SEZ7260X5x45B

BACnet™ MS-TP Zone Terminal Equipment Controller Installation Guide

For Commercial Zoning Systems

CONTENTS

Schneider Electric

INSTALLATION

Remove the security screw on the bottom of Terminal Equipment Controller cover.

- Open unit by pulling on the bottom side of Terminal Equipment Controller (fig. 1).
- Remove wiring terminals from sticker.
- Please read the FCC ID and IC label installed in the cover upon removal of cover for the wireless products.

Location

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

Installation

1. Swing open the Terminal Equipment Controller PCB to the left by pressing the PCB locking tabs (fig. 2).
2. Pull out cables 6” out from the wall.
3. Wall surface must be flat and clean.
4. Insert cable in the central hole of the base.
5. Align the base and mark the location of the two mounting holes on the wall. Install proper side of base up.
6. Install anchors in the wall.
7. Insert screws in mounting holes on each side of the base (fig. 2).
8. Gently swing back the circuit board on the base and push on it until the tabs lock it.
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 (fig. 3).
12. Re-Install wiring terminals in their correct locations (fig. 3).
13. Re-install the cover (top side first) and gently push extra wire length back into the hole in the wall.
14. Install security screw.

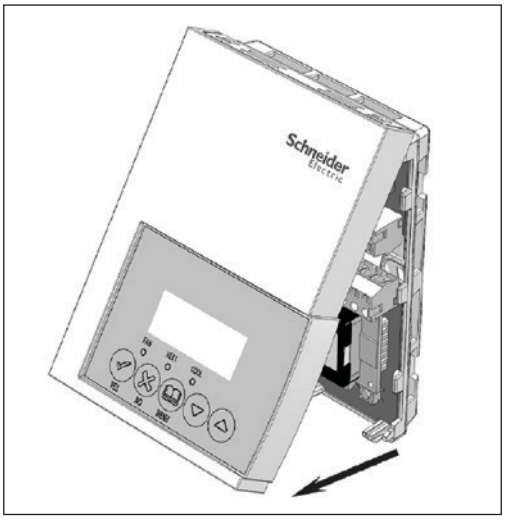

Figure-1 Opening the Cover

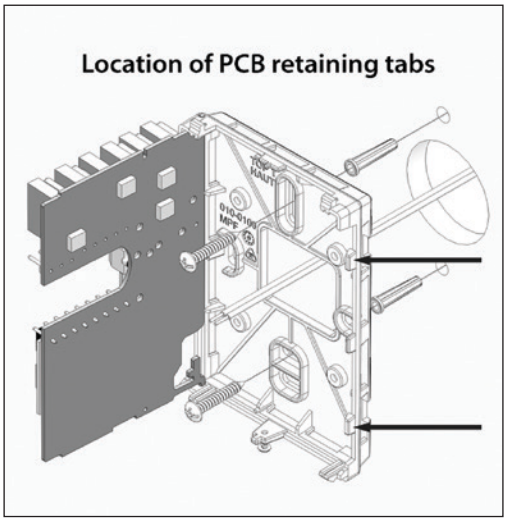

Figure-2 Opening the PCB

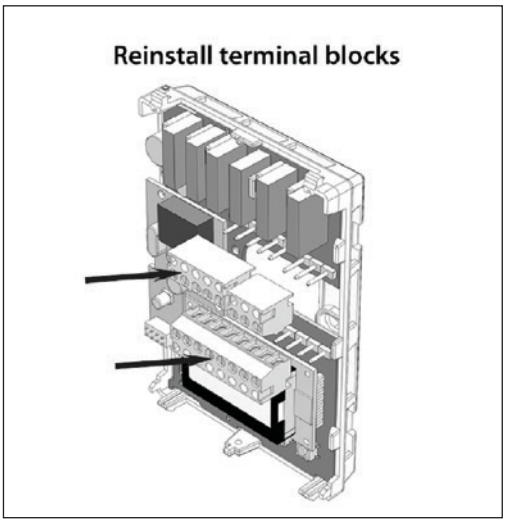

Figure-3 Terminal Block Reinstall

- When replacing an existing Terminal Equipment Controller, label the wires before removal of the Terminal Equipment Controller.
- Electronic controls are static sensitive devices. Discharge yourself properly before manipulating and installing the Terminal Equipment Controller.
- A short circuit or improper wiring may permanently damage the Terminal Equipment Controller or the equipment.
- All SEZ7000 series Terminal Equipment 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 or installer or 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.

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THEORY OF OPERATION

The SEZ7260 series uses a Schneider-Electric proprietary adaptive logic algorithm to control the space temperature. This algorithm controls the heating and or air conditioning system to minimize overshoot while still providing comfort. It provides exceptional accuracy due to its unique PI time proportioning control algorithm, which virtually eliminates temperature offset associated with traditional, differential-based On-Off thermostats.

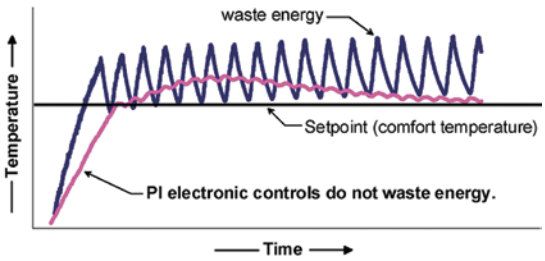


Figure-2 On-Off Mechanical vs PI Electronic Control

Features overview

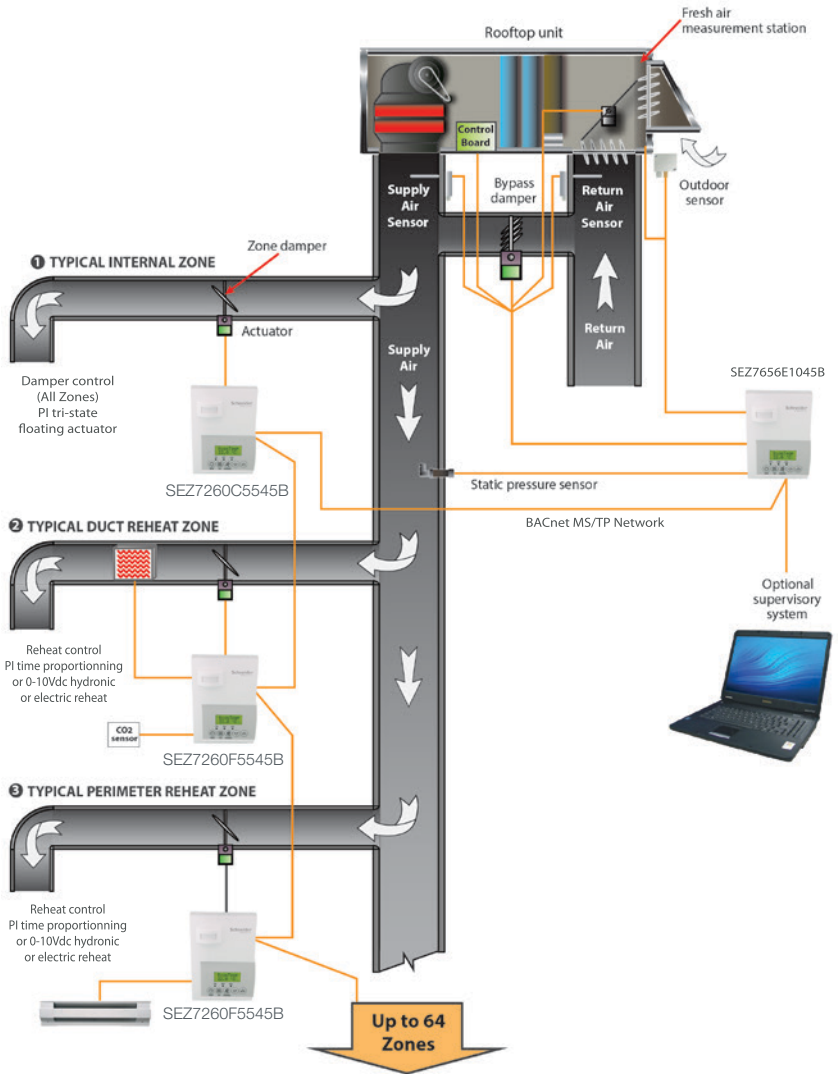
- Available with analog or floating outputs (model dependent)
- Adjustable Proportional Band
- Password protected configuration menu
- Removable terminal blocks
- Hinged PC board design
- EEPROM memory
- PIR and Stand-by setpoints supported
- Local keypad lockable
- PI time proportioning algorithm
- Auxiliary output
- Auto central system RTU changeover
- Unique local configuration setup utility
- C02 sensor input for monitoring and control
- Configurable zone sequences of operation
- Pre-engineered design, software and documentation
- Self-discovering and self-binding database
- Increased energy savings
- Improves indoor air quality
- Compatible with most actuator types (model dependent)
- No loss of program
- Access to mounting holes
- Facilitates wiring

Easy configuration and self-binding operation

- Easy configuration without using any special software or additional tools.
- Can be used as stand-alone or with BACnet™ MS-TP supervision controller for monitoring purposed.
- Truly scalable in terms of supported number of zones and RTU units.

BACNET™ SYSTEM OVERVIEW

Schneider Electric SEZ7260X5x45B Zone controllers are used in conjunction with the SEZ7656X1045B Roof Top controllers. Combined, they are designed for operate typical single or multistage RTU, HP's and their associated local zones.



