

SE7260X5x45B

Installation Guide for BACnet MS/TP Zone Controller



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NOTICE

IMPORTANT NOTICE RELATED TO PRODUCT PART NUMBERS

For the latest model and part numbers, please refer to "SE8000 and SE7000 Series Room Controllers Catalog, version 10" (028-6155-10), which can be found on <https://ecobuilding.schneider-electric.com>.

The installation instructions provided in this document contain information on active and retired products. The latter are no longer sold by Schneider Electric or its partners.

Refer to the "7000 Series Room Controllers and Historical Offer Product Withdrawal Process (PWP) Project Product Announcement" (PA-00723) for a list of replacement part numbers, which can also be found on <https://ecobuilding.schneider-electric.com>.

Failure to follow these instructions can result in confusion or order delays.

SAFETY INFORMATION

Important Information

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service or maintain it. The following special messages may appear throughout this bulletin or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of either symbol to a "Danger" or "Warning" safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result in** death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, **could result in** death or serious injury.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **could result in** minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury. The safety alert symbol shall not be used with this signal word.

Please Note

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

BEFORE YOU BEGIN

Loss of Control

⚠ WARNING

LOSS OF CONTROL

- The designer of any control scheme must consider the potential failure modes of control paths and, for certain critical control functions, provide a means to achieve a safe state during and after a path failure. Examples of critical control functions are emergency stop and over travel stop.
- Separate or redundant control paths must be provided for critical control functions.
- System control paths may include communication links. Consideration must be given to the implications of anticipated transmission delays or failures of the link.¹
- Each implementation of equipment utilizing communication links must be individually and thoroughly tested for proper operation before being placed into service.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

California Proposition 65

⚠ WARNING

CALIFORNIA PROPOSITION 65

This product can expose you to chemicals including Lead and Bisphenol A (BPA), which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

Failure to follow these instructions can result in birth defects or other reproductive harm.

Electrostatic Discharge

NOTICE

STATIC SENSITIVE COMPONENTS

Circuit boards and option cards can be damaged by static electricity. Observe the electrostatic precautions below when handling controller circuit boards or testing components.

Failure to follow these instructions can result in equipment damage.

Observe the following precautions for handling static-sensitive components:

- Keep static-producing material such as plastic, upholstery, and carpeting out of the immediate work area.
- Store static-sensitive components in protective packaging when they are not installed in the drive.
- When handling a static-sensitive component, wear a conductive wrist strap connected to the component or drive through a minimum of 1 megohm resistance.
- Avoid touching exposed conductors and components leads with skin or clothing.

Installation

NOTICE

INSTALLATION

- The system must be installed correctly by a qualified technician.
- If replacing an existing Room Controller, label wires before removal of Controller.
- Electronic controls are static sensitive devices. Discharge yourself correctly before manipulating and installing Room Controller.
- A short circuit or wrong wiring may permanently damage Room Controller or equipment.
- All Room Controllers are designed for use as operating controls only and are not safety devices. These instruments have undergone rigorous tests and verification prior to shipping to ensure proper and reliable operation in the field. Whenever a control failure could lead to personal injury and/or loss of property, it becomes the responsibility of the user/installer/electrical system designer to incorporate safety devices (such as relays, flow switch, thermal protections, etc.) and/or an alarm system to protect the entire system against such catastrophic failures. Tampering with the devices or unintended application of the devices will result in a void of warranty.
- This device must be installed to provide a separation distance of at least 8in (20cm) from all persons and must not be located or operating in conjunction with any other antenna or transmitter.
- Refer to the Room Controller User Interface Guide for information on how to configure the Room Controller.

Failure to follow these instructions can result in equipment damage.

¹ For additional information about anticipated transmission delays or failures of the link, refer to NEMA ICS 1.1 (latest edition), *Safety Guidelines for the Application, Installation, and Maintenance of Solid State Control* or its equivalent

Location

NOTICE

LOCATION

- Do not install on an exterior wall.
- Do not install behind a door.
- Do not install in areas with direct heat source.
- Do not install near any air discharge grill.
- Do not install in areas exposed to direct sunlight.
- Ensure Room Controller has sufficient natural air circulation.
- Ensure wall surface is flat and clean.
- Ensure external thermal sensor wirings are away from noisy electrical sources.
- Install 1.3 to 1.5 meter (52 to 60 inches) above the floor.
- Perform preventive maintenance on the damper and Variable Air Volume (VAV) box, according to the supplier documentation.

