & Blind Control	Override	Setpoint	Off-Touchscreen Light & Blind Control Buttons	Off-Touchscreen Light Control Buttons	Occupancy Sensor (PIR)	Housing Finish
SXWSCDXSELXX	X	X	X				Medium, White
SXWSC3XSELXX		X	X				Medium, White
SXWSCBXSELXX							Medium, White
SXWSCDPSELXX	X	X	X			X	Medium, White
SXWSC3PSELXX		X	X			X	Medium, White
SXWSCBPSELXX						X	Medium, White
SXWSCDXSELXW	X	X	X				Optimum, White
SXWSC3XSELXW		X	X				Optimum, White
SXWSCBXSELXW							Optimum, White
SXWSCDPSELXW	X	X	X			X	Optimum, White
SXWSC3PSELXW		X	X			X	Optimum, White
SXWSCBPSELXW						X	Optimum, White
SXWSCDXSELXB	X	X	X				Optimum, Black
SXWSC3XSELXB		X	X				Optimum, Black
SXWSCBXSELXB							Optimum, Black
SXWSCDPSELXB	X	X	X			X	Optimum, Black
SXWSC3PSELXB		X	X			X	Optimum, Black
SXWSCBPSELXB						X	Optimum, Black
SXWSC2XSELXW	X	X	X		X		Optimum, White
SXWSC4XSELXW	X	X	X	X			Optimum, White
SXWSC2PSELXW	X	X	X		X	X	Optimum, White
SXWSC4PSELXW	X	X	X	X		X	Optimum, White
SXWSC2XSELXB	X	X	X		X		Optimum, Black
SXWSC4XSELXB	X	X	X	X			Optimum, Black
SXWSC2PSELXB	X	X	X		X	X	Optimum, Black
SXWSC4PSELXB	X	X	X	X		X	Optimum, Black

* Covered by these installation instructions.
** SXWS covers will not work with combination base/cover sensors.

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Specifications

Temperature Sensor	
Accuracy	±0.2 °C (±0.36 °F) typical
Setpoint	Temperature (allowable span set in EcoStruxure Building Operation software)
Fan Speed	3-speed, automatic or off
Override	Overrides unoccupied mode (duration and comfort parameters configured in EcoStruxure Building Operation software)
Heating/Cooling	Heating, cooling or automatic
Temperature Scale	Celsius or Fahrenheit
Display	LCD 30mm (1.375 In)
Buttons (3)	Change values -/+ and Advance Menu
Operating Environment	
Operating temperature	0 to 50 °C (32 to 122 °F)
Operating humidity range	0 to 95% RH, non-condensing
Housing material	High impact ABS plastic Flammability rating UL 94 V-0
Input power	2 watts, 24 Vdc over Sensor Bus
Mounting Location	Not suitable for wet locations. For indoor use only.
Wiring	
Communicating models	RJ-45 female Sensor Bus
Regulatory Information	
Agency approvals	UL 916 European conformance CE: EN61000-6-3 EN61000 Series - industrial immunity standard FCC Part 15 Class B, REACH, RoHS, Green Premium, RCM (Australia), ICES-003 (Canada), EAC (Russia)

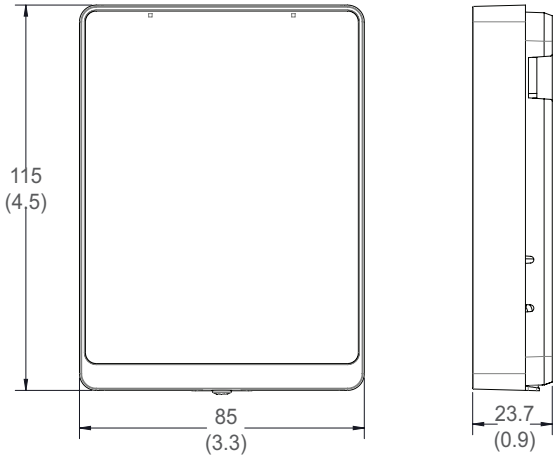
Precautions

- This product is not intended for life or safety applications.
- Do not install this product in hazardous or classified locations.
- Read and understand the instructions before installing the product.
- Turn off all power supplying equipment before working on it.
- The installer is responsible for conformance to all applicable codes.