Typical BACnet™ Zoning System Installation

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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**

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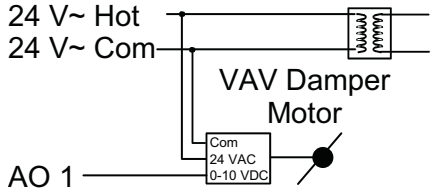
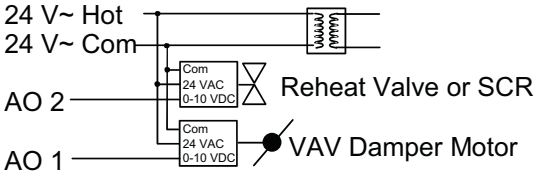
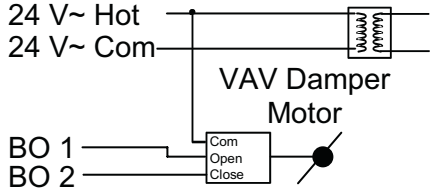
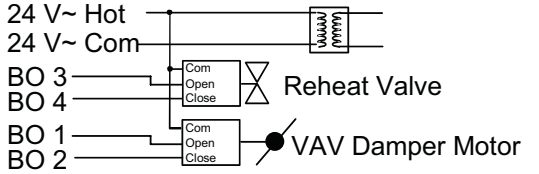
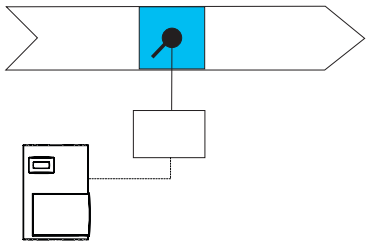
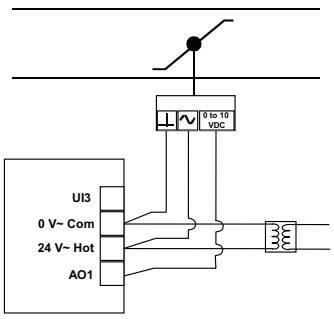
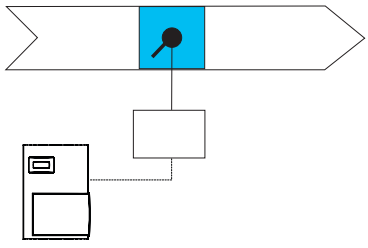
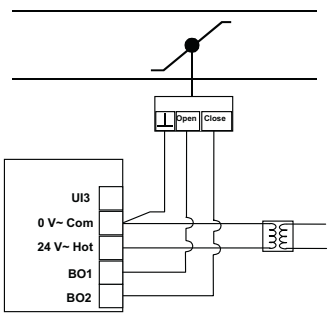
TYPICAL APPLICATIONS

Main outputs wiring

VAV Damper Wiring	VAV Damper and Analog Reheat Wiring
	

VAV Damper Wiring	VAV Damper and Analog Reheat Wiring
	

Schematic	Wiring	Settings
Pressure dependent VAV cooling only system		
Analog VAV Actuator  Room Temperature Control Minimum & Maximum Position Adjusted at Controller		**Mandatory** RehtConf= 0 None
Floating VAV Actuator  Room Temperature Control Minimum & Maximum Position Adjusted at Controller		**Mandatory** RehtConf = 0 None

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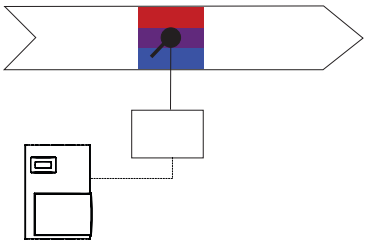
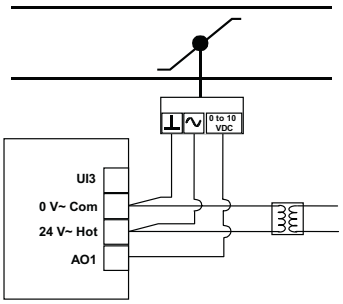
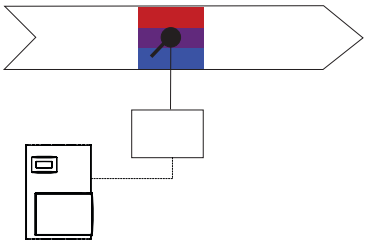
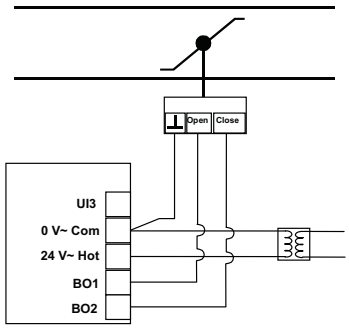
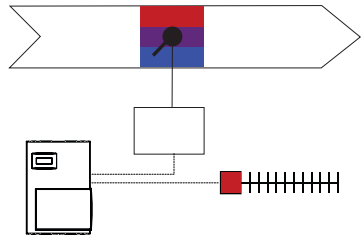
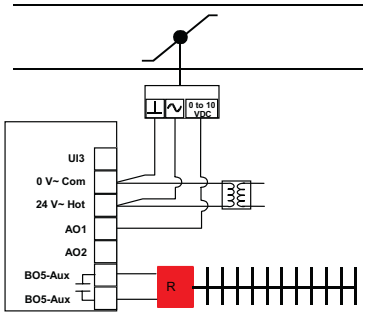
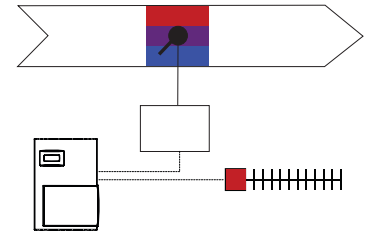
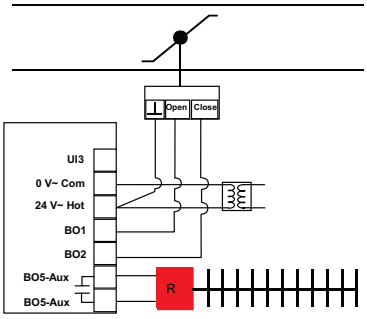
Schematic	Wiring	Settings
Pressure dependent VAV cooling/heating system with central changeover		
0 to 10 Vdc Analog Actuator  Room Temperature Control Minimum & Maximum Position Adjusted at Controller		**Mandatory** RehtConf= 0 None
Tri-State Floating Actuator  Room Temperature Control Minimum & Maximum 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

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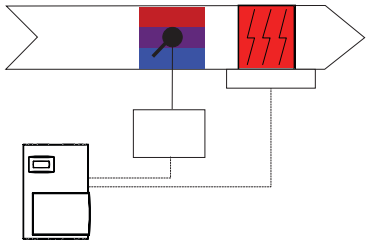
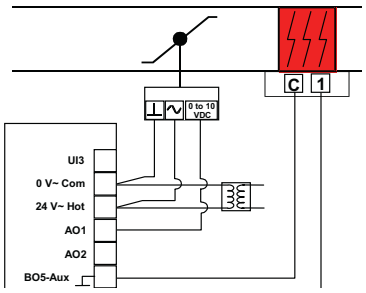
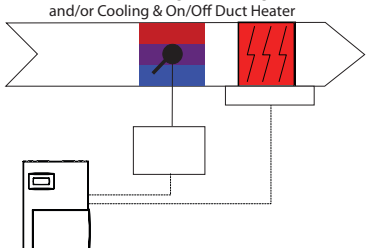
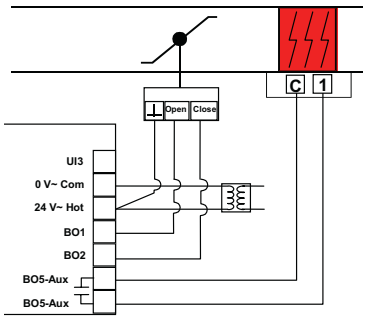
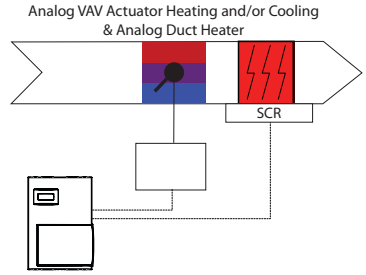
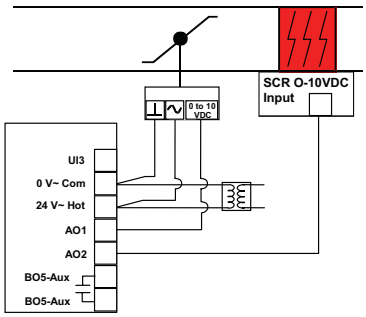
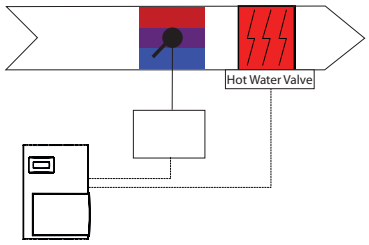
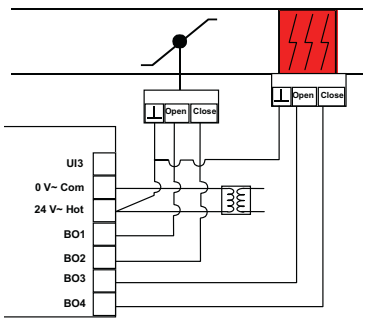
Schematic	Wiring	Settings
Pressure dependent VAV cooling or heating system with local On-Off duct reheat and central changeover		
Analog VAV Actuator Heating and/or Cooling & On/Off Duct Heater  Room Temperature Control Min. Max. and HeatFlow Positions Adjusted at Controller		**Mandatory** RehtConf = 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		**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		**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		**Mandatory** RehtConf = 1 = Analog Duct Reheat Only