Failure to follow these instructions can result in equipment damage.

Cleaning the Room Controller

NOTICE

CLEANING THE ROOM CONTROLLER

- Use a soft, pre-moistened lint-free cloth for cleaning.
- Avoid getting moisture in openings.
- Do not spray anything directly on the Room Controller or use compressed air.
- Do not use caustic/corrosive products, ammonia, solvents or any cleaning product containing alcohol or grit.
- Never use tools directly on the touchscreen.
- Never use paint on the Room Controller.
- Do not drop or crush the Room Controller, or allow it to come into contact with liquids.
- Do not use a damaged device (such as one with a cracked screen).

Failure to comply with these recommendations will result in damage to the unit and void the manufacturer's warranty.

INSTALLATION

- Remove security screw on bottom of Room Controller cover.
- Open unit by pulling on bottom side of Room Controller (Figure 1).
- Remove wiring terminals from sticker.
- Read FCC ID and IC label installed in cover.

Location

1. Should not be installed on outside wall.
2. Must be installed away from any direct heat source.
3. Should not be installed near air discharge grill.
4. Should not be affected by direct sun radiation.
5. Nothing should restrict vertical air circulation to Room Controller.

Installation

1. Swing open Room Controller PCB to left by pressing PCB locking tabs (Figure 2).
2. Pull out cables 6" out from wall. Ensure wall surface is flat and clean.
4. Insert cable in central hole of base.
5. Align base and mark location of two mounting holes on wall ensuring proper side of base is up.
6. Install anchors in wall.
7. Insert screws in mounting holes on each side of base (Figure 2).
8. Gently swing back circuit board on base and push until tabs lock.
9. Strip each wire 1/4 inch from end.
10. Insert each wire according to wiring diagram.
11. Gently push excess wiring back into hole (Figure 3).
12. Re-Install wiring terminals in correct locations (Figure 3).
13. Re-install cover (top side first) and gently push extra wire length back into hole in wall.
14. Install security screw.

