

SER7300 Series

Installation Guide for HVAC FCU Applications



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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.

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

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.

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 the 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 (next page).
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.

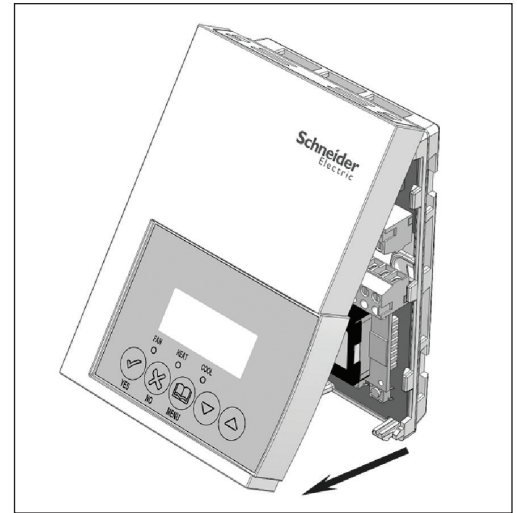


Figure-1 Opening the Cover

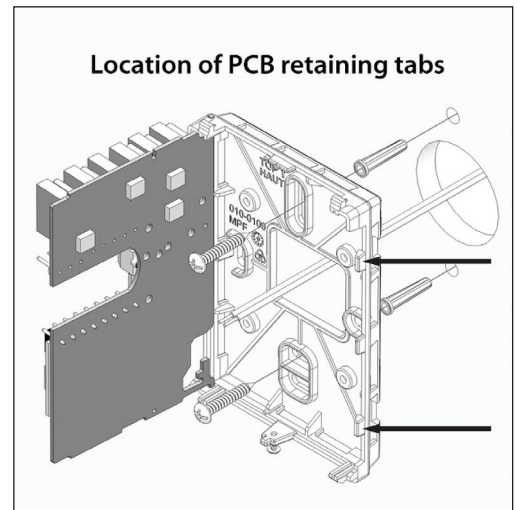


Figure-2 Opening the PCB

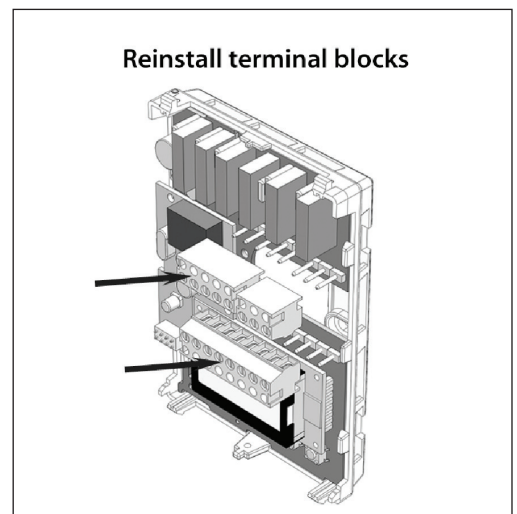


Figure-3 Terminal Block Reinstall

TERMINAL, IDENTIFICATION AND FUNCTION

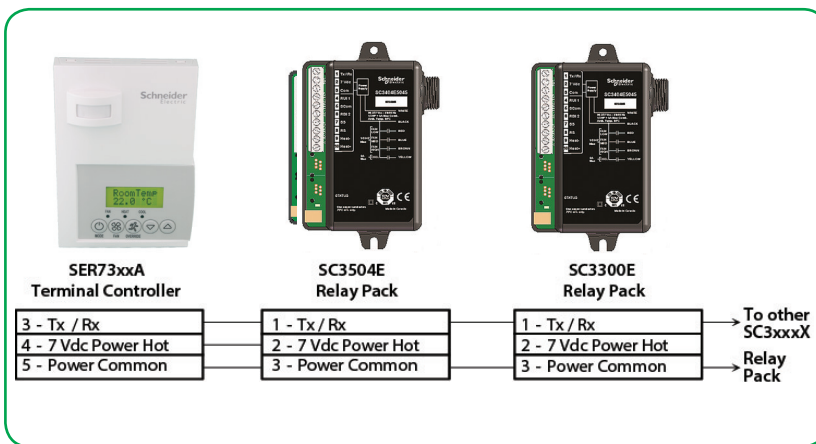
Terminal Identification	All SER73XXA5X45(X) Room Controller
Terminal 3	Tx – Rx Communication
Terminal 4	Power Hot 7.0 VDC
Terminal 5	Power Common
Terminal 13	BI 1 (Configurable)
Terminal 14	Scom
Terminal 15	BI 2 (Configurable)

Only ONE SC3xxxX Relay Pack with remote monitoring inputs can be used under a single SER73xxA Controller. All other slave units must be SC3xxxX Relay Pack(s) WITHOUT remote inputs. A maximum of 10 SC3xxxX Relay Packs can be used for a single SER73xxA Room Controller.