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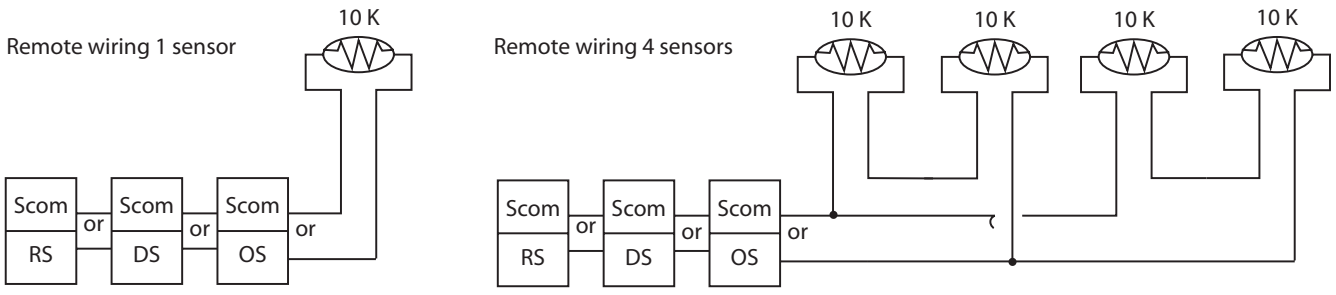
Temperature vs. Resistance Chart for 10K Type 2 NTC Thermistor

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

°C	°F	Kohm	°C	°F	Kohm	°C	°F	Kohm	°C	°F	Kohm	°C	°F	Kohm
-40	-40	324.3197	-20	-4	94.5149	0	32	32.1910	20	68	12.4601	40	104	5.3467
-39	-38	303.6427	-19	-2	89.2521	1	34	30.6120	21	70	11.9177	41	106	5.1373
-38	-36	284.4189	-18	0	84.3147	2	36	29.1197	22	72	11.4018	42	108	4.9373
-37	-35	266.5373	-17	1	79.6808	3	37	27.7088	23	73	10.9112	43	109	4.7460
-36	-33	249.8958	-16	3	75.3299	4	39	26.3744	24	75	10.4443	44	111	4.5631
-35	-31	234.4009	-15	5	71.2430	5	41	25.1119	25	77	10.0000	45	113	4.3881
-34	-29	219.9666	-14	7	67.4028	6	43	23.9172	26	79	9.5754	46	115	4.2208
-33	-27	206.5140	-13	9	63.7928	7	45	22.7861	27	81	9.1711	47	117	4.0607
-32	-26	193.9703	-12	10	60.3980	8	46	21.7151	28	82	8.7860	48	118	3.9074
-31	-24	182.2686	-11	12	57.2044	9	48	20.7004	29	84	8.4190	49	120	3.7607
-30	-22	171.3474	-10	14	54.1988	10	50	19.7390	30	86	8.0694	50	122	3.6202
-29	-20	161.1499	-9	16	51.3692	11	52	18.8277	31	88	7.7360	51	124	3.4857
-28	-18	151.6239	-8	18	48.7042	12	54	17.9636	32	90	7.4182	52	126	3.3568
-27	-17	142.7211	-7	19	46.1933	13	55	17.1440	33	91	7.1150	53	127	3.2333
-26	-15	134.3971	-6	21	43.8268	14	57	16.3665	34	93	6.8259	54	129	3.1150
-25	-13	126.6109	-5	23	41.5956	15	59	15.6286	35	95	6.5499	55	131	3.0016
-24	-11	119.3244	-4	25	39.4921	16	61	14.9280	36	97	6.2866	56	133	2.8928
-23	-9	112.5028	-3	27	37.5056	17	63	14.2629	37	99	6.0351	57	135	2.7886
-22	-8	106.1135	-2	28	35.6316	18	64	13.6310	38	100	5.7950	58	136	2.6886
-21	-6	100.1268	-1	30	33.8622	19	66	13.0307	39	102	5.5657	59	138	2.5926

Wiring for 10K Type 2 NTC Thermistor Sensors



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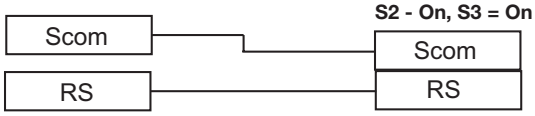
Wiring examples

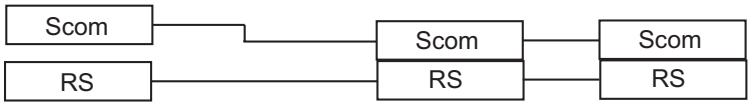
Wiring example of single remote room sensor:

SEZ7260 Series Controller — **SE3010W1045**
Remote Wiring 1 Sensor
S2 - On, S3 = On



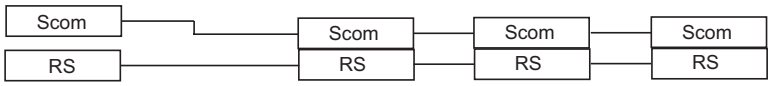
Wiring examples of 2 remote room sensors for averaging applications:

SEZ7260 Series Controller — **2 x SE3010W1045**
Remote Wiring 2 Sensors
S2 - On, S3 = Off



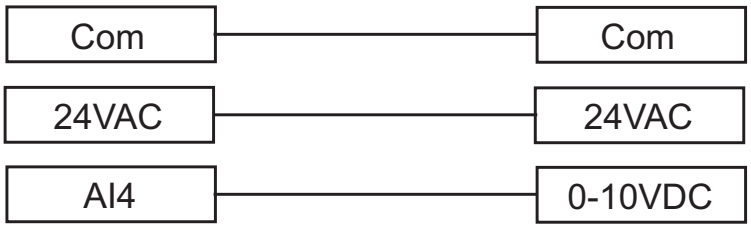
Wiring examples of 3 remote room sensors for averaging applications:

SEZ7260 Series Controller — **3 X SE3010W1045**
Remote Wiring 3 SensorS
S2 - Off, S3 = On

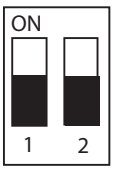


Wiring example of CO2 sensor:

SEZ7260 Series Controller — **CO2 Sensor**

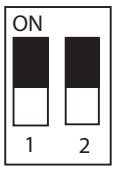


Temp. Sensor DIP Switch Settings

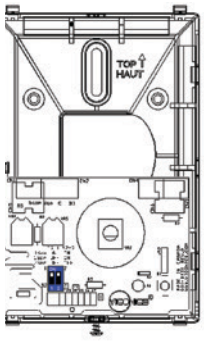


One Sensor:
S2-1 = ON
S2-2 = ON

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



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



SE3020W1045
Remote temperature sensor DIP switch location

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CONFIGURING AND STATUS DISPLAY INSTRUCTIONS

Status display

The Terminal Equipment 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 Terminal Equipment 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

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

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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; “ToccTime.”

Local keypad interface

	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; “ToccTime.”
	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

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.

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INSTALLER CONFIGURATION PARAMETER MENU

Configuration can be done through the network or locally at the Terminal Equipment Controller.

- To enter configuration, press and hold the middle button (°C/°F or Override) for 8 seconds.
- If a password lockout is active, “Password” is prompted. Enter password value using the “up” and “down” arrows and press the middle button again to gain access to all configuration properties of the Terminal Equipment Controller. Entering a wrong password will prevent local access to the configuration menu.
- Press the same middle button repetitively to scroll between all the available parameters.
- Use the up and down key to change the parameter to the desired value.
- To acknowledge and save the new value, press the middle button again.
- The next parameter will now be displayed.