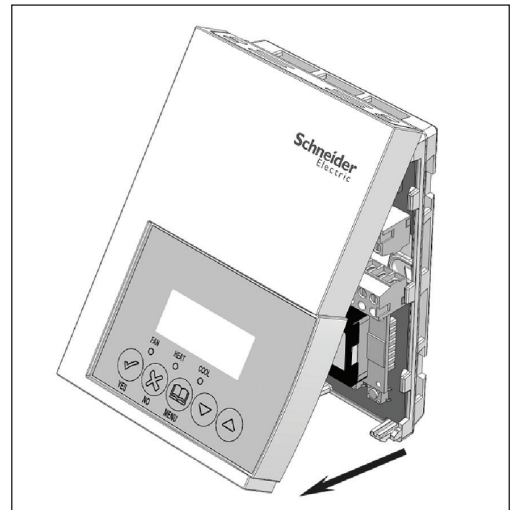


Figure-1 Opening the Cover

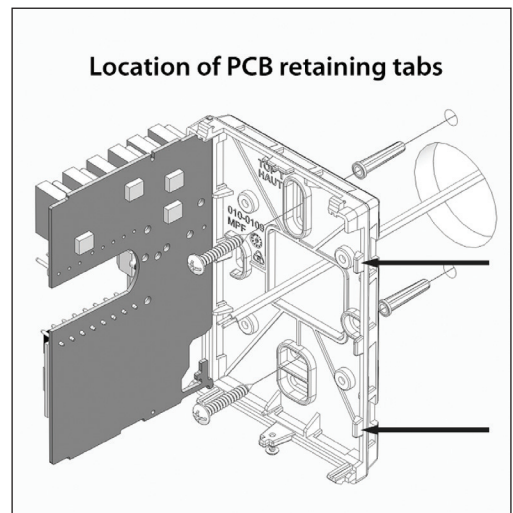


Figure-2 Opening the PCB

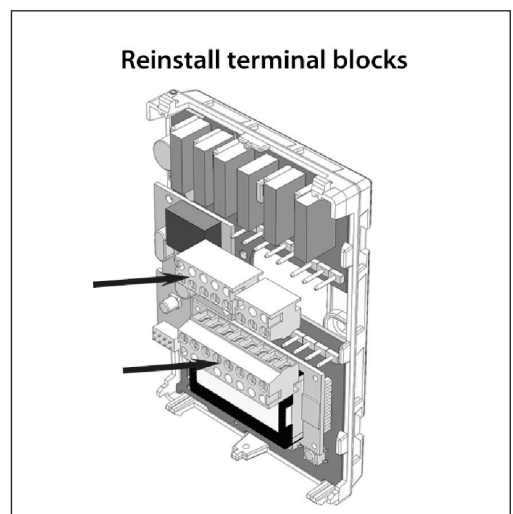


Figure-3 Terminal Block Reinstall

TERMINAL, IDENTIFICATION AND FUNCTION

Wiring

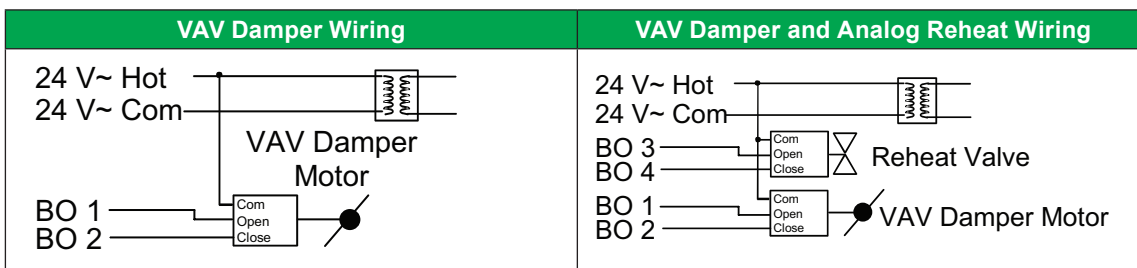
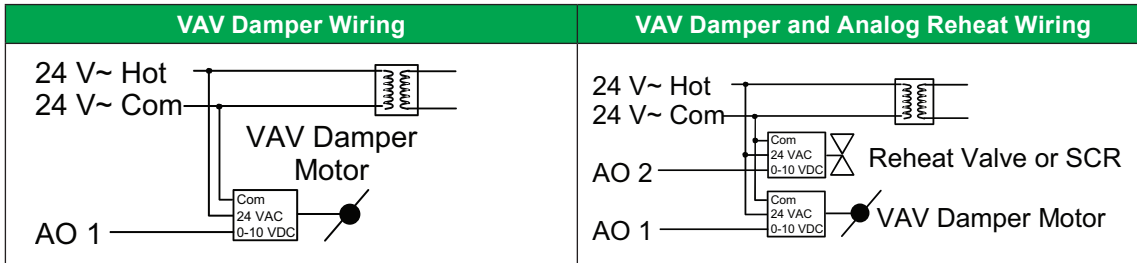
Terminal Use	Terminal Identification SEZ7260F	Terminal Identification SEZ7260C	Description
4 - 24 V ~ Hot	24V ~ Hot	24V ~ Hot	Power supply of controller, hot side (Delivered from the RTU)
5 - 0 V ~ Com	0V~Com	0V~Com	Power supply of controller, common side. Also used as reference for the analog outputs when used
6- On-Off Rht	BO5	BO5	Local isolated triac reheat output when used
7- On-Off Rht	BO5	BO5	Local isolated triac reheat output when used
8- Primary Rht	Not used	BO3	24 VAC triac reheat output (open)
9 – Primary Rht	AO2	BO4	For SEZ7260F: Local analog 0 - 10 VDC reheat output when used For SEZ7260C: 24VAC triac reheat output (close)
10 – VAV Damper	AO1	BO1	For SEZ7260F: Local VAV analog 0 - 10 VDC For SEZ7260C: 24VAC triac VAV output (open)
11 – VAV Damper	Not used	BO2	24VAC triac reheat output (close)
12 – BI1	BI1	BI1	Configurable extra digital input. See parameter section for more information
13 - A14	A14	A14	0-10VDC analog input for remote CO2 or other sensor (airflow, etc...)
14 - Scom	Scom	Scom	Reference input for BI 1, BI 2, UI3 and RS
15 - RS	RS	RS	Remote room sensor input when used. Input auto-detects a remote sensor and will automatically by-pass the internal sensor when used.
16 – UI3 / SS	UI3	UI3	Non-configurable extra analog input for monitoring local discharge or supply temperatures over the network.

