

# SE76X7 Series Installation Guide

Installation Guide for Commercial HVAC Applications



## CONTENTS

<b>Installation</b>	<b>2</b>
Location	2
Installation	2
<b>Terminal, Identification and Function</b>	<b>3</b>
Wiring	3
Screw terminal arrangement	3
<b>Typical applications</b>	<b>4</b>
Remote humidity sensor accessories	4
<b>Configuring and Status Display Instructions</b>	<b>6</b>
Status display	7

## INSTALLATION

### 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.

### Preparation

- 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,

### 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 flat and clean).
3. Insert cable in central hole of base.
4. Align base and mark location of two mounting holes on wall. (ensure proper side of base up).
5. Install anchors in wall.
6. Insert screws in mounting holes on each side of base (Figure 2).
7. Gently swing back circuit board on base and push until tabs lock.
8. Strip each wire 1/4 inch from end.
9. Insert each wire according to wiring chart (page 3).
10. Gently push excess wiring back into hole (Figure 3).
11. Re-Install wiring terminals in correct locations (Figure 3).
12. Re-install cover (top side first) and gently push extra wire length back into hole in wall.
13. Install security screw.



- If replacing an existing Room Controller, label wires before removal of Room Controller.
- Electronic controls are static sensitive devices. Discharge yourself properly before manipulating and installing Room Controller.
- A short circuit or wrong wiring may permanently damage the Room Controller or the equipment.
- All SE7000 series 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) 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.

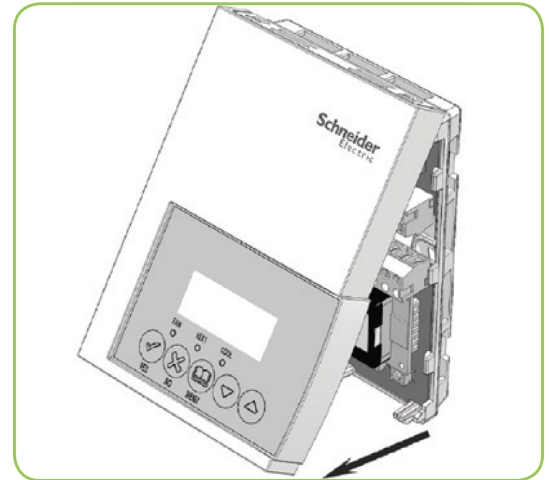


Figure-1 Open the cover

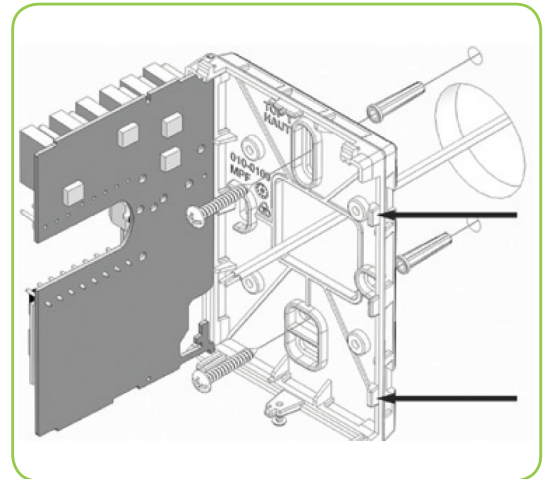


Figure-2 Location of PCB retaining tabs

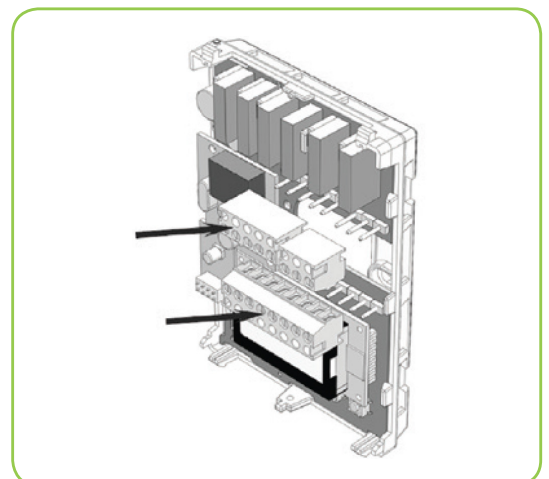


Figure-3 Re-install terminal blocks

## TERMINAL, IDENTIFICATION AND FUNCTION

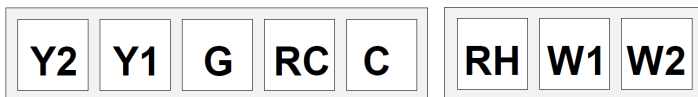
### Wiring

Part Number	SE7657B5x45(X)	SE7607B5x45(X)
Schedule	Yes	No
<b>Top left terminal block</b>		
Y2	X	X
Y1	X	X
G	X	X
RC	X	X
C	X	X
<b>Top right terminal block</b>		
RH	X	X
W1	X	X
W2	X	X
<b>Bottom terminal block</b>		
HUM	X	X
AUX	X	X
DEHUM	X	X
DI	X	X
HS	X	X
SCOM	X	X
OS	X	X
HL	X	X