Configuration parameters default value	Significance and adjustments
PswrdSet Configuration parameters menu access password Default value = **0** No password prompted	This parameter sets a password access to prevent unauthorized access to the configuration menu parameters. A default value of “0” will not prompt a password or lock the access to the configuration menu. **Range is: 0 to 1000**
Zone MAC Zone Controller Controller network address Default Value: **255**	RTC MAC address must be unique for the entire network. **1 to 255** (Increments: 1 or 10) For BACnet™ models valid range to use is from 1 to 127.
Zone Baud RTC Controller Communication Baud Rate Default Value: 4 = **Auto**	This parameter will set the network’s baud rate. 0 = 9600 KBps 1 = 19200 KBps 2 = 38400 KBps 3 = 76800 KBps 4 = Auto Bauding (Baud Rate will match detected Baud Rate).
Get From Controller Get From another device configuration utility Default value = **255** Range is: **1 to 255**	Entering a new MAC address enabled an automatic routine that automatically fetches all the required configuration property of the current device from another one already configured to the same required property values. If another value than the default value of 255 is entered, user will then be prompted to exit the Configuration Menu. Ex.: If you are currently configuring MAC12 and the settings **exactly match** the settings of ZN MAC5, then enter 5 as the current parameter value. If the process is successful and all required configuration properties have been copied, the value will revert back to 255. If the process is NOT successful and all required configuration properties have NOT been copied (either the reference device is NOT the same model number or is offline or does not exists) the value will revert back to 254 to indicate the failure of the process. Leaving the Get From parameter to 255 means that every configuration parameters has to be set manually.
RTC MAC RTC Controller network address Default: **4**	Master SEZ76 RTU system controller to which current SEZ72 Zone controller is attached **1 to 127** (Increments: 1 or 10)
MenuScro Menu scroll Default: **On = Scroll active**	Removes the scrolling display and only presents the room temperature to the user. With this option enabled, no status is given for occupancy and outdoor temperature. **On = Scroll active** **Off = Scroll not active**

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C or F Sets the display scale of the controller Default: **°F**	**°F** for Fahrenheit scale **°C** for Celsius scale
Lockout Keypad lockout levels Default value = **0 No lock**	0 = No lock 1 = Low level 2 = High level 3 = High level

USER KEY FUNCTIONS

LEVEL	Occupied temperature setpoints	Local override only	Global overrride access
0	Unlocked	Unlocked	Unlocked
1	Unlocked	Unlocked	Locked
2	Unlocked	Locked	Locked
3	Locked	Locked	Locked

BI1 Binary input no. 1 configuration Default: **None**	**(None):** No function will be associated with the input. Point can still be monitored through the BACnet ™ network. **(Motion NO):** Used in Occupied Mode only to toggle from the Occupied setpoints to the Stand-By setpoints when no motion is detected for 60 minutes at the zone. When motion is detected at the zone, the Occupied setpoint resumes. **Contact opened = No motion detected.** **Contact closed = Motion detected.** **(Motion NC):** Used in Occupied Mode only to toggle from the Occupied setpoints to the Stand-By setpoints when no motion is detected for 60 minutes at the zone. When motion is detected at the zone, the Occupied setpoint resumes. **Contact opened = Motion detected.** **Contact closed = No motion detected.**
AI4 Analog input no.4 configuration Default: **None**	**(None):** No function will be associated with the input. Point can still be monitored through the BACnet network. **CO2:** Used when a 0-10VDC CO2 sensor is connected to AI4 input. The value of the input signal is displayed in AI4 Dis parameter.

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RehtConf Number of Reheat Stages and their applications **Default:** 1 = Modulating Duct Reheat Only	**0 = None** Zone will operate in VAV heating or cooling only based on the Master RTU mode without any reheat. • RTU in cooling mode uses Control Curve 1 • RTU in heating mode uses Control Curve 2
	1 = Modulating Duct Reheat Only Zone will operate in VAV heating or cooling based on the Master RTU mode and use the Modulating reheat output for a local Modulating duct reheat device like a proportional hot water valve or an SCR. The local reheat can be enabled or disabled based on the outdoor air temperature and AO2 OALK. • RTU in cooling mode uses Control Curve 3 • RTU in heating mode uses Control Curve 4
	2 = On-Off Duct Reheat Only Zone will operate in VAV heating or cooling based on the Master RTU mode and use the On-Off reheat output for a local On-Off duct reheat device like a 2 position hot water valve or a single electric duct heater. The local reheat can be enabled or disabled based on the outdoor air temperature and BO5 OALK. • RTU in cooling mode with On-Off Reheat (BO5 Time=0=15 minutes) uses Control Curve 5b • RTU in cooling mode with On-Off Pulsed Reheat (BO5 Time=1=10 seconds) uses Control Curve 5a • RTU in heating mode with reheat uses Control Curve 6
	3 = On-Off Perimeter Reheat Only Zone will operate in VAV heating or cooling based on the Master RTU mode and use the On-Off reheat output for a local On-Off perimeter reheat device like a 2 position hot water valve or a electric baseboard unit. The local reheat can be enabled or disabled based on the outdoor air temperature and BO5 OALK. • RTU in cooling mode uses Control Curve 7 • RTU in heating mode uses Control Curve 6
	4 = Modulating Duct Reheat & On-Off Perimeter Reheat Zone will operate in VAV heating or cooling based on the Master RTU mode and uses 2 stages of local reheat. The first reheat stage will use the modulating reheat output for a local modulating duct reheat device like a proportional hot water valve or an SCR. The local reheat stage can be enabled or disabled based on the outdoor air temperature and AO2 OALK. The second reheat stage will use the On-Off reheat output for a local On-Off perimeter reheat device like a 2 position hot water valve or a electric baseboard unit. The local reheat stage can be enabled or disabled based on the outdoor air temperature and BO5 OALK • RTU in cooling mode uses Control Curve 9 • RTU in heating mode uses Control Curve 10
	5 = Duct heater & On-Off/Pulsed perimeter reheat (All electric) Zone will operate in VAV heating or cooling based on the Master RTU mode and use 2 stages of local reheat. The first reheat stage will use the modulating BO5 reheat output (10s or 15m cycles) for a local modulating electric duct reheat device with a 24 Vac fired SSR. The local reheat stage can be enabled or disabled based on the outdoor air temperature and BO5 OALK The second reheat stage will use the reheat output BO3 (15m cycles) and/or BO4 (10s cycles) for a local On-Off/Pulsed perimeter reheat device like a 2 position electric baseboard unit. The local reheat stage can be enabled or disabled based on the outdoor air temperature and FO2 OALK

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AO2RA/DA **RA/DA** Reverse acting or Direct acting actuator signal for Reheat 1 Analog output signals Default: **DA signal**	Changes the action of the reheat 1 analog output. Valid only if analog reheat sequences are enabled **DA** = Direct acting 0 to 100 % = 0 to 10 VDC **RA** = Reverse acting 0 to 100 % - 10 to 0 VDC **SEZ7260F5x45B models only**
AO2 OALK Zone's analog reheat (AO2) outside air temperature lockout Default: **55°F (13°C)**	Outdoor air temperature value from the RTU controller under which the analog reheat stage will be allowed to be used. Function will only be enabled if a valid outside air temperature value is received at the zone. **-40 to 122 °F (-40.0 to 50.0 °C)** (Increments: 5° or 50°) **SEZ7260F5x45B models only**
FL TM Dp Floating damper actuator timing – Output BO1-BO2 Default: **1.5 minutes**	Maximum stroke time of floating damper actuator Output BO1-BO2. **0.5 to 9.0** in 0.5 minutes increment **SEZ7260C5x45B models only**
FL TM Rh Floating damper actuator timing – Output BO3-BO4 Default: **1.5 minutes**	Maximum stroke time of floating damper actuator Output BO3-BO4. **0.5 to 9.0** in 0.5 minutes increment **SEZ7260C5x45B models only**
FO2 OALK Zone's BO3-BO4 reheat floating output outside air temperature lockout Default: **55°F (13°C)**	Outdoor air temperature value from the RTU controller under which the BO3-BO4 reheat output stage will be allowed to be used Function will only be enabled if a valid outside air temperature value is received at the zone. **-40 to 122 °F (-40.0 to 50.0 °C)** (Increments: 5° or 50°) **SEZ7260C5x45B models only**
BO5 OALK Zone's On-Off reheat (BO5) outside air temperature lockout Default: **32°F (0°C)**	Outdoor air temperature value from the RTU controller under which the On-Off reheat stage will be allowed to be used. Function will only be enabled if a valid outside air temperature value is received at the zone. **-40 to 122 °F (- 40.0 to 50.0 °C)** (Increments: 5° or 50°)
BO5 Time Sets the time base for the ON-Off reheat output if used Default: **0 = 15 minute**	Valid only if reheat sequences are enabled with BO5 **0=** 15 minutes **1=** 10 seconds for Solid state relays
BO5 cont BO5 contact function Default value = **0 = NO**	Enables the use of normally opened or normally closed 2 position reheat valves. 0 = **NO**, Energized = Contact Closed / De-energized = Contact Opened **1 = NC, Energized = Contact Opened / De-energized = Contact Closed**
St-By TM Stand-by Timer value Default **0.5 hours**	Time delay between the moment when the PIR cover detected the last movement in the area and the time when the controller's stand-by mode and setpoints become active. Range is: **0.5 to 24.0** hours in 0.5hr increments.