BACnet™ Network Connections

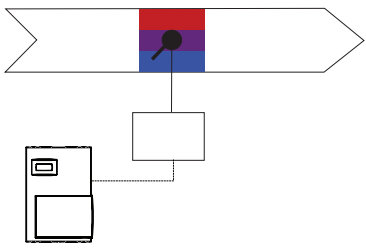
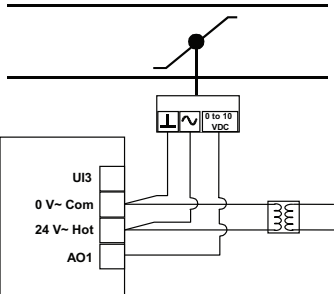
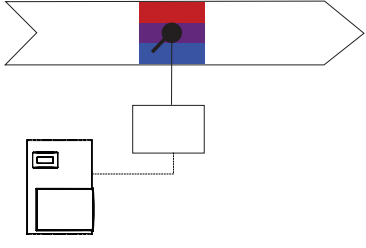
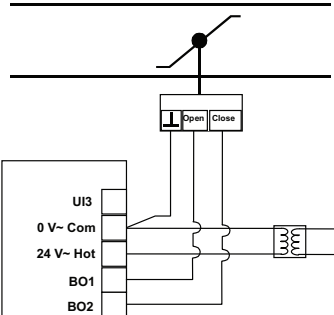
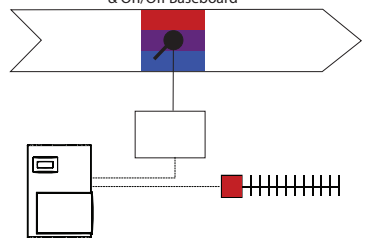
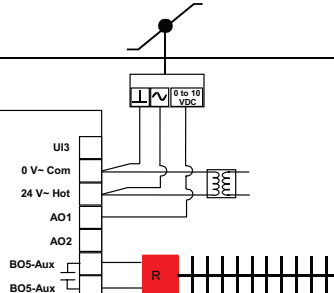
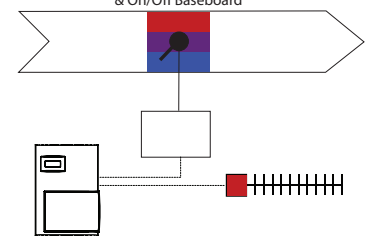
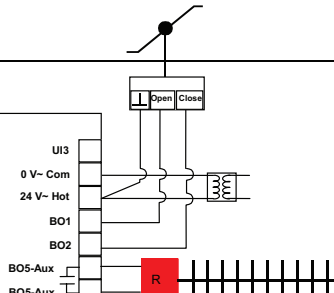
BACnet™ Network Connections		
BACnet™ Com	Com +	BACnet™ communication bus + connection.
BACnet™ Com	Com -	BACnet™ communication bus – connection.
Ref	Ref	Communication bus reference terminal. • DO NOT USE FOR OTHER THAN SERVICING ISSUES • DO NOT WIRE SHIELD TO THIS TERMINAL

