©2016 Lennox Industries Inc.
Dallas, Texas, USA

INSTALLATION/ OPERATION INSTRUCTIONS

V0STAT54 Indoor Unit
Non-programmable Controller

CONTROLS
507463-04
02/2016

THIS MANUAL MUST BE LEFT WITH THE OWNER FOR FUTURE REFERENCE

⚠WARNING

Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life.
Installation and service must be performed by a licensed professional HVAC installer (or equivalent) or service agency.

IMPORTANT!

Frequent changes to operating mode may cause system malfunction. Allow at least one minute between mode changes to allow the system to stabilize.

Shipping and Packing List

Package 1 of 1 contains;
1 – Wired Controller
1 – Installation and operation manual
2 – Phillips screws
2 – Plastic spacers
1 – Cable with connector (33 ft. 10 m)

General

The V0STAT54 is a wired non-programmable local controller that controls one VRF indoor unit. These instructions are intended as a general guide and do not supersede local codes in any way. Consult authorities having jurisdiction before installation.

Requirements

Be sure that power supply has been turned off before beginning installation. This controller should be used only as described in this manual. Do not install the controller on outside walls (where there is unconditioned space on opposite side of wall) or in locations where direct sunlight may be present.

Installation

⚠CAUTION

Clean controller using a clean, damp cloth. Do not spray cleanser on or around controller.

⚠CAUTION

Do not install controller in areas where heavy oil, vapor, or gases containing sulfur may exist or the controller may be damaged.

⚠CAUTION

Do not operate controller with wet hands.

IMPORTANT!

Read all of the information in this manual before using this controller. All wiring must conform to local and national building and electrical codes and ordinances. **This is a 5 VDC controller. Do not install on voltages higher than 5 VDC.**

IMPORTANT!

The provided cables must be used. Do not use excessive force while pulling the cable or when making the connections.

- This manual provides the installation instructions for this controller. Refer to the included wiring diagram to connect the controller to the indoor unit.
- The controller is low voltage. Keep a minimum distance of 12" (305mm) between low voltage control wire and high voltage power wires.
- Ground the shielded control wiring.
- Do not attempt to extend the shielded cable by splicing. Use Terminal Connection Block to make connections.
- Do not use a megger to test insulation.
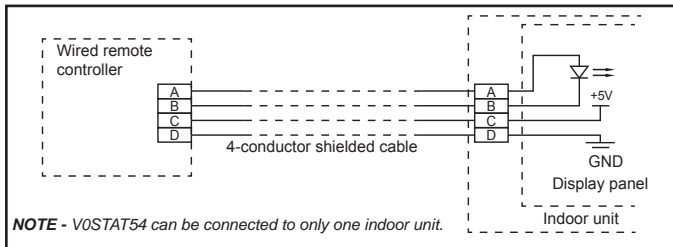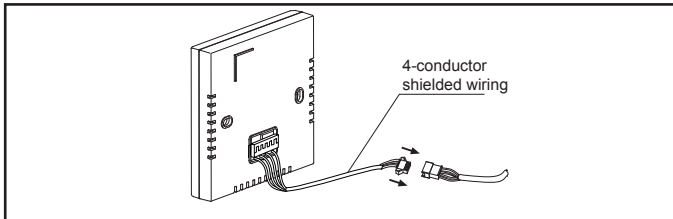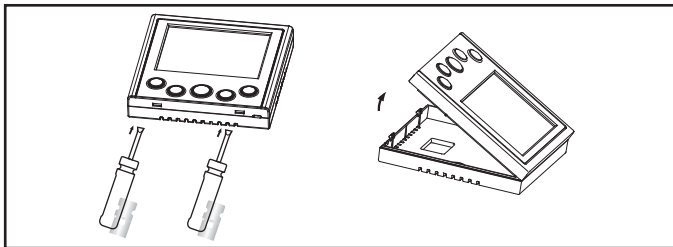- The controller cable length should not exceed 66 ft.