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Unocc TM Unoccupied Timer value Default: **0.0 hours**	Time delay between the moment where the controller toggles to stand-by mode and the time which the controller unoccupied mode and setpoints become active. The factory value or **0.0 hours:** Setting this parameter to its default value of 0.0 hours disables the unoccupied timer. This prevents the controller to drift from stand-by mode to unoccupied mode when PIR functions are used. **Range is: 0.0 to 24.0 hours in 0.5hr increments**
Unocc HT Unoccupied heating setpoint Default: **62 °F (17°C)**	Unoccupied heating setpoint adjustment. Heating setpoint range is: **40 to 90 °F (4.5 to 32.0 °C)** (Increments:0.5° or 5°)
Unocc CL Unoccupied cooling setpoint limit Default: **80 °F (27°)**	Unoccupied cooling setpoint adjustment. Cooling setpoint range is: **54 to 100 °F (12.0 to 37.5 °C)** (Increments: .5° or 5°)
St-By HT Stand-by heating setpoint Default: **65 °F (18°C)**	Stand-by heating setpoint adjustment. This setpoint will be used if there is a motion detector connected and configured on BI1 or a PIR sensor cover used. Heating setpoint range is: **40 to 90 °F (4.5 to 32.0 °C)**
St-By CL Stand-by cooling setpoint limit Default: **75 °F (24°C)**	Stand-by cooling setpoint adjustment. This setpoint will be used if there is a motion detector connected and configured on BI1 or a PIR sensor cover used. Cooling setpoint range is: **54 to 100 °F (12.0 to 37.5 °C)**
Set Type Temporary user setpoints enable Default: **permnent**	Enables temporary setpoints feature to any local change of occupied setpoints. **temporar:** (temporary) Any new setpoints entered by the user will revert back to their default value after internal timer ToccTime expires. To change setpoints permanently, revert to **No** this variable or write new setpoint values through the network. Any setpoints written through the network will be permanent ones and saved to permanent memory. **permnent:** (permanent) Any changes of occupied setpoints entered by the user through the keypad are permanent and saved to permanent memory.
TOccTime Temporary occupancy time Default value = **2 hours**	Temporary occupancy time with occupied mode setpoints when override function is enabled. When the controller is in unoccupied mode, function is enabled with the local override keypad button. Range is: **0,1, 2, 3, 4 & up to 12 hours** (Increments: 1 hr or 10 hr)
Cal RS Room air temperature sensor calibration Default: **0.0 °F or °C**	Offset that can be added or subtracted to actual displayed and used room temperature **± 5.0 °F, 1.0 °F increments** **(± 2.5 °C, 0.5 °C increments)**
Deadband Minimum deadband Default: **2.0 °F (1.0 °C)**	Minimum deadband value between the heating and cooling setpoints. If modified, it will be first applied only when a setpoint is modified. **2, 3, 4 or 5 °F, 1.0 °F increments** **(1.0 to 2.5 °C, 0.5 °C increments)**

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<table>
<tr><td>Pband
Proportional band setting
Default is : 3</td><td>Adjust the proportional band used by the Terminal Equipment Controller PI control loop.

 
Note that the default value of 3.0 °F (1.2 °C) gives satisfactory operation in most normal installations. cases. The use of a superior proportional band is different than the factory default is normally warranted in applications where the controller location is problematic and leads to unwanted cycling of the unit. A typical example is a wall mounted unit where the controller is installed between the return and supply air feeds and is directly influenced by the supply air stream of the unit.

<table>
<tr><th>VALUE</th><th>°F SCALE PBAND</th><th>°C SCALE PBAND</th></tr>
<tr><td>3</td><td>3 F</td><td>1.7 C</td></tr>
<tr><td>4</td><td>4 F</td><td>2.2 C</td></tr>
<tr><td>5</td><td>5 F</td><td>2.8 C</td></tr>
<tr><td>6</td><td>6 F</td><td>3.3 C</td></tr>
<tr><td>7</td><td>7 F</td><td>3.9 C</td></tr>
<tr><td>8</td><td>8 F</td><td>4.4 C</td></tr>
<tr><td>9</td><td>9 F</td><td>5.0 C</td></tr>
<tr><td>10</td><td>10 F</td><td>5.6 C</td></tr>
</table>
</td></tr>
<tr><td>Heat max
Maximum local heating setpoint limit
Default: 90 °F (32 °C)</td><td>Maximum local occupied heating user setpoints adjustments.
Heating setpoint range is:
40 to 90 °F (4.5 to 32.0 °C) (Increments: 0.5° or 5°)</td></tr>
<tr><td>Cool mi
Enable / Disable damper minimum position.
Default: On</td><td>Enables or disabled the damper minimum position (parameter Min PO) if the controller cooling or heating demand is not the same as the zone sequence. Example: if controller calls for heating and the zone sequence is Cool (sent by the SEZ76xx master controller).
On = Enable Minimum Position
Off = Disable Minimum Position</td></tr>
<tr><td>DisMinPo
Enable / Disable damper minimum position
Default: On</td><td>Enables or disabled the damper minimum position (parameter Min PO) if the controller cooling or heating demand is not the same as the zone sequence. Example: if controller calls for heating and the zone sequence is Cool (sent by the SEZ76xx master controller).
On = Enable Minimum Position
Off = Disable Minimum Position</td></tr>
<tr><td>Min Pos
Zone damper minimum position
Default: 10%</td><td>Sets the minimum position of the damper.
0 to 100% (Increments: 1% or 10%)</td></tr>
<tr><td>Max Pos
Zone damper maximum position
Default : 100%</td><td>Sets the maximum position of the damper for both heating and cooling mode of the RTU.
0 to 100% (Increments: 1% or 10%)</td></tr>
</table>

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MaxHTPos Zone damper Maximum heating position Default: **30%**	Opens the damper up to this maximum position when the primary air is cold and used only when the RTU is in cooling mode and there is a local call for reheat using the reheat output(s). This will maximize the efficiency and delivery of a duct mounted reheat device by augmenting the airflow on a single duct VAV. **0 to 100%** (Increments: 1% or 10%)
PIHT Wei PI heating weight zone output used for RTU controller demand calculations Default value: **100%**	Weight of the zone in the calculation of the PI Heating Demand calculation of the RTU controller. If a zone has a special application (servers room, mechanical room, etc) and have impact on other rooms' comfort, this parameter can be set to 0%. Please refer to the Zoning System Application Guide for more information that impacts systems operation. Set all heating weight to 0% if the RTU is cooling only. Valid range: **0%, 25%, 50%, 75% and 100%**
PICL Wei PI cooling weight zone output used for RTU controller demand calculations Default value: **100%**	Calculation of the RTU controller. If a zone has a special application such as (server room, mechanical room, etc) and has impact on the comfort of other rooms, this parameter can be set to 0%. Please refer to the Zoning System Application Guide for more information regarding systems operation. Valid range: **0%, 25%, 50%, 75% and 100%**
HT Perfo Controller's heating performance Default value: **0%**	Not a configuration parameter. Only displays the controller's performance in heating mode. This value is only valid if there's no change in system mode, setpoints or occupancy for at least 1.5 hours. These changes cause the value to reset to an invalid value (above 20°F)
CL Perfo Controller's cooling performance Default value: **0%**	Not a configuration parameter. Only displays the controller's performance in cooling mode. This value is only valid if there's no change in system mode, setpoints or occupancy for at least 1.5 hours. These changes cause the value to reset to an invalid value (above 20°F)
UI3 Dis UI3 display value	Used as diagnostic or service help to troubleshoot and diagnose sensor operation Supply or Discharge temperature
CO2 Room CO2 value	Used as diagnostic or service help to troubleshoot and diagnose sensor operation. This value is displayed only if AI4 parameter is set to CO2. **0 to 2000 ppm**

AI4 INPUT FOR CO2 SENSOR

The SEZ7260x5x45B series features a 0-10VDC CO2 sensor input which value can be used by the SEZ7656E1045B controller for Indoor Air Quality (IAQ) control.

Here's the table showing the CO2 value treatment based on the AI4 parameter settings:

AI4 parameter setting	CO2 display at the controller	Value Written to SEZ7656E1045B	Room CO2 Value available in ppm (BACnet object)	AI4 Value available in VDC (BACnet object)
None	NO	NO	NO	YES
CO2	YES	YES (Only in Occupied mode)	YES	YES

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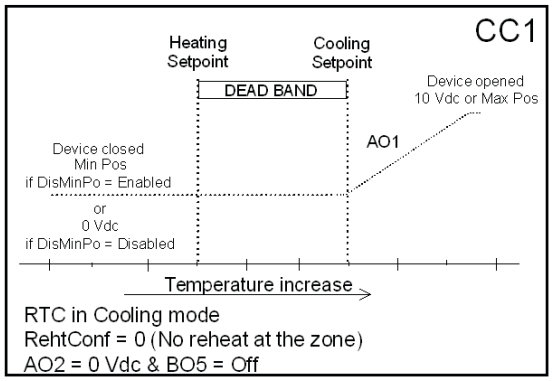
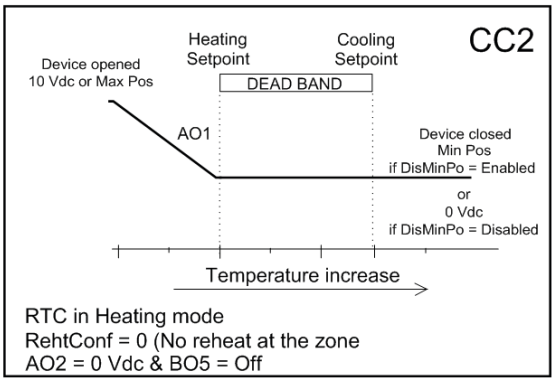
REFERENCED OPERATIONAL CONTROL CURVES