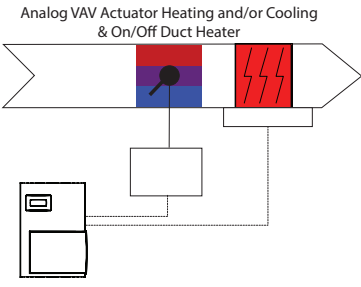
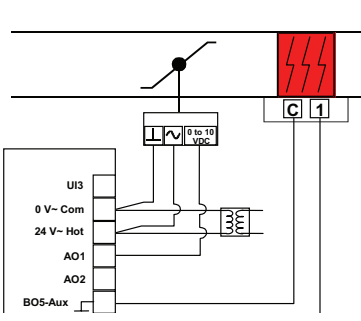
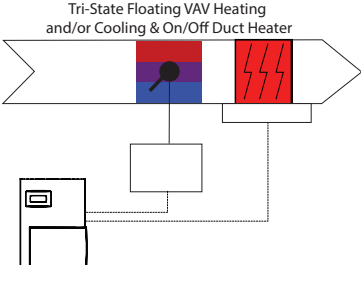
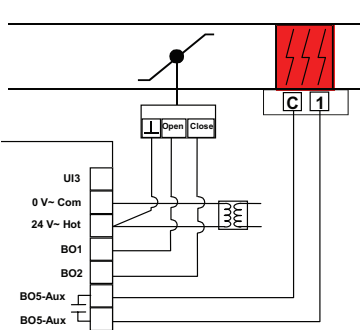
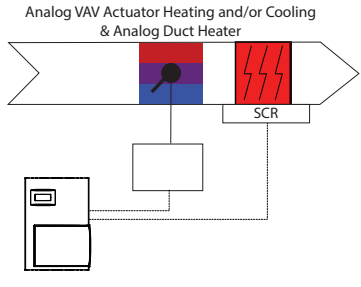
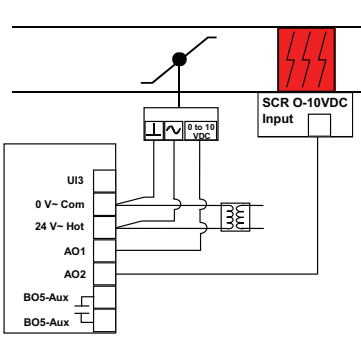
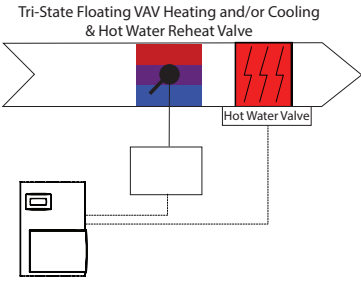
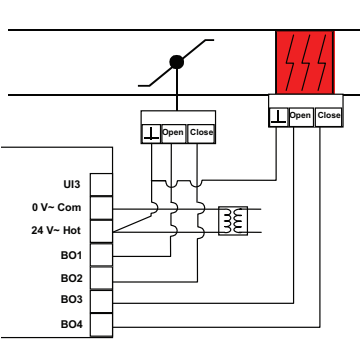
TYPICAL APPLICATIONS

Main outputs wiring



Schematic	Wiring	Settings
Pressure dependent VAV cooling only system		
Analog VAV Actuator Room Temperature Control Minimum & Maximum Position Adjusted at Controller	UI3 0 V~ Com 24 V~ Hot AO1	Mandatory RehtConf= 0 None
Floating VAV Actuator Room Temperature Control Minimum & Maximum Position Adjusted at Controller	UI3 0 V~ Com 24 V~ Hot BO1 BO2	Mandatory RehtConf = 0 None

Schematic	Wiring	Settings
Pressure dependent VAV cooling/heating system with central changeover		
0 to 10 Vdc Analog Actuator  Room Temperature Control Minimum & Maximum Position Adjusted at Controller		Mandatory RehtConf= 0 None
Tri-State Floating Actuator  Room Temperature Control Minimum & Maximum Position Adjusted at Controller		Mandatory RehtConf = 0 None
Pressure dependent VAV cooling or heating system with local On-Off perimeter reheat and central changeover		
Analog VAV Actuator Heating and/or Cooling & On/Off Baseboard  Room Temperature Control Minimum & Maximum Position Adjusted at Controller		Mandatory RehtConf = 3 = On-Off Perimeter Reheat Only Set BO5 Time to 0= 15 minutes if using regular 24 VAC relays Set BO5 Time to 1= 10 seconds if using 24 VAC Solid State Relays (SSRs) for proportional control
Tri-State Floating VAV Actuator Heating and/or Cooling & On/Off Baseboard  Room Temperature Control Minimum & Maximum Position Adjusted at Controller		Mandatory RehtConf = 3 = On-Off Perimeter Reheat Only Set BO5 Time to 0= 15 minutes if using regular 24 VAC relays Set BO5 Time to 1= 10 seconds if using 24 VAC Solid State Relays (SSRs) for proportional control