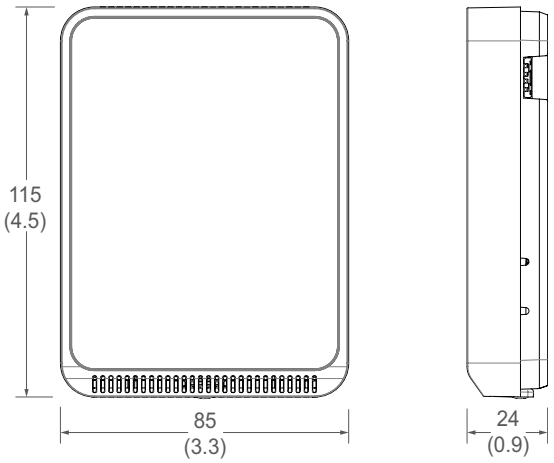
If this product is used in a manner not specified by the manufacturer, the protection provided by the product may be impaired. No responsibility is assumed by the manufacturer for any consequences arising out of the use of this material.

Dimensions mm (in.)

Optimum Housing



Medium Housing



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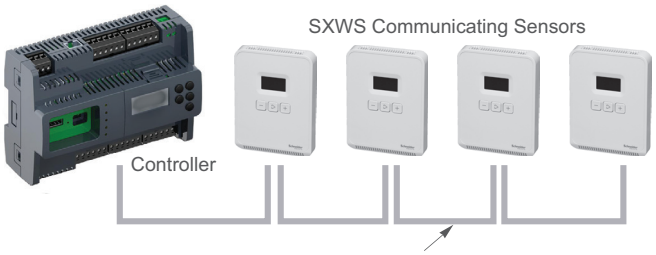
Functions

LCD temperature sensors output temperature, setpoint and mode adjustment data to the EcoStruxure Building Operation software controller via the Sensor Bus and provide a local LCD display.

System Architecture

MP or RP Series Controller and Sensor Bus with Communicating Sensors



Cat 5/6 cable (22 to 26 AWG) terminated via unshielded RJ-45 connector
61 m (200 ft.) total maximum length
Up to four SXWSATXXXSLx communicating sensors on Sensor Bus*

*Though the Sensor Bus supports four SXWSATXXXSLx sensors, there are some limitations. For specific combinations of sensors, see the Sensor Bus Configuration Calculator at the end of this document.

Cable Termination

The IP Controller Sensor Bus allows up to four communicating SXWS living space sensors to be connected to a single MP or RP Series controller. Total maximum cable length cannot exceed 61 m (200 ft.). Cat 5/6 cable (22 to 26 AWG) terminated with unshielded RJ-45 connectors are used for power and communication. Cables must be the “straight through” type, rather than crossover versions. Cross-over RJ-45 cables will not work.

NOTICE

MISWIRE POTENTIAL

- Do not connect Sensor Bus cables to any non-Sensor Bus connections, including Ethernet.

Failure to follow these instructions can result in damaged circuitry and loss of factory warranty.

NOTICE

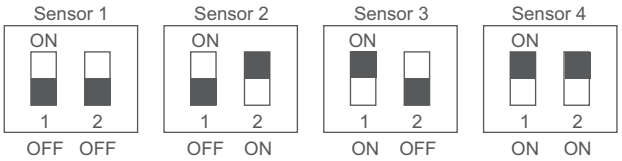
ELECTRICAL DAMAGE

- Do not use a CAT 5/6 cable terminated with a shielded RJ-45 connector.

Failure to follow these instructions can result in damaged circuitry and loss of factory warranty.

DIP Switch Addressing

Up to four SXWS Communicating Sensors can be connected to the Sensor Bus*. These sensors must be uniquely addressed using the DIP switches. The default DIP switch setting for the SXWS Communicating Sensor is sensor position 1. If more than one sensor is connected to the Sensor Bus, the DIP switch settings for the additional sensors will need to be changed.



Note: Black squares indicate DIP switch positions.