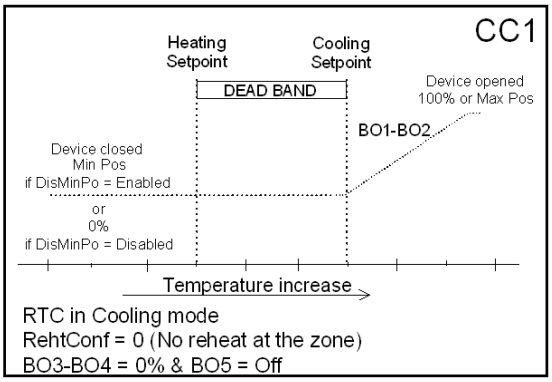
RehtConf = 0 = None

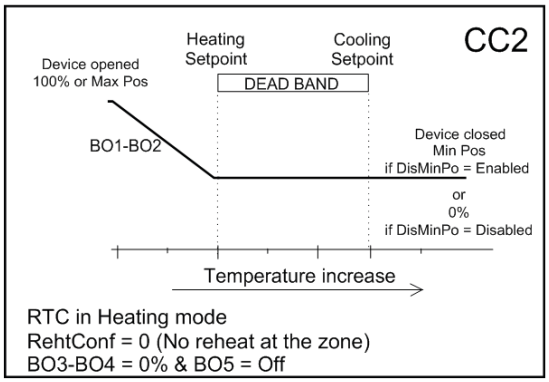
SEZ7260F Series: Analog Outputs





SEZ7260C Series: Floating Outputs





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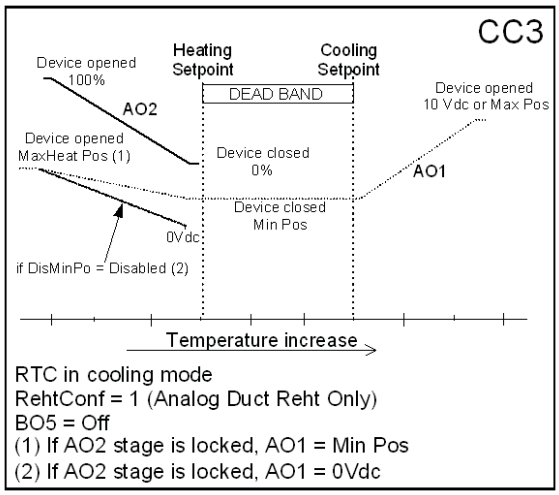
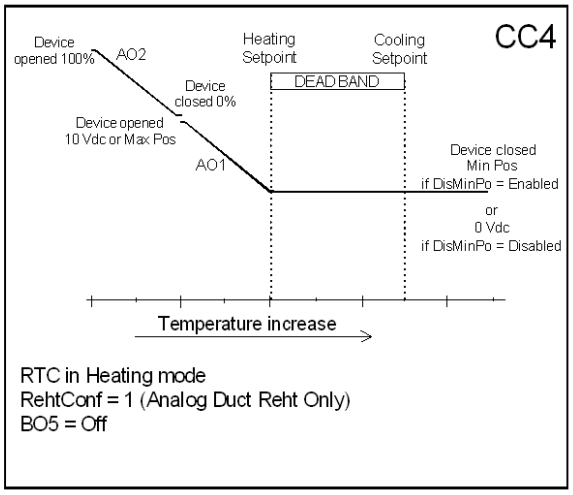
RehtConf = 1 = Analog Duct Reheat Only

SEZ7260F Series: Analog Outputs

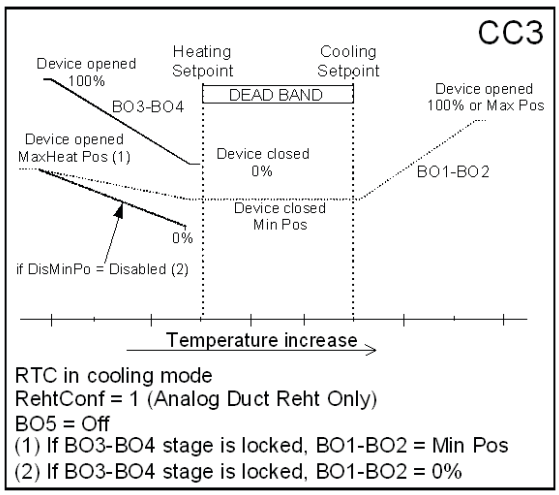


RTC in cooling mode
RehtConf = 1 (Analog Duct Reht Only)
BO5 = Off
(1) If AO2 stage is locked, AO1 = Min Pos
(2) If AO2 stage is locked, AO1 = 0Vdc

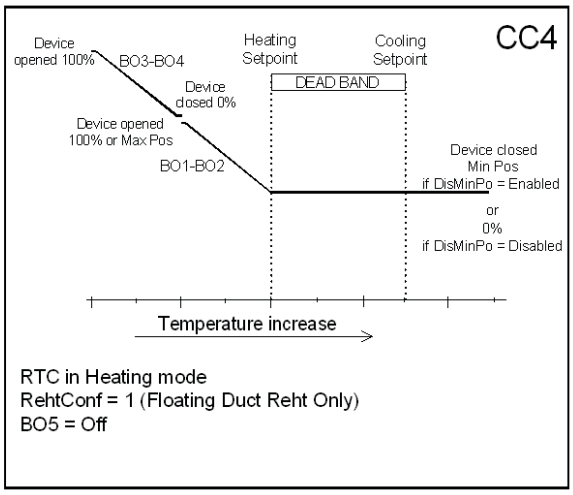


RTC in Heating mode
RehtConf = 1 (Analog Duct Reht Only)
BO5 = Off

SEZ7260C Series: Floating Outputs



RTC in cooling mode
RehtConf = 1 (Analog Duct Reht Only)
BO5 = Off
(1) If BO3-BO4 stage is locked, BO1-BO2 = Min Pos
(2) If BO3-BO4 stage is locked, BO1-BO2 = 0%



RTC in Heating mode
RehtConf = 1 (Floating Duct Reht Only)
BO5 = Off

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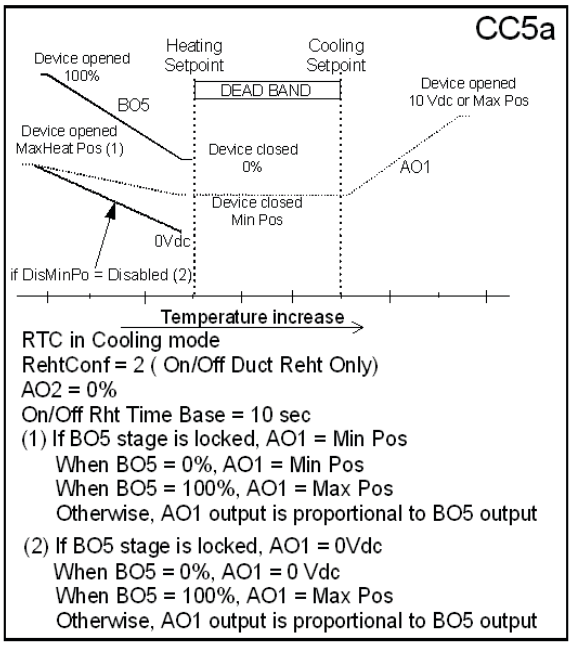
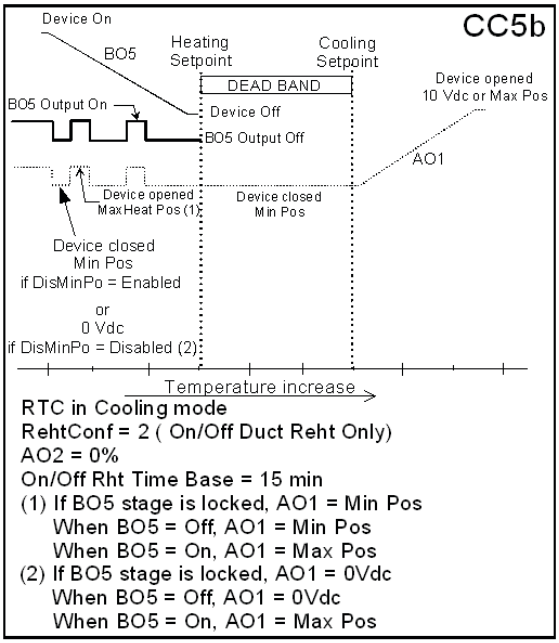
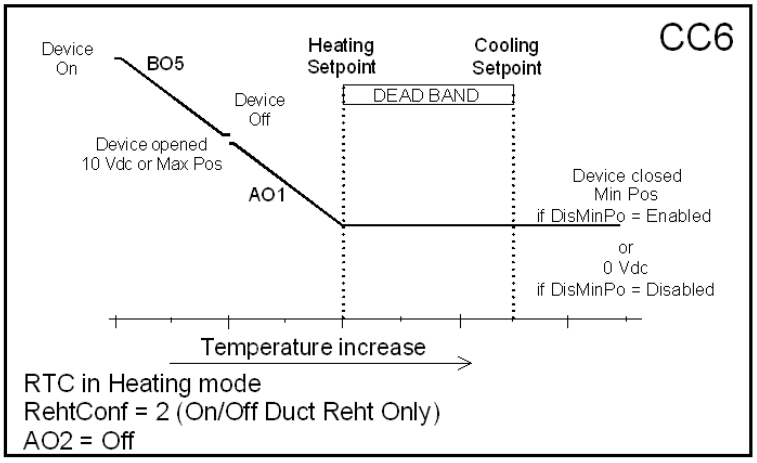
RehtConf = 2 = On-Off Duct Reheat Only