Schematic	Wiring	Settings
Pressure dependent VAV cooling or heating system with local On-Off duct reheat and central changeover		
 Analog VAV Actuator Heating and/or Cooling & On/Off Duct Heater Room Temperature Control Min. Max. and HeatFlow Positions Adjusted at Controller	 UI3 0 V~ Com 24 V~ Hot AO1 AO2 BO5-Aux	Mandatory RehtConf = 2 = On-Off Duct Reheat Only Set BO5 Time to 0= 15 minutes if using regular 24 VAC relays Set BO5 Time to 1=10 seconds if using 24 VAC Solid State Relays (SSRs) for proportional control
 Tri-State Floating VAV Heating and/or Cooling & On/Off Duct Heater Room Temperature Control Min. Max. and HeatFlow Positions Adjusted at Thermostat	 UI3 0 V~ Com 24 V~ Hot BO1 BO2 BO5-Aux BO5-Aux	Mandatory RehtConf = 2 = On-Off Duct Reheat Only Set BO5 Time to 0= 15 minutes if using regular 24 VAC relays Set BO5 Time to 1= 10 seconds if using 24 VAC Solid State Relays (SSRs) for proportional control
Pressure dependent VAV cooling or heating system with local Analog duct reheat and central changeover		
 Analog VAV Actuator Heating and/or Cooling & Analog Duct Heater Room Temperature Control Min. Max. and HeatFlow Positions Adjusted at Thermostat	 UI3 0 V~ Com 24 V~ Hot AO1 AO2 BO5-Aux BO5-Aux SCR 0-10VDC Input	Mandatory RehtConf = 1 = Analog Duct Reheat Only Set AO2RA/DA to DA if SCR input signal is Direct Acting 0 to 10 VDC Set AO2RA/DA to RA if SCR input signal is Reverse Acting 10 to 0 VDC
 Tri-State Floating VAV Heating and/or Cooling & Hot Water Reheat Valve Room Temperature Control Min. Max. and HeatFlow Positions Adjusted at Thermostat	 UI3 0 V~ Com 24 V~ Hot BO1 BO2 BO3 BO4	Mandatory RehtConf = 1 = Analog Duct Reheat Only

Temperature vs. Resistance Chart for 10K Type 2 NTC Thermistor

$$(R_{25^{\circ}\text{C}} = 10\text{K}\Omega \pm 3\% - B_{25/85^{\circ}\text{C}} = 3975\text{K} \pm 1.5\%)$$

°C	°F	Kohm
-40	-40	324.3197
-39	-38	303.6427
-38	-36	284.4189
-37	-35	266.5373
-36	-33	249.8958
-35	-31	234.4009
-34	-29	219.9666
-33	-27	206.5140
-32	-26	193.9703
-31	-24	182.2686
-30	-22	171.3474
-29	-20	161.1499
-28	-18	151.6239
-27	-17	142.7211
-26	-15	134.3971
-25	-13	126.6109
-24	-11	119.3244
-23	-9	112.5028
-22	-8	106.1135
-21	-6	100.1268

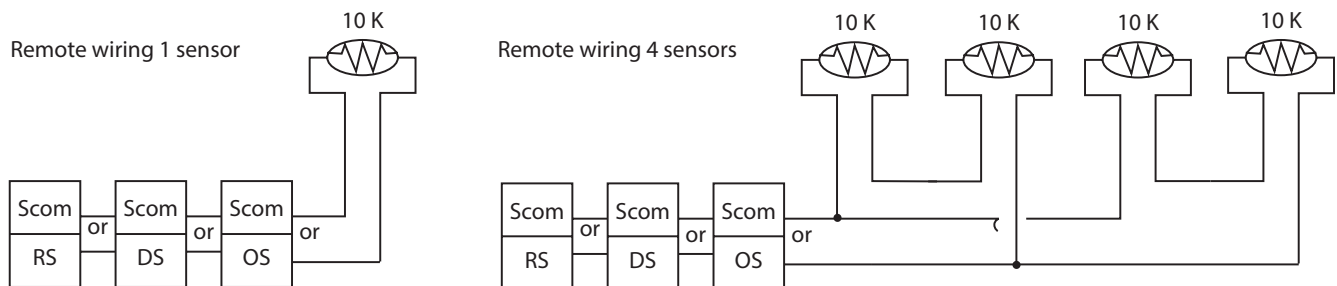
°C	°F	Kohm
-20	-4	94.5149
-19	-2	89.2521
-18	0	84.3147
-17	1	79.6808
-16	3	75.3299
-15	5	71.2430
-14	7	67.4028
-13	9	63.7928
-12	10	60.3980
-11	12	57.2044
-10	14	54.1988
-9	16	51.3692
-8	18	48.7042
-7	19	46.1933
-6	21	43.8268
-5	23	41.5956
-4	25	39.4921
-3	27	37.5056
-2	28	35.6316
-1	30	33.8622