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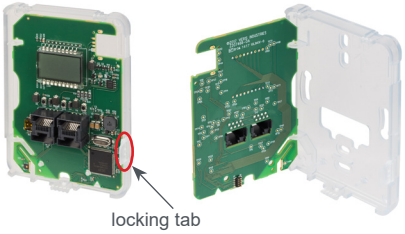
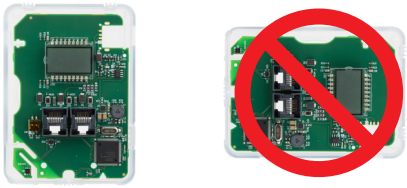
SXWS Base Installation

1. Pull the locking tab outward and swing the circuit board open to expose mounting screw holes on the back of the housing.



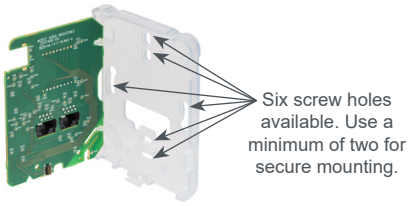
2. Position the sensor vertically on the wall 1.35 m (4.5 ft.) above the floor with the “UP” arrow facing upward. Locate away from windows, vents and other sources of draft. If possible, do not mount on an external wall, as this may cause inaccurate temperature readings.



3. Pull RJ-45 cable(s) through the hole in the backplate.

*Due to power constraints there are some limitations on the number of sensors the Sensor Bus can support. For specific combinations of sensors, see the Sensor Bus Configuration Calculator on the last page of this document.

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



5. Plug RJ-45 cables into the receptacles on the circuit board. Either receptacle may be used for connection to the controller or to another SXWS communicating sensor.

6. Swing the circuit board closed, ensuring the RJ-45 cables are tucked sufficiently into the wall opening to allow for complete closure using the locking tab.

7. 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.

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

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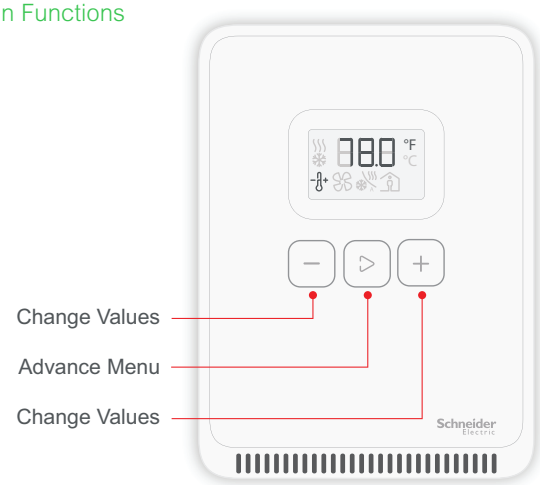
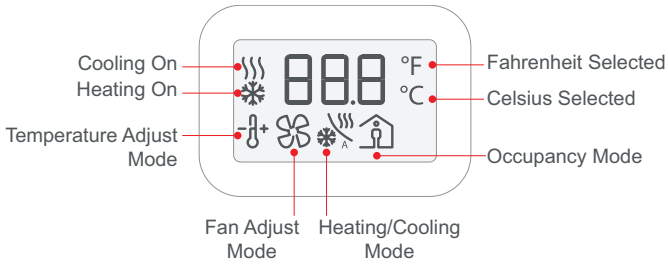
Operation