Figure 1. General Wiring Diagram

1. At the controller, insert the plug of the 4-conductor cable into the socket of the controller.

4-conductor
shielded wiring

Figure 2. Connection at controller

2. Remove the cover from the wallplate using a flat head screw driver as shown.

Figure 3. Remove cover from wallplate

3. Adjust the length of the two plastic spacers as needed to allow the controller to be mounted flush with the wall. *NOTE – Be sure to provide for future maintenance by allowing enough slack in the wiring to allow the controller to be removed from the wall if needed.*
4. Attach the wallplate using the provided screws.
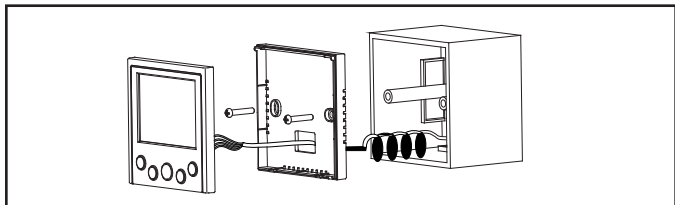5. Reattach the cover to the wallplate.

Figure 4. Installation

6. At the indoor unit, insert the plug of the 4-conductor cable into the socket of the indoor unit display panel.
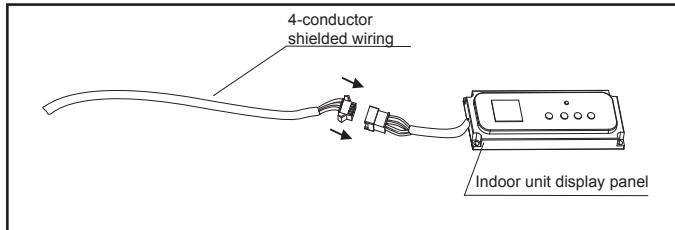

4-conductor shielded wiring
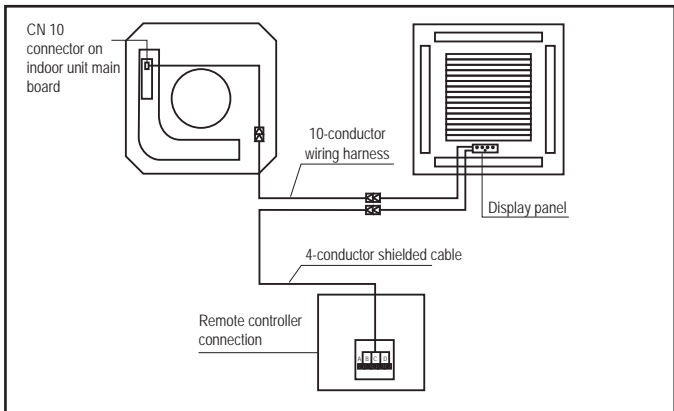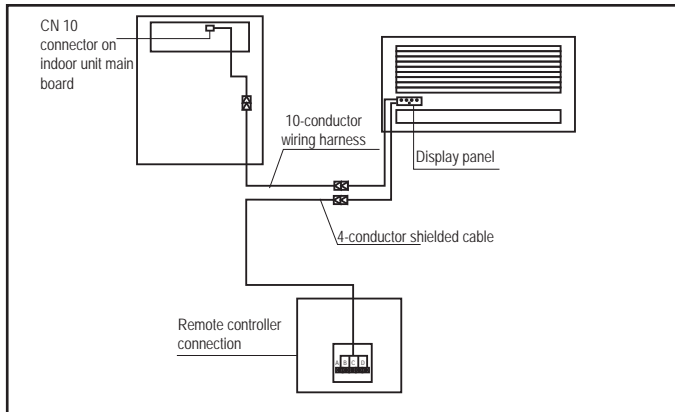
Indoor unit display panel
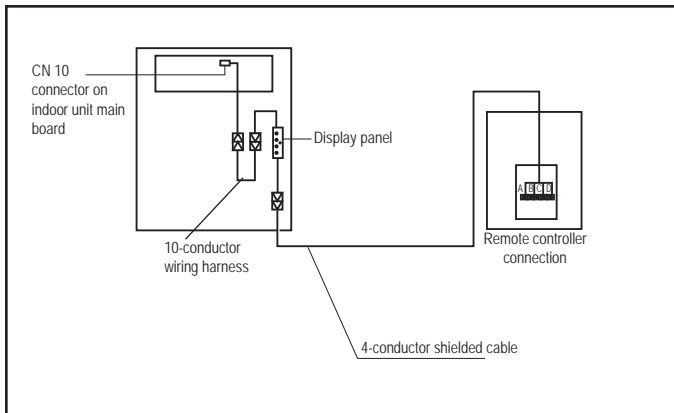
Figure 5. Connection at Indoor Unit