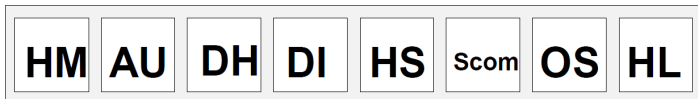
### Screw terminal arrangement

5 pole left top connector  
8 pole bottom connector

3 pole left top connector



### MAIN OUTPUTS WIRING



### Wiring notes:

Note 1: If the same power source is used for the heating stages, install jumper across RC and RH. Maximum current is 2.0 amps.

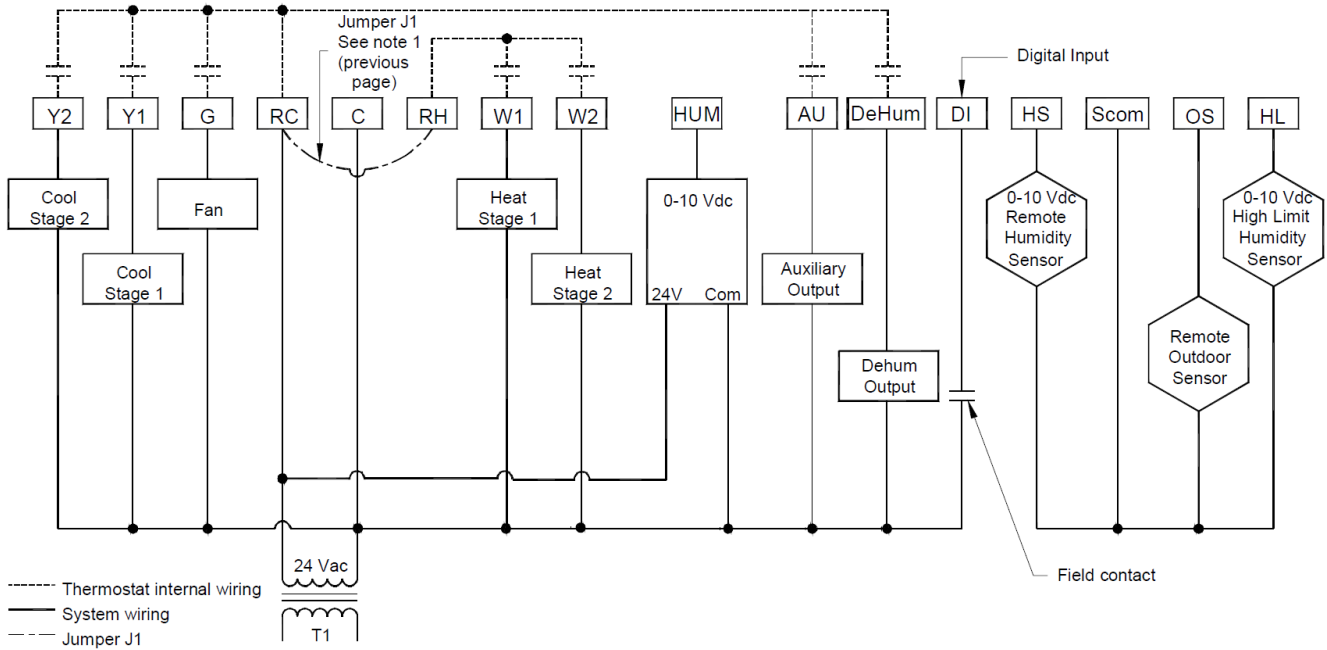
Note 2: If auxiliary output is used to toggle occupancy of the electronic control card inside the equipment, configure the relay parameter (Aux cont) to the N.O. setting. A second relay can be added for additional functionality of the occupancy output.