Button Functions

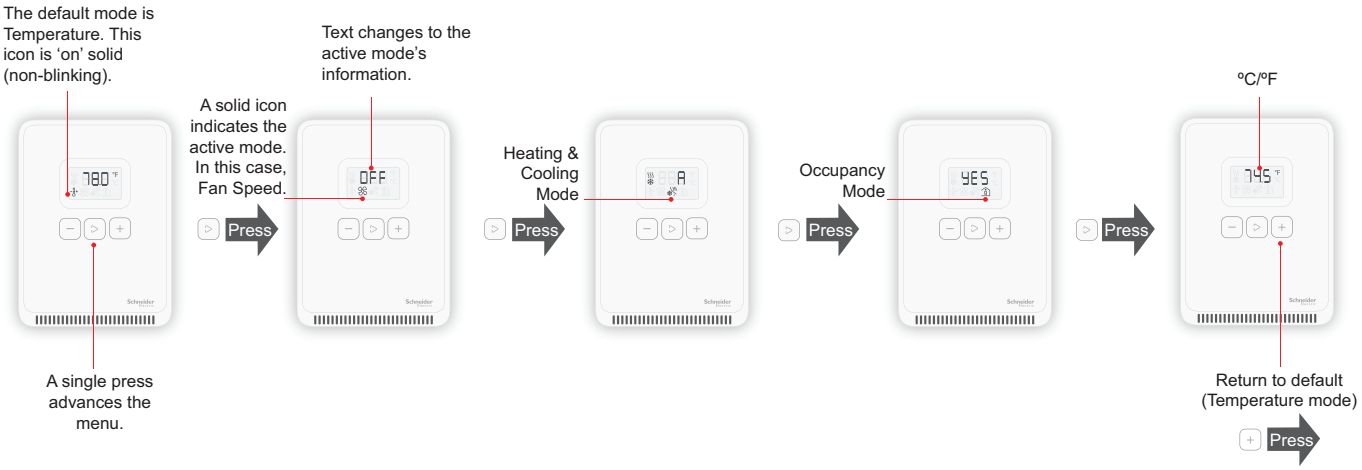


Display Icons

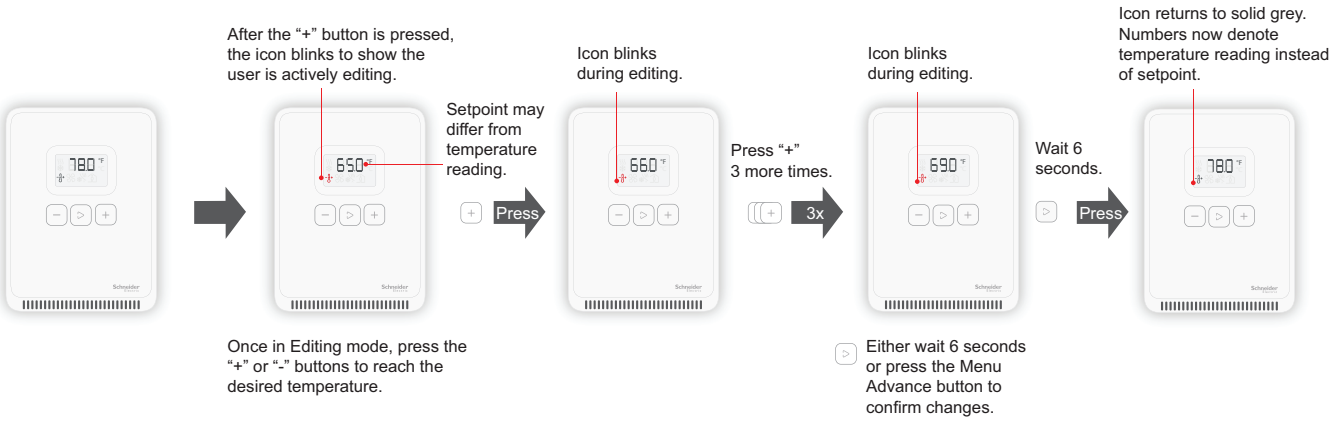


Note: During firmware updates, the display may appear to be off. Please allow five minutes for this process to complete before disconnecting the sensor. This may also occur when the sensor is first connected to a controller.