SEZ7260F Series: Analog Outputs







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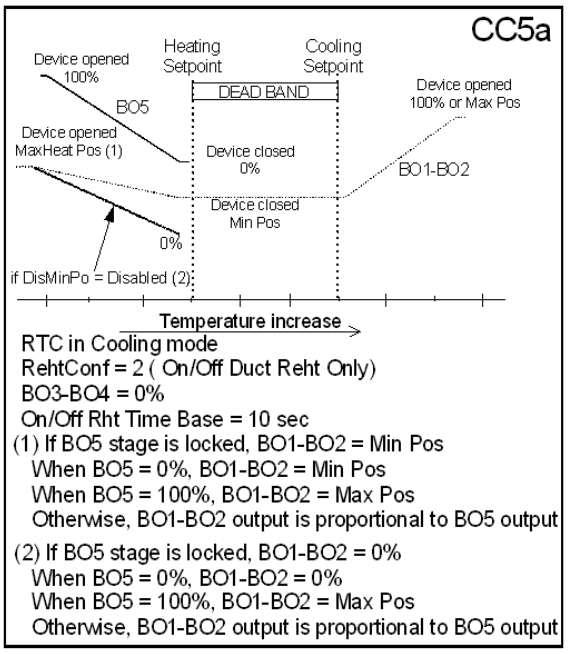
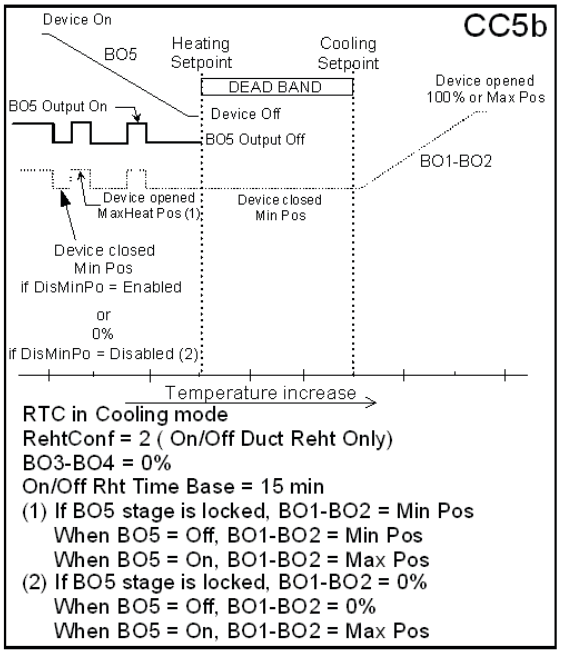
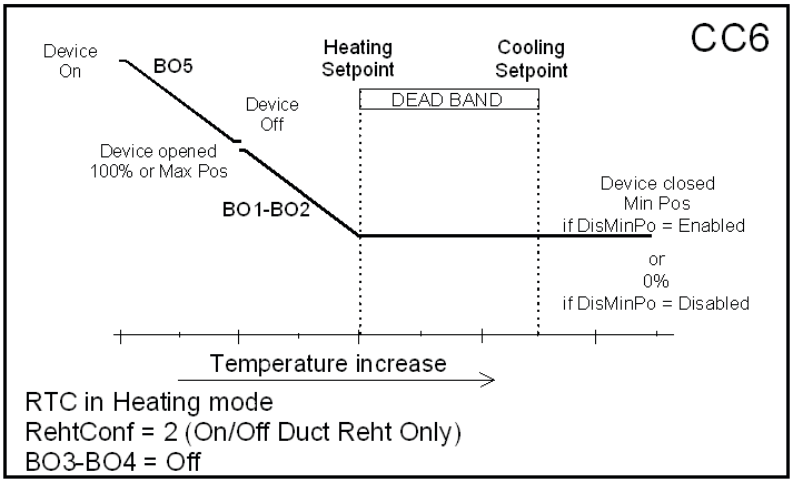
SEZ7260C Series: Floating Outputs







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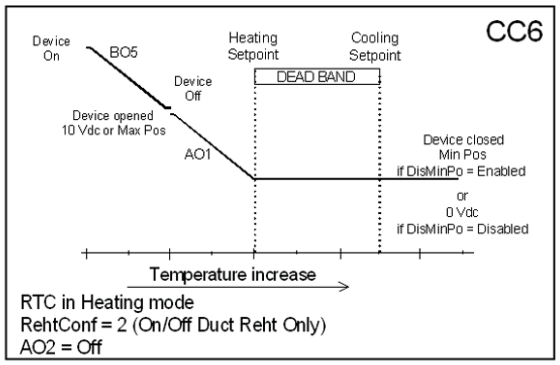
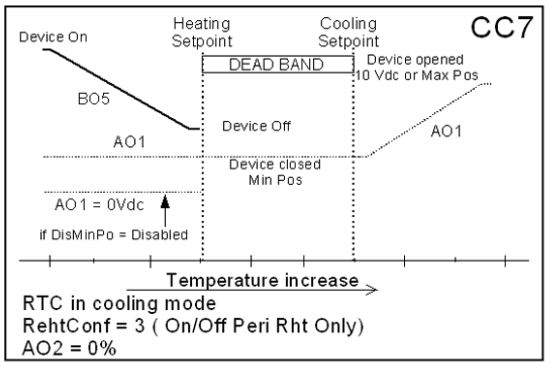
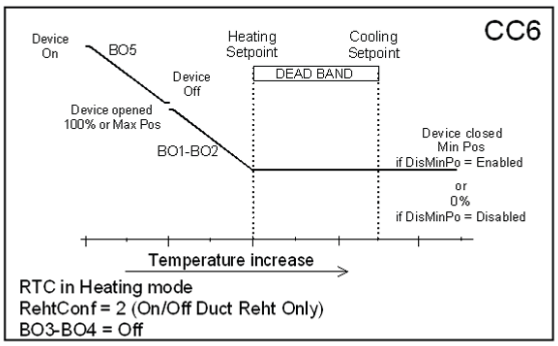
RehtConf = 3 = On-Off Perimeter Reheat Only

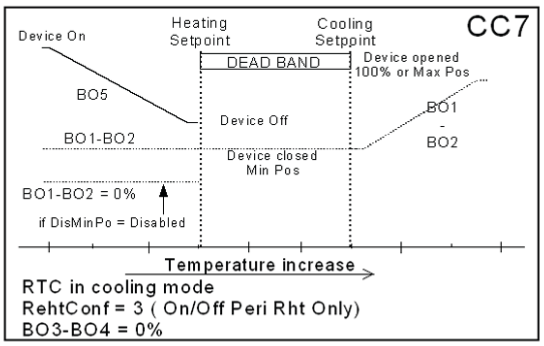
SEZ7260F Series: Analog Outputs





SEZ7260C Series: Floating Outputs





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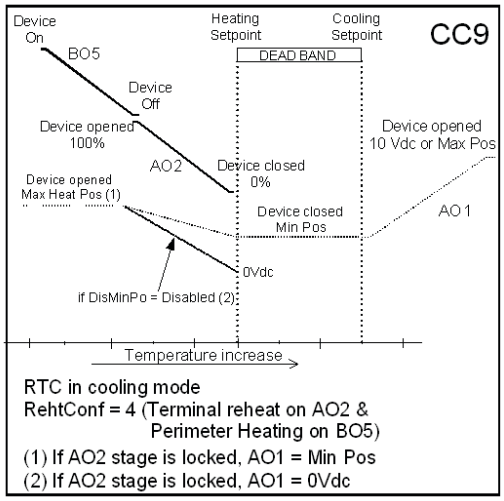
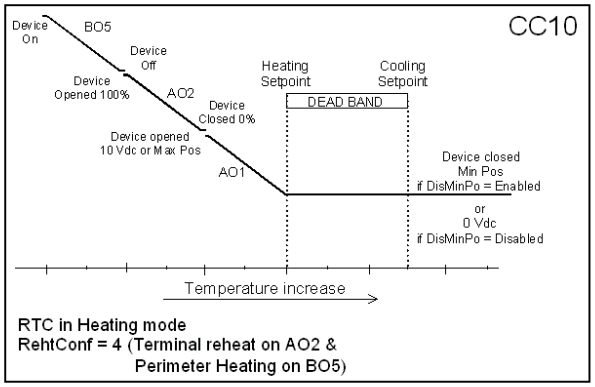
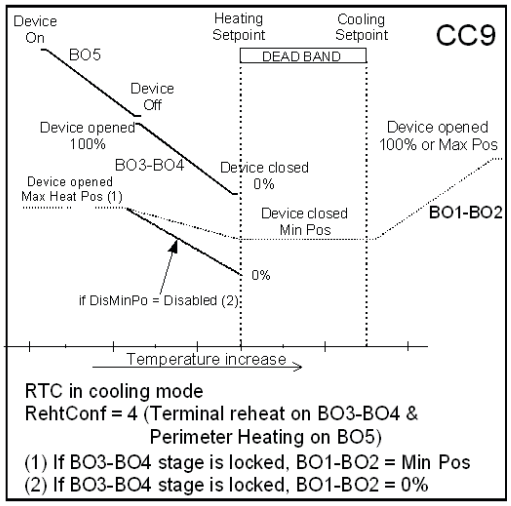
RehtConf = 4 = Analog Duct Reheat & On-Off Perimeter Reheat