Note 3: Humidifier output uses a half bridge rectifier. Reference of the control signal is the common of the power supply of the Room Controller. (Terminal C)

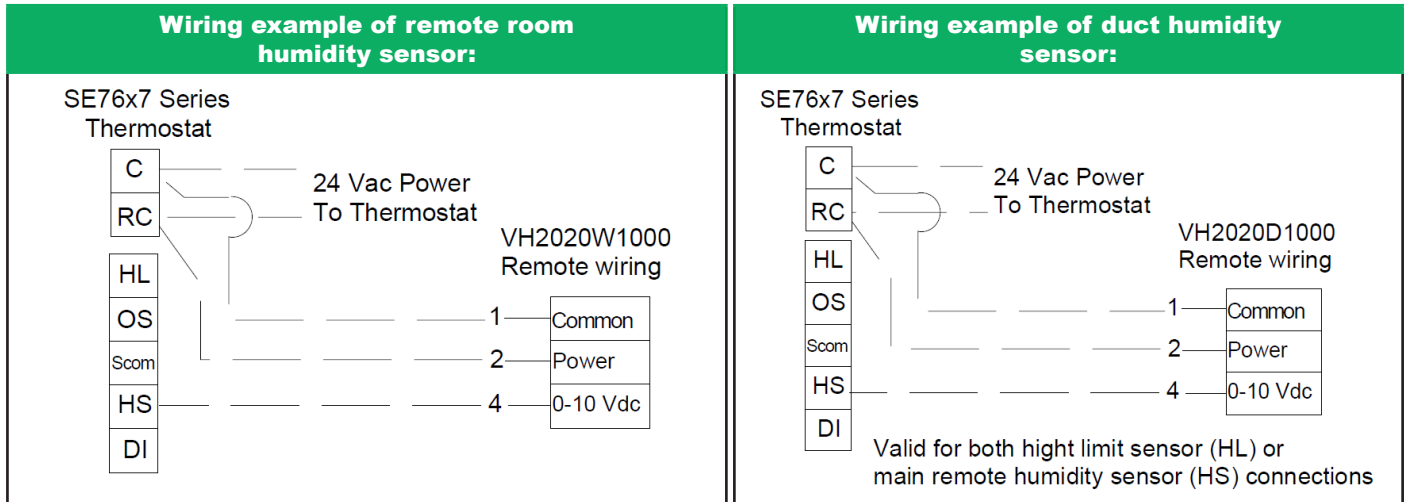
Note 4: Electromechanical contacts are to be used with the digital inputs. Electronic triacs cannot be used as mean of switching for the input. The switched leg to the input for the input to activate is terminal C (common)

Note 5: The transformer of the unit provides power to the Room Controller and the additional loads wired to the Room Controller.