°C	°F	Kohm
0	32	32.1910
1	34	30.6120
2	36	29.1197
3	37	27.7088
4	39	26.3744
5	41	25.1119
6	43	23.9172
7	45	22.7861
8	46	21.7151
9	48	20.7004
10	50	19.7390
11	52	18.8277
12	54	17.9636
13	55	17.1440
14	57	16.3665
15	59	15.6286
16	61	14.9280
17	63	14.2629
18	64	13.6310
19	66	13.0307

°C	°F	Kohm
20	68	12.4601
21	70	11.9177
22	72	11.4018
23	73	10.9112
24	75	10.4443
25	77	10.0000
26	79	9.5754
27	81	9.1711
28	82	8.7860
29	84	8.4190
30	86	8.0694
31	88	7.7360
32	90	7.4182
33	91	7.1150
34	93	6.8259
35	95	6.5499
36	97	6.2866
37	99	6.0351
38	100	5.7950
39	102	5.5657

°C	°F	Kohm
40	104	5.3467
41	106	5.1373
42	108	4.9373
43	109	4.7460
44	111	4.5631
45	113	4.3881
46	115	4.2208
47	117	4.0607
48	118	3.9074
49	120	3.7607
50	122	3.6202
51	124	3.4857
52	126	3.3568
53	127	3.2333
54	129	3.1150
55	131	3.0016
56	133	2.8928
57	135	2.7886
58	136	2.6886
59	138	2.5926

Wiring for 10K Type 2 NTC Thermistor Sensors

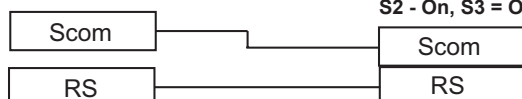


Wiring examples

Wiring example of single remote room sensor:

SEZ7260 Series Controller

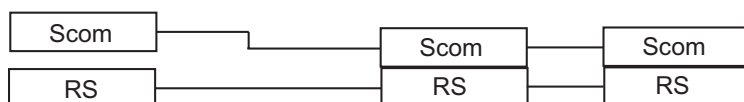
SE3010W1045
Remote Wiring 1 Sensor
S2 - On, S3 = On



Wiring examples of 2 remote room sensors for averaging applications:

SEZ7260 Series Controller

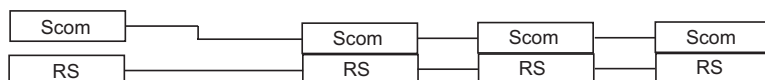
2 x SE3010W1045
Remote Wiring 2 Sensors
S2 - On, S3 = Off



Wiring examples of 3 remote room sensors for averaging applications:

SEZ7260 Series Controller

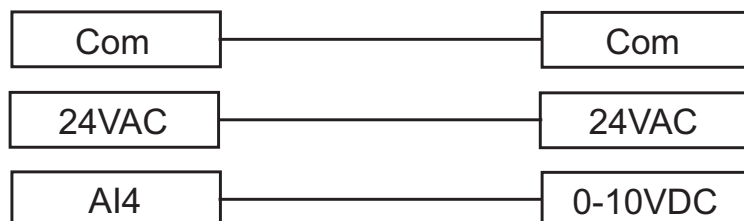
3 X SE3010W1045
Remote Wiring 3 Sensors
S2 - Off, S3 = On



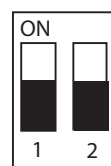
Wiring example of CO2 sensor:

SEZ7260 Series Controller

CO2 Sensor



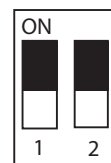
Temp. Sensor DIP Switch Settings



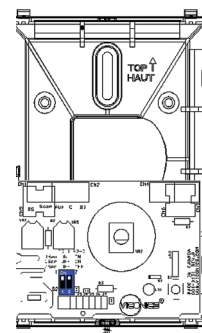
One Sensor:
S2-1 = ON
S2-2 = ON



Two Sensors,
averaging:
S2-1 = OFF
S2-2 = ON



Three Sensors:
S2-1 = OFF
S2-2 = OFF



SE3020W1045
Remote temperature sensor DIP switch location

CONFIGURATION AND STATUS DISPLAY INSTRUCTIONS

Status display

The Room Controller features a two-line, eight-character display. There is a low level backlight that is always active and can only be seen at night. When left unattended, the Room Controller has an auto scrolling display that shows the current status of the system.