From the SER73xxA to the first SC3xxxX Relay Pack

- Uses existing or new field wires
- A minimum of 3 wires are required 14-22 Ga Solid or Stranded. Shield not necessary.

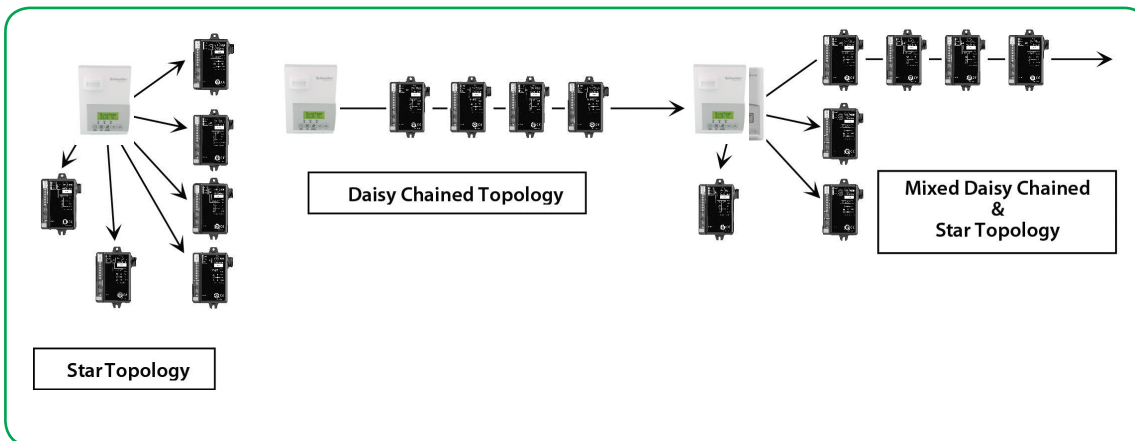
COMMUNICATION WIRING TO SC3XXXX RELAY PACK



From the first SC3xxxX to all other slave SC3xxxX Relay Pack(s)

- Uses existing or new field wires
- A minimum of 2 wires are required 14-22 Ga Solid or Stranded. Shield not necessary.
- Connect only wires #1 Power Common and #2 Tx/Rx Communication

Network Wiring Topology



SC3XXX LED OPERATION

Condition of status LED	Cause	Solution
> 2 short blinks	No communication between the SER73xxA and the SC3xxxX relay pack. The SC3xxxX Relay Pack will resume its output "no communication active" status	Check communication wiring and or power cycle the controllers
> 2 short blinks and a longer blink	Normal communication between the SER73xxA and the SC3xxxX relay pack.	N/A

CONFIGURING AND STATUS DISPLAY INSTRUCTIONS

Status display

The SER73xxA 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.

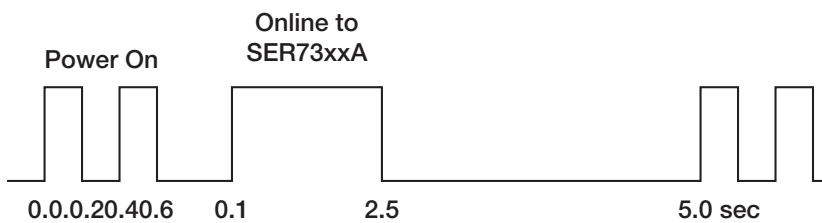
When left unattended, the Room Controller has an auto scrolling display that shows the status of the system. There is an option in the configuration menu to lockout the scrolling display and to only display the room temperature and conditional outdoor temperature to the user. With this option enabled, no local status of mode, occupancy and relative humidity is shown.

Each item scrolls individually with the back lighting in low level mode. Pressing any key will cause the back light to come on to high level. When left unattended for 10 seconds after changes are made, the display will resume automatic status display scrolling.

To activate the back light to high level, press any key on the front panel. The back light display will return to low level when the Room Controller is left unattended for 45 seconds.

To activate the back light to high level, press any key on the front panel. The back light display will return to low level when the Room Controller is left unattended for 45 seconds.

LED/Time Status Operation



Wiring of local inputs to SER73xxA Room Controller



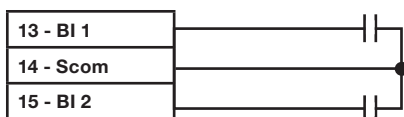
Local BI 1 Input by configuration

- None (monitoring only)
- Remote motion detector: Motion NO or Motion NC
- Remote Night Setback: RemNSB
- Window contact Window:

SER73xx
Terminal Controller

Local BI 2 Input by configuration:

- None (monitoring only)
- Door contact: DoorDry



Sequence of auto-scroll status display:

Room & Humidity	System mode	Schedule status	Outdoor temp	Alarms
x.x °C or °F XX % RH	Sys mode auto	Occupied	Outdoor x.x °C or °F	Service
If humidity display enabled	Sys mode cool	Stand-By	Network value only	Filter
RoomTemp x.x °C or °F	Sys mode heat	Unoccup	n/a	Window
If humidity display is not enabled	Sys mode off	Override	n/a	Low Batt

% RH display is conditional to:

(Humidity display is model and configuration dependent)

- Model with RH sensor built in
- Display function can be enabled with RH display parameter. Displayed range is 10 to 90 % RH

Outdoor air temperature

- Display is only enabled when outdoor air temperature network variable is received.