## TYPICAL APPLICATIONS

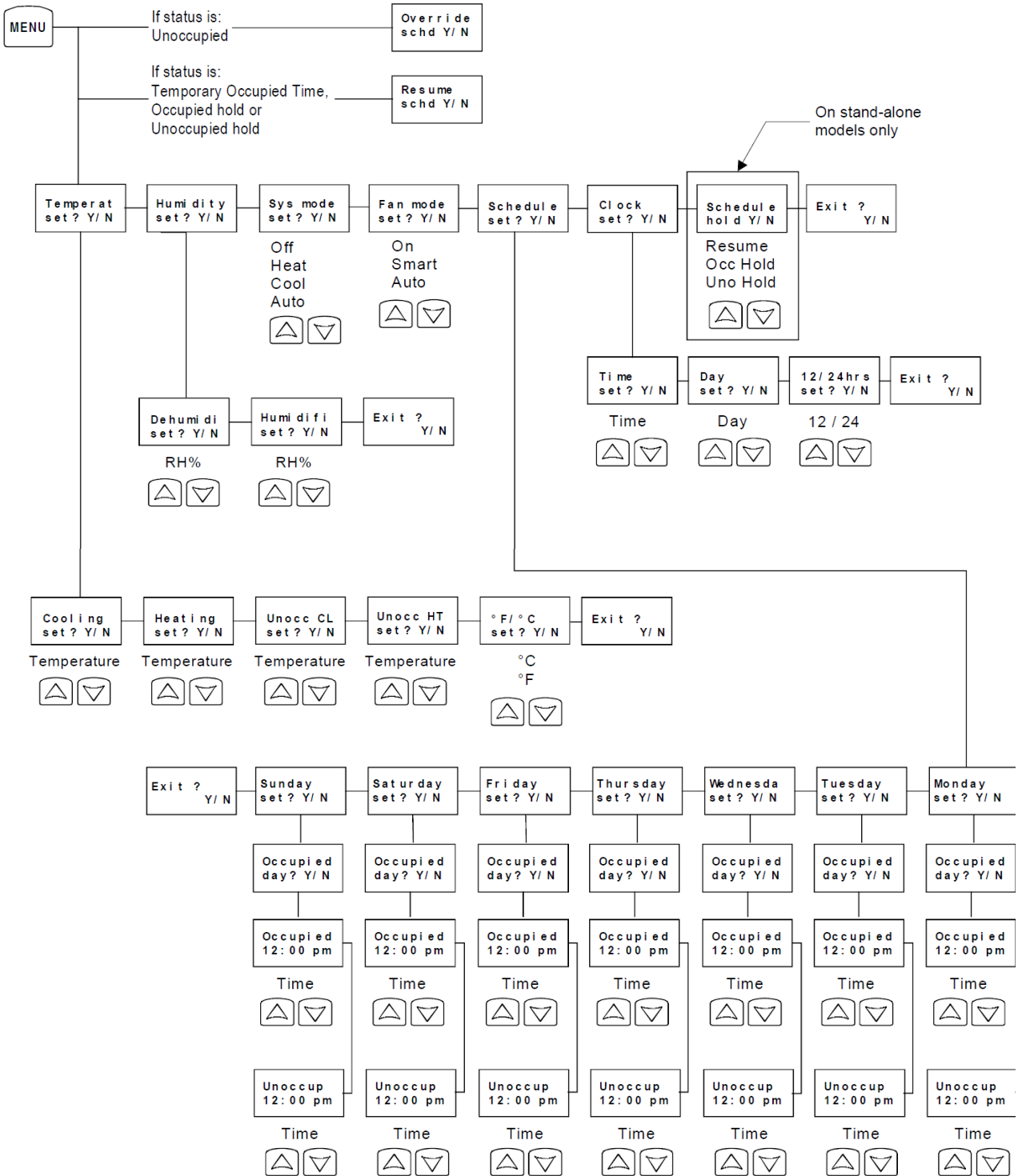


## Remote humidity sensor accessories



User menu flow chart:

**NOTE:** Prompts may not all be present depending on model selected



## CONFIGURATION AND STATUS DISPLAY INSTRUCTIONS

### Status display

The Room Controller features a two-line, eight-character display. There is a low level backlight level 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 actual status of the system.

Each item is scrolled one by one with the back lighting in low level mode. Pressing any key causes the back light to come on to high level.

Manual scroll 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	CLOCK STATUS	SYSTEM MODE	SCHEDULE STATUS	OUTDOOR TEMPERATURE	ALARMS
x.x °C or °F XX % RH	Monday 12:00 AM	Sys mode auto	Occupied	Outdoor x.x °C or °F	Service
		Sys mode off	Occupied Hold		Frost ON
		Sys mode cool	Unoccup		SetClock
		Sys mode heat			Filter
		Sys mode emer- gency			Fan lock

### 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.

### Alarms

- If alarms are detected, they will automatically be displayed at the end of the status display scroll.
- During an alarm message display, the back lit screen will light up at the same time as the message and shut off during the rest of the status display.
- Two alarms maximum can appear at any given time.
- The priority for the alarms is as follows:

Frost On	Indicates that the heating is energized by the low limit frost protection room temperature setpoint 5.6 °C (42 °F)
SetClock	Indicates that the clock needs to be reset. There has been a power failure which has lasted longer than 6 hours
Service	Indicates that there is a service alarm as per one of the configurable digital input (DI1 or DI2)
Filter	Indicates that the filters are dirty as per one of the configurable digital input (DI1 or DI2)
Fan lock	Indicates that the heating and cooling action are locked out due to a defective fan operation

Three status LEDs on the Room Controller cover are used to indicate the status of the fan, a call for heat, or a call for cooling.

When any of the fans are <b>ON</b> , the <b>FAN LED</b> will illuminate	FAN O
When heating is <b>ON</b> , the <b>HEAT LED</b> will illuminate	HEAT O
When cooling is <b>ON</b> , the <b>COOL LED</b> will illuminate	COOL O

LED Operation	Heatpump models SE76XXH	Multistage and single stage models SE7600A, SE7652A, SE7600B & SE7652B	Multistage economizer models SE7605B & SE7656B
Fan LED on	When G Fan terminal operates	When G Fan terminal operates	When G Fan terminal operates
Heating LED on	When Y1 and or W1 terminal(s) operate in heating mode	When W1 terminal operates in heating mode	When W1 terminal operates in heating mode
Cooling LED on	When Y1 terminal operate in cooling mode	When Y1 terminal operates in cooling mode	When Y1 terminal operates in cooling mode and / or economizer output is in function

## USER INTERFACE

### User configuring instructions menu

The SE76x7 series of Room Controller feature an intuitive, menu-driven, back-lit LCD display that walks users through the configuring steps, making the configuring process extremely simple. This menu is typically accessed by the user to set the parameters such as temperature and time events, system mode, fan mode, etc.