Each item is scrolled sequentially with the back light in low level mode. Pressing any key will cause the back light to come on to high level.

Manual scrolling of each menu item is achieved by pressing the Yes (scroll) key repetitively. The last item viewed will be shown on the display for 30 seconds before returning to automatic scrolling. Temperature is automatically updated when scrolling is held.

Sequence of auto-scroll status display:

ROOM TEMPERATURE	OCCUPANCY STATUS	OUTDOOR TEMPERATURE
RoomTemp x.x °C or °F	Occupied	Outdoor x.x °C or °F
	Stand-By	
	Unoccup	
	Override	



Outdoor air temperature

- Outdoor air temperature display is only enabled when outdoor air temperature sensor is connected.
- A maximum range status display of 50 °C (122 °F) indicates a shorted sensor. Associated functions, such as mode lockouts and economizer function are automatically disabled.
- A minimum range status -40 °C (-40 °F) is not displayed and indicates a opened sensor or a sensor not connected. Associated functions, such as mode lockouts and economizer function are automatically disabled.

Occupancy Status

- Occupied, Stand-By, Unoccupied and Override status are displayed on the scrolling display.
- Two status LED's on the controller cover are used to indicate a call for heat or a call for cooling

	When heating and reheat is ON , the HEAT LED will illuminate.
	When cooling is ON , the COOL LED will illuminate.

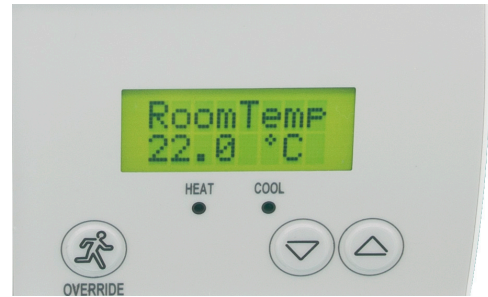
USER INTERFACE

User configuring instructions menu

Unoccupied mode Override

An Override can be made during an unoccupied period. If the Override option is enabled in the lockout configuration pressing the Override button will resume occupied setpoints for a time specified by the parameter; "TocTime."

Local keypad interface



Unoccupied and Stand-By setpoints adjustments

Setting the Unoccupied and Stand-By setpoints is done through the network or through configuration setup only.

When in Unoccupied period, pressing the up or down button will display the following message on the display: "Press Override First".

When left unattended for 45 seconds, the display will resume automatic status display scrolling.

To turn on the back light, press any key on the front panel. The back lit display will turn off automatically after 45 seconds.

	An OVERRIDE can be made during an Unoccupied period. If the Override option is enabled in the lockout configuration pressing the override key will resume occupied setpoints for a time specified by the parameter; "TocTime."
	Adjust the setpoints DOWN ; - In cooling mode only the cooling setpoint displayed. - In heating mode only the heating setpoint displayed. - In auto mode; (See below).
	Adjust the setpoints UP ; - In cooling mode only the cooling setpoint displayed. - In heating mode only the heating setpoint displayed. - In auto mode; (See below).

1. Any setpoint change can be permanent or temporary based on configuration parameter (Setpoint Type).
2. Any setpoint written through the network will be permanent and cancel any active temporary setpoints.
3. Lockouts to access certain functions are made with configuration parameter (lockout).
4. If in Unoccupied period, pressing the Down button will display the following message on the display: "Press Override First".

Occupied setpoint adjustments

LOCAL ZONE MODE AS DICTATED BY ATTACHED MASTER RTU CONTROLLER		
RTU in cooling mode	RTU in heating mode	RTU in cooling mode with Local Reheat enabled - Setpoint presented to user is the setpoint from the last action taken by the controller or the one currently in use. - Both heating and cooling setpoints are changed simultaneously while respecting the minimum configured deadband. - If the other setpoint is the one desired, then the OVERRIDE button is used to toggle between the current displayed one and the other.
COOL XX.X °F OR °C	HEAT XX.X °F OR °C	Cool XX.X °F or °C and Heat XX.X °F or °C Both heating & cooling setpoints are changed simultaneously

Technical Support



For any issues with SmartStruxure Solution or SmartStruxure Lite, contact Schneider Electric Technical Support according to your region.

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Building Management Systems (BMS): www.nampss.com

Global Product Support
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