Mode Selection



Changing Temperature



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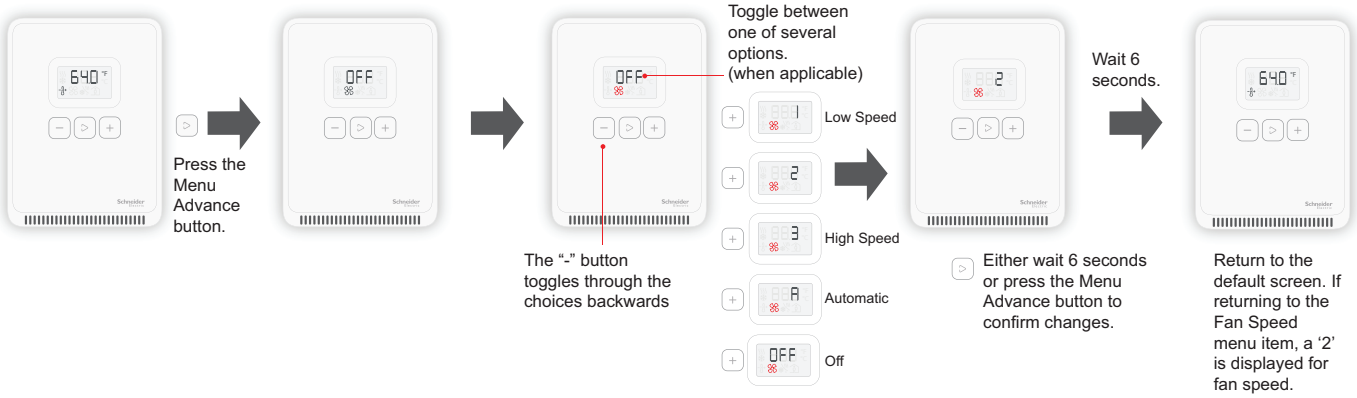
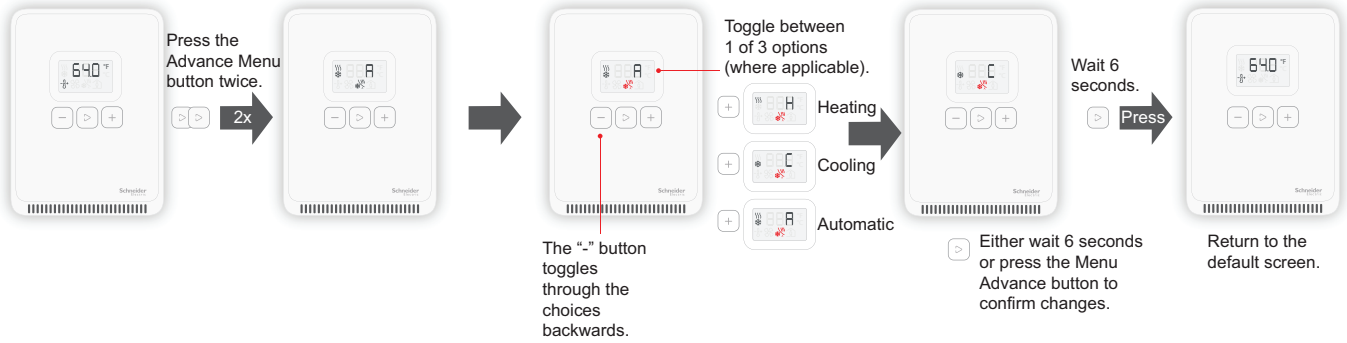
Operation, continued

Changing Fan Speed



Changing Heating/Cooling Mode



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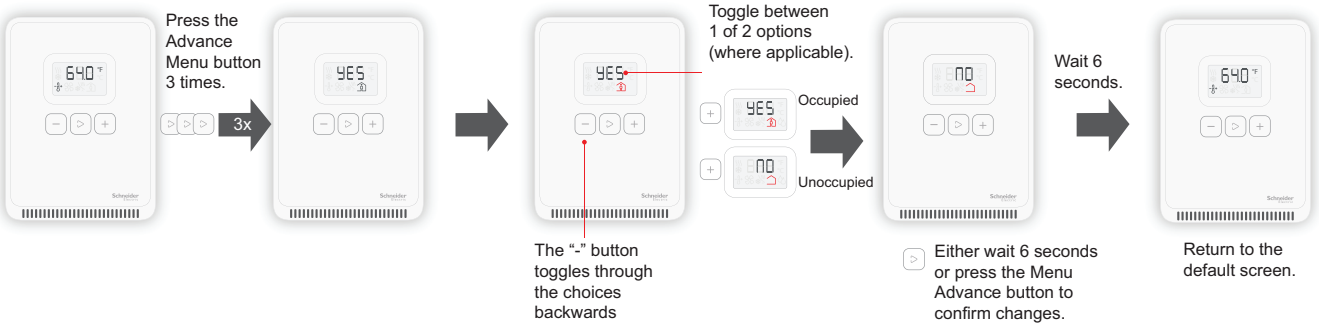
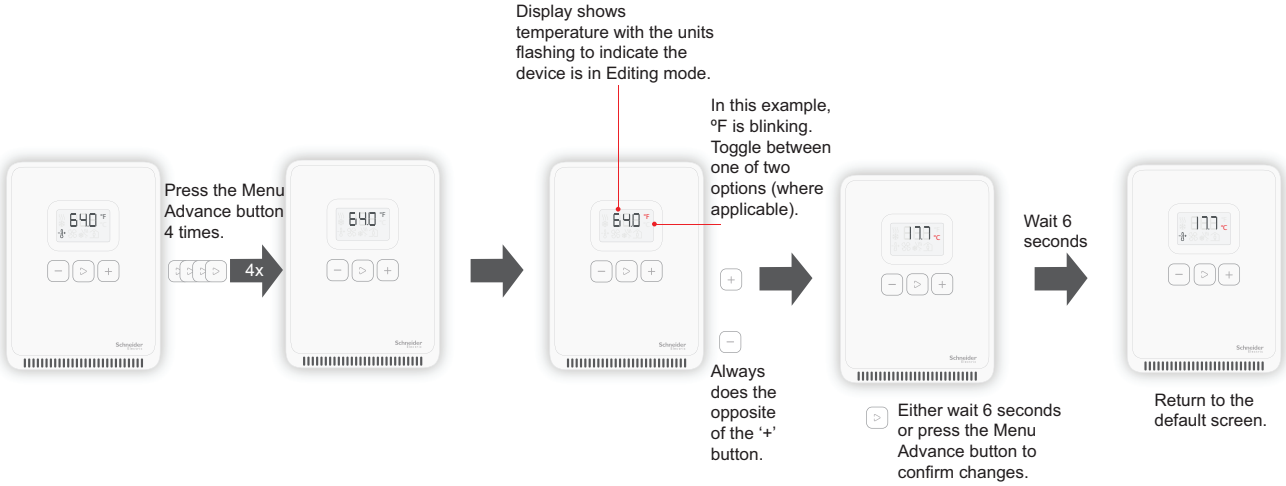
Operation, continued