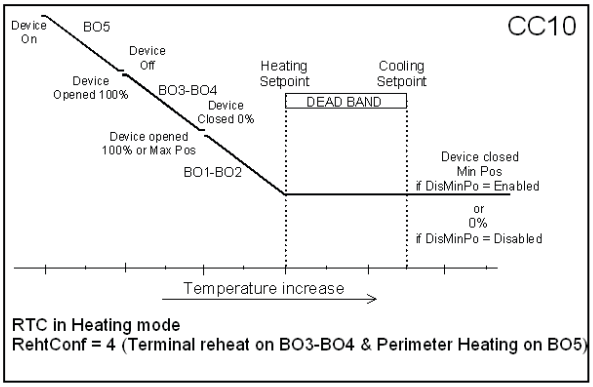
SEZ7260F Series: Analog Outputs





SEZ7260C Series: Floating Outputs





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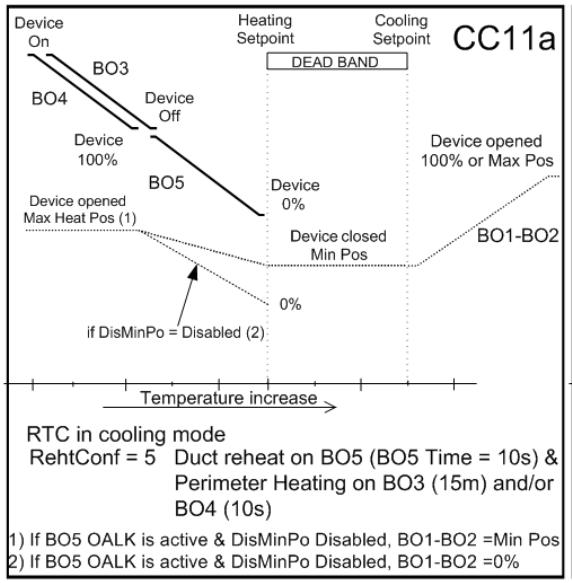
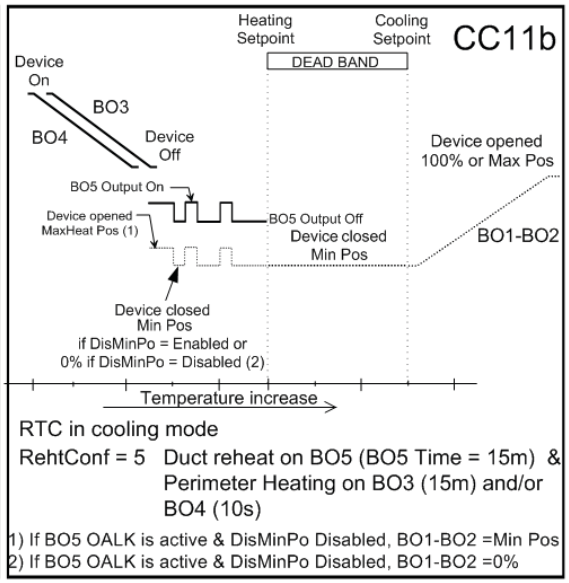
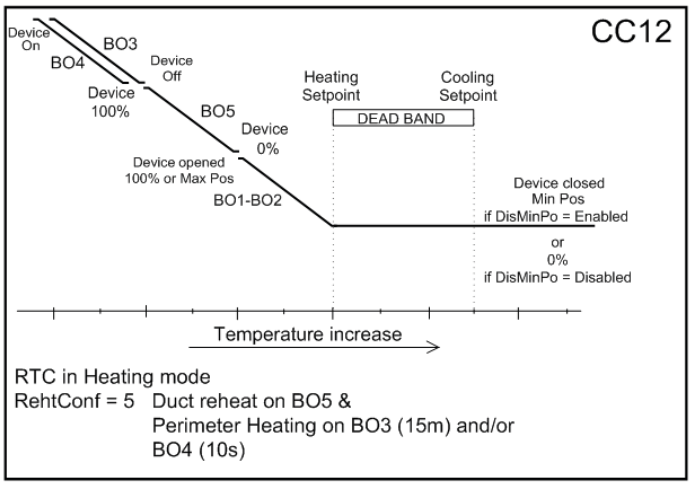
RehtConf = 5 = Pulsed Duct heater & On-Off/Pulsed perimeter reheat (All electric)

SEZ7260C Series: Floating Outputs







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SPECIFICATIONS

Terminal Equipment Controller power requirements	19-30 VAC 50 or 60 Hz; 2 VA Class 2
Operating conditions	0 °C to 50 °C (32 °F to 122 °F) 0% to 95% R.H. non-condensing
Storage conditions	-30 °C to 50 °C (-22 °F to 122 °F) 0% to 95% R.H. non-condensing
Sensor	Local 10 K NTC thermistor
Resolution	± 0.1 °C (± 0.2 °F)
Temperature control accuracy	± 0.5 ° C (± 0.9 °F) @ 21 °C (70 °F) typical calibrated
Contact output rating	Relay outputs: 30 VAC, 1 Amp. Maximum, 3 Amp. In-rush 0 to 10 VDC into 2 KΩ resistance min. 12.0 to 37.5 °C (54 to 100 °F)
Occ, Stand-By and Unocc cooling setpoint range	4.5 °C to 32 °C (40 °F to 90 °F)
Occ, Stand-By and Unocc heating setpoint range:	-40 °C to 50 °C (-40 °F to 122 °F)
Room and outdoor air temperature display range:	Cooling & Heating: 1.8°C (3.2°F)
Proportional band for room temperature control:	Dry contact across terminal BI1 & UI3 to Scom
AI4 Analog input:	0 to 10 VDC into 10KΩ resistance min.
Wire gauge	18 gauge max. 22 gauge min.
Approximate shipping weight	0.75 lb (0.34 kg)
Agency Approvals all models	UL: UL 873 (US) and CSA C22.2 No. 24 (Canada), File E27734 with CCN XAPX (US) and XAPX7 (Canada)
Agency Approvals all models	FCC: Compliant to CFR 47, Part 15, Subpart B, Class A (US) CE : EMC Directive 2004/108/EC (Europe Union) C-Tick: AS/NZS CISPR 22 Compliant (Australia / New Zealand) Supplier Code Number N10696
Agency Approvals Wireless models	FCC: Compliant to: Part 15, Subpart B, Class (US)
THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.	
 Please check with your local government for instruction on disposal of this product.	

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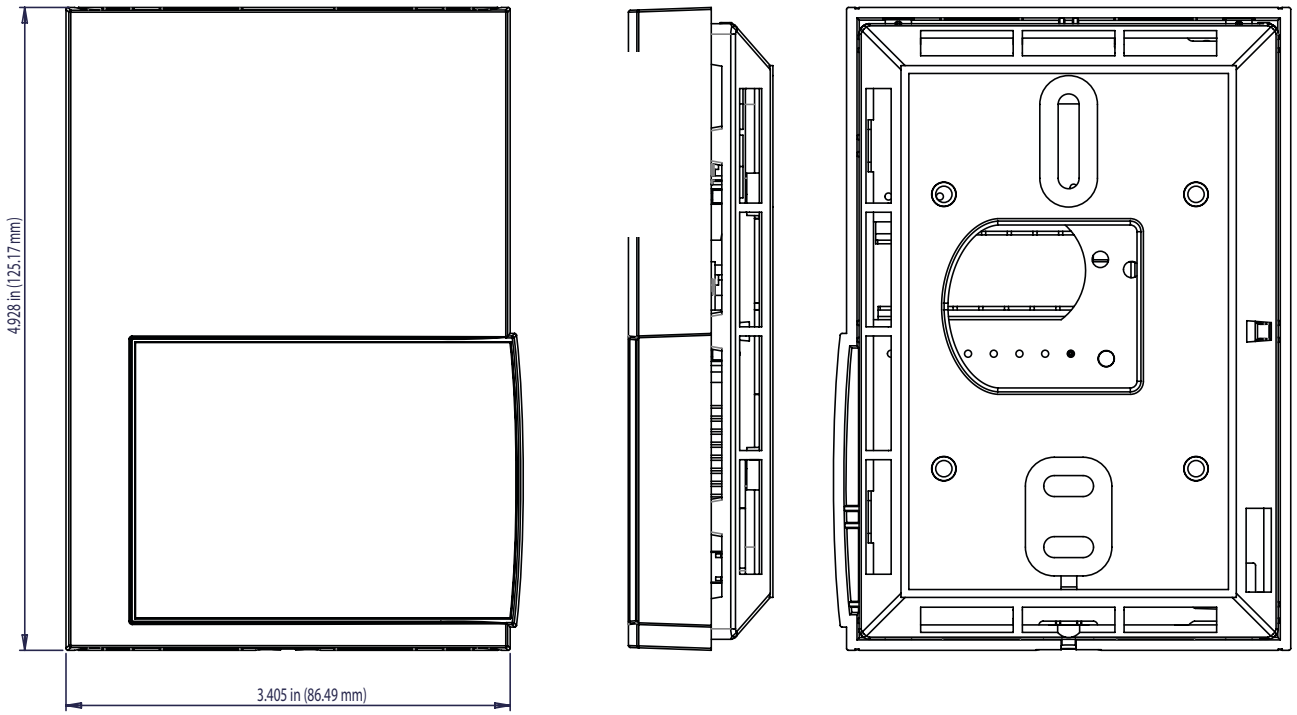
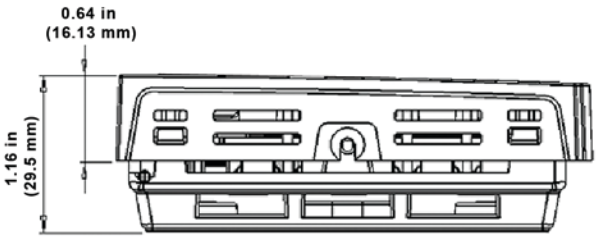
DIMENSIONAL DRAWING





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