It is possible to bring up the user menu at any time by depressing the MENU key. The status display automatically resumes after exiting the user-configuring menu.

If the user pauses at any given time during configuring, Auto Help text is displayed to help and guide the user through the usage and configuring of the Room Controller.




---






Ex.: Press yes key to change cooling temperature setpoint  
Use the up or down arrow to adjust cooling setpoint

---

### Local keypad interface

Each section in the menu is accessed and configured using 5 keys on the Room Controller cover.

The priority for the alarms is as follows:

 YES	The YES key is used to confirm a selection, to move onto the next menu item and to manually scroll through the displayed information.
 NO	The NO key is used when you do not desire a parameter change, and to advance to the next menu item. Can also be used to toggle between heating and cooling setpoints.
 MENU	The MENU key is used to access the Main User Menu or exit the menu.
	The down arrow key is used to decrease temperature setpoint and to adjust the desired values when configuring the Room Controller.
	The up arrow key is used to increase temperature setpoint and to adjust the desired values when configuring the Room Controller.

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 when the Room Controller is left unattended for 45 seconds

**Refer to SE7600 User Interface Guide on Schneider Electric Downloads Exchange for further details.**

## TROUBLESHOOTING GUIDE

Symptom	Possible Cause	Corrective Action
No display on the Room Controller	Absent or incorrect supply voltage	Check power supply voltage between C & RC to be from 19-30 VAC Check for tripped fuse or circuit breaker
	Overloaded power transformer	Verify that the transformer used is powerful enough (sufficient VAs) to supply all controlled devices including the Room Controller
Keyboard menu does not access all functions	Keyboard locked	Change configuration parameter LOCKOUT to value "0" to access all levels of the menu
Temperature setpoints revert to original value after a certain time period	Temporary setpoint option selected	<ol style="list-style-type: none"> <li>The Room Controller needs to be in Permanent setpoint mode for the new setpoint to be kept and memory and used all the time</li> <li>Go to the Set temperature menu.</li> <li>The last prompt is setpoint type. Set it to Permanent setpoint</li> </ol>
Room Controller will not call for heating	Wrong mode selected	Select heating mode
	Room Controller in Unoccupied mode	Select Occupied Hold in Schedule hold or Override to force the Room Controller Occupied heating setpoint
	Anticycle delay active	Wait, the anticycling period will end and the equipment will start
	Heating setpoint is satisfied	Raise the Heating setpoint
	Heating lockout attained	<ol style="list-style-type: none"> <li>Mode is locked out based on outside air temperature</li> <li>Change configuration parameter H Lock to value 120 °F ( 49 °C ) to by-pass lockout</li> </ol>
	Wiring error	<ol style="list-style-type: none"> <li>Start the Fan by forcing the Fan ON mode</li> <li>Put a jumper across terminals RH &amp; W1. The heating should come ON. If it does not, verify wiring and check if a jumper is required between RC &amp; RH</li> </ol>
Room Controller will not call for cooling	Wrong mode selected	Select cooling mode
	Room Controller in Unoccupied mode	Select Occupied Hold in Schedule hold or Override to force the Room Controller Occupied cooling setpoint
	Anticycle delay active	Wait, the anticycling period will end and the equipment will start
	Cooling setpoint is satisfied	Lower the cooling setpoint
	Cooling lockout attained	<ol style="list-style-type: none"> <li>Mode is locked out based on outside air temperature</li> <li>Change configuration parameter C Lock to value -40 °F ( -40 °C ) to bypass lockout</li> </ol>
	Wiring error	<ol style="list-style-type: none"> <li>Start the Fan by forcing the Fan ON mode</li> <li>Put a jumper across terminals RC &amp; Y1. The cooling should come ON. If it does not, verify wiring</li> </ol>
The Room Controller will not turn on the fan	Wrong mode selected	<ol style="list-style-type: none"> <li>Start the Fan by forcing the Fan ON mode</li> </ol>
	Wiring error	<ol style="list-style-type: none"> <li>Put a jumper across terminals RC &amp; G. The fan should come ON. If it does not, verify wiring</li> </ol>
Digital display shows missing digits or erratic segments	Defective display	Replace Room Controller