Field Wiring Diagrams

NOTE - V0STAT54 can be connected to only one indoor unit.

Figure 6. Controller Wired to Four-Way Cassette Indoor Unit (V22 & V33)
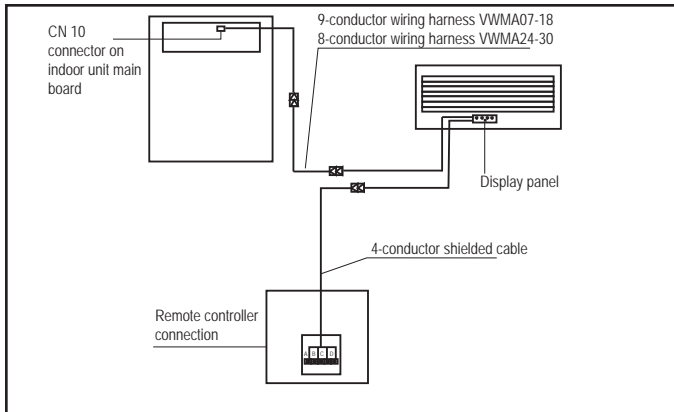
CN 10 connector on indoor unit main board

10-conductor wiring harness

Display panel

4-conductor shielded cable

Remote controller connection

Figure 7. Controller Wired to Medium-Static Ducted Indoor Unit (VMDA)

CN 10 connector on indoor unit main board

Display panel

10-conductor wiring harness

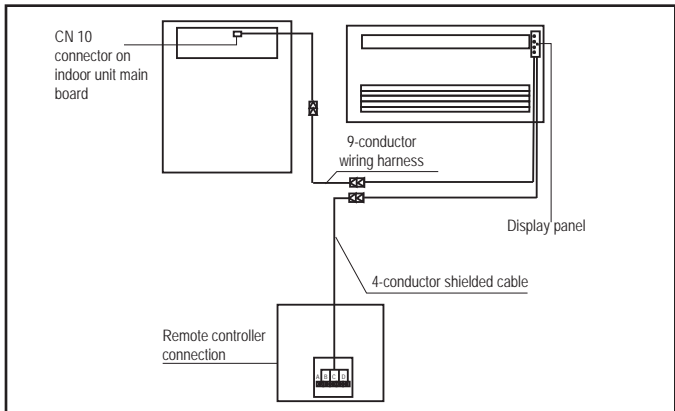Remote controller connection

4-conductor shielded cable

Figure 8. Controller Wired to High-Static Ducted Indoor Unit (VHIA)