Changing Occupancy Mode



Changing Celsius and Fahrenheit Scales



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Sensor Bus Configuration Calculator

Calculate Power/mW to Validate Sensor Bus Configuration

Add power/mW for all covers, combination units and bases to be used on a single sensor bus for total sensor bus wattage. The sensor bus will support current of up to 2000 mW. Device combinations totalling more than 2000 mW will not be supported on the sensor bus.

Sensor Bus Power Table

Description	Model Number	Power/mW
Sensor Base, Temp	SXWSBTXXXSXX	90
Sensor Base, Temp, Humidity	SXWSBTHXXSXX	90
Sensor Base, Temp, CO_2	SXWSBTXCXSXX	490
Sensor Base, Temp, Humidity, CO_2	SXWSBTHCXSXX	490
Resistive 10K T3 Combination Sensors	SXWSATXXXRXX	0
	SXWSATXXXRXB	0
	SXWSATXXXRXW	0
Temp with LCD, 3 Button Combination Sensors	SXWSATXXXSLX	80
	SXWSATXXXSLB	80
	SXWSATXXXSLW	80
3 Button Covers with Occupancy	SXWSC3PSELXB	210
	SXWSC3PSELXW	210
	SXWSC3PSELXX	210
3 Button Covers	SXWSC3XSELXB	190
	SXWSC3XSELXW	190
	SXWSC3XSELXX	190
Blank Covers with Occupancy	SXWSCBPSELXB	20
	SXWSCBPSELXW	20
	SXWSCBPSELXX	20
Blank Covers	SXWSCBXSELXB	0
	SXWSCBXSELXW	0
	SXWSCBXSELXX	0
Touchscreen Covers with Occupancy	SXWSCDPSELXB	210
	SXWSCDPSELXW	210
	SXWSCDPSELXX	210
	SXWSC2PSELXB	210
	SXWSC2PSELXW	210
	SXWSC4PSELXB	210
	SXWSC4PSELXW	210

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Sensor Bus Power Table (cont.)

Description	Model Number	Power/mW
Touchscreen Covers	SXWSC2XSELXB	190
	SXWSC2XSELXW	190
	SXWSC4XSELXB	190
	SXWSC4XSELXW	190
	SXWSCDXSELXB	190
	SXWSCDXSELXW	190
	SXWSCDXSELXX	190
eCommission Bluetooth Adaptor	SXWBTAECXX10001*	300

*The eCommission Bluetooth Adapter is used temporarily for commissioning and servicing only.

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

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