Occupancy status

- Occupied, Stand-By, Unoccupied and Override status are displayed on the scrolling display.

Alarms

- If alarms are detected, they will automatically be displayed at the end of the scrolling status display.
- When an alarm message is displayed, the backlit screen will illuminate at the same time as the message and shut off during the rest of the status display.
- A maximum of two alarms can appear at any given time. The priority for the alarms are as follows:

Service	Indicates that there is a service alarm as per one of the configurable binary inputs (BI2)
Filter	Indicates that the filters are dirty as per one of the configurable binary inputs (BI2)
Window	Indicates that the outside window or door is opened and that the Room Controller has cancelled any cooling or heating action (BI1)
Low Batt	Indicates that attached wireless switching devices (Door or window contact) have a low battery condition. (Only functional when used with a wireless communication adapter)

Three status LED's on the Room Controller cover are used to indicate the status of the fan (any speed), a call for heat, or a call for cooling.

Fan coil models

	When any of the fan speeds are ON , the FAN LED will illuminate.
	When heating is ON , the HEAT LED will illuminate.
	When cooling is ON , the COOL LED will illuminate.

USER INTERFACE

Hotel/Lodging Models



Commercial Models



Unoccupied mode override

An Override can be made on commercial models during an unoccupied period. If the Override option is enabled in the lockout configuration, pressing the middle override button will resume occupied setpoints for a time specified by the parameter "ToccTime".

Local Keypad Interface

	MODE Is used to toggle between the different system modes available as per sequence and menu selected. - Repetitively pressing the button will toggle between all the available modes. - Available menus are dependent on selected sequence of operation
	FAN Is used to toggle between the different fan modes available as per the sequence and menu selected - Repetitively pressing the button will toggle between all the available modes - Available menus are dependent on selected sequence of operation and menu selected for Fan
	Hotel and lodging applications. Toggles the local user temperature scale between °F and °C
	Commercial and institutional applications. Set a local unoccupied timed OVERRIDE to occupied mode
	- In cooling mode only the cooling setpoint is displayed, - In heating mode only the heating setpoint is displayed - In auto mode, (See below)
	- In cooling mode only the cooling setpoint is displayed, - In heating mode only the heating setpoint is displayed - In auto mode, (See below)

- Any setpoint change can be permanent or temporary based on configuration parameter (Setpoint Type)
- Any setpoint written through the network, will be permanent and cancel any active temporary setpoints
- Lockouts of access to certain functions is made with configuration parameter (lockout)

Dual occupied setpoints adjustment

(Local occupied setpoint adjustment when "Stp Func" = Dual Stp)

COOLING MODE	HEATING MODE	OFF MODE	AUTO MODE
			- Setpoint presented to user is the setpoint from the last action taken by the Room Controller or the one currently in use. - If the other setpoint is the one desired, then the MODE 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	No access to setpoint	Cool XX.X °F or °C or Heat XX.X °F or °C Toggle to (Heat or Cool) with MODE button

- Heat/Cool setpoint toggle with MODE button to be active only in AUTO mode.
- If cooling, heating or off mode is active, function is disabled.

Single occupied setpoints adjustment

(Local occupied setpoint adjustment when "Stp Func" = Atch Stp)

COOLING MODE	HEATING MODE	OFF MODE	AUTO MODE
			- Setpoint presented to user is the setpoint from the last action taken by the Room 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 MODE 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	No access to setpoint	Cool XX.X °F or °C and Heat XX.X °F or °C Both heating & cooling setpoints change simultaneously Toggle from (Heat or Cool) using the system MODE button

Technical Support



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

North America (NAM) Product Support
Building Management Systems (BMS): www.nampss.com

Global Product Support
Building Management Systems (BMS): productsupport.BMS@schneider-electric.com

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Schneider Electric is leading the Digital Transformation of Energy Management and Automation in Homes, Buildings, Data Centers, Infrastructure and Industries.

With global presence in over 100 countries, Schneider is the undisputable leader in Power Management – Medium Voltage, Low Voltage and Secure Power, and in Automation Systems. We provide integrated efficiency solutions, combining energy, automation and software.

In our global Ecosystem, we collaborate with the largest Partner, Integrator and Developer Community on our Open Platform to deliver real-time control and operational efficiency.

We believe that great people and partners make Schneider a great company and that our commitment to Innovation, Diversity and Sustainability ensures that Life Is On everywhere, for everyone and at every moment.

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