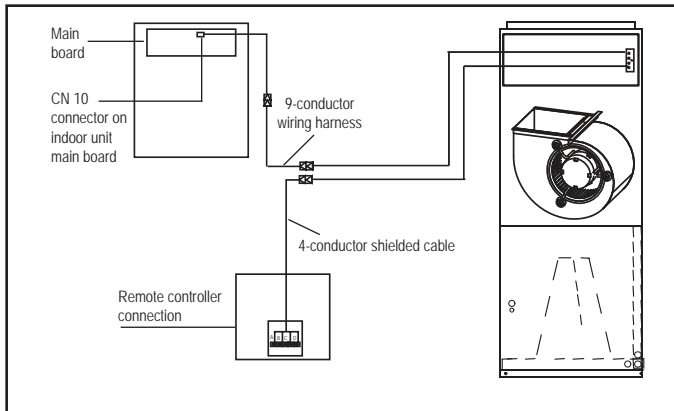**Figure 9. Controller Wired to Wall-Mounted Indoor Unit (VWMA)**

Figure 10. Controller Wired to Ceiling/Floor Indoor Unit (VCFA)

CN 10 connector on indoor unit main board

9-conductor wiring harness

Display panel

4-conductor shielded cable
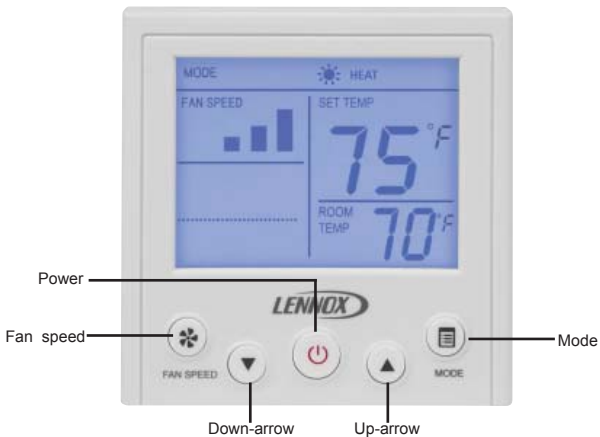
Remote controller connection

Figure 11. Controller Wired to Vertical Air Handler Indoor Unit (VVCA)

Specifications

Input voltage	5 VDC
Ambient temperature	23~110°F (-5~43°C)
Ambient humidity	RH40%~RH90%

Description of Buttons

Power

Fan speed

FAN SPEED

Down-arrow

Up-arrow

MODE

Mode

- **Power button**. Press to turn the indoor unit on or off.
- **Fan speed button**. Press the Fan speed button to scroll through the fan speeds: Low → Med →High
  NOTE - Auto fan speed not available for all systems.

- **Down-arrow button**. Press to decrease the setpoint.
- **Mode button**. Press to scroll through the modes: Cool → Heat →Fan.
- **Up-arrow button**. Press to increase the setpoint.

Operation

NOTE - Indoor units connected to a local controller may also be controlled by a centralized controller. Indoor units respond to the last command sent. It is recommended that indoor units be controlled from a single source of control, either local controller or centralized controller but not both, to avoid conflicts in commands.

Start/stop operation
Press the power button.
- Controller ON: LED display lit.
- Controller OFF: LED display not lit.

To set the operation mode
Press the Mode button to scroll through the mode selections.
- Cool – System operates in cooling mode.
- Heat – System operates in heating mode.
- Fan – Fan only, no heating or cooling.

To set (or change) the room temperature setting (setpoint)
Press the up-arrow & down-arrow buttons to adjust the setpoint.

Temperature Sensing

Indoor Unit
Default sensor. All indoor units have a temperature sensor that senses the zone temperature and controls operation of the indoor unit within the limits of the system.

Remote Sensor
Field installed accessory. Used to relocate temperature sensor from indoor unit to remote location.

Troubleshooting

Digital Tube Display	Content
F0	Wired remote controller and indoor unit communication failure
E1	Communication error between indoor and outdoor units
E2	Indoor ambient temperature sensor (T1) error
E3	Middle evaporator temperature sensor (T2) error
E4	Evaporator outlet temperature sensor (T2B) error
EE	Water level alarm error
E7	Indoor Unit EEPROM error
E0	Mode conflict error
Ed	Outdoor units error
FE	IDU doesn't have address when it is first turned on