

# Installation and Operating Instructions

Part Number 40WA900022

## CONTENTS

	Page
<b>SAFETY CONSIDERATIONS</b> .....	1
<b>GENERAL</b> .....	1
<b>INSTALLATION CONSIDERATIONS</b> .....	1
<b>INSTALLATION</b> .....	1,2
<b>OPERATION</b> .....	3,4

## SAFETY CONSIDERATIONS

Read and follow manufacturer instructions carefully. Follow all local electrical codes during installation. All wiring must conform to local and national electrical codes. Improper wiring or installation may damage thermostat.

Understand the signal words — DANGER, WARNING, and CAUTION. DANGER identifies the most serious hazards which will result in severe personal injury or death. WARNING signifies hazards that could result in personal injury or death. CAUTION is used to identify unsafe practices, which would result in minor personal injury or product and property damage.

Recognize safety information. This is the safety-alert symbol (⚠). When this symbol is displayed on the unit and in instructions or manuals, be alert to the potential for personal injury. Installing, starting up, and servicing equipment can be hazardous due to system pressure, electrical components, and equipment location.

## GENERAL

The single-phase VRF (variable refrigerant flow) wired non-programmable controller is a wall-mounted, low-voltage thermostat that maintains room temperature by controlling system operation. The controller, which does not require batteries, is capable of displaying temperatures from 62 to 88 F.

The wired non-programmable controller accessory is available for use with the single-phase VRF (variable refrigerant flow) indoor units listed in Table 1.

**Table 1 — Wired Controller Accessory Usage**

UNIT	SIZES
<b>40WAC Compact Cassette</b>	007,009,012,015
<b>40WAF 4-Way Cassette</b>	009,012,015,018,024,030,048
<b>40WAW High Wall</b>	007,009,012,015,018
<b>40WAD Ducted</b>	007,009,012,015,018,024
<b>40WAH High Static</b>	024,030,036,048
<b>40WAU Under Ceiling</b>	012,018,024,030,036,048
<b>40WAV Vertical</b>	018,024,030,036,048

## INSTALLATION CONSIDERATIONS

The thermostat should be mounted:

- approximately 48 in. from the floor
- on a section of wall without water or drainage pipes

The thermostat should **NOT** be mounted:

- where it can be directly affected by the unit's discharge airflow
- close to a window, on an outside wall, or next to a door leading to the outside
- near shelves or curtains that may restrict air movement
- near heat sources such as direct sunlight, heaters, dimmer switches, and other electrical devices.

## INSTALLATION

To install the thermostat, perform the following procedure:

1. Turn off all power to the indoor unit.

**⚠ WARNING**

Electrical shock can cause personal injury and death. Before installing thermostat, shut off all power to this equipment during installation. There may be more than one power disconnect. Tag all disconnect locations to alert others not to restore power until work is completed.

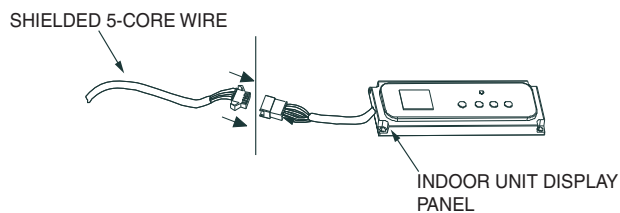
2. If an existing thermostat is being replaced:
  - a. Remove existing thermostat from wall or unit.
  - b. Disconnect wires from existing thermostat. Do not allow wires to fall back into the wall or unit.
  - c. Discard or recycle old thermostat.

**⚠ CAUTION**

Failure to follow this caution may result in equipment damage or improper operation. Improper wiring or installation may damage the thermostat. Check to make sure wiring is correct before proceeding with installation or turning on unit.

3. Shielded 5-core control cable (approximately 19 ft) is provided as standard to connect the controller to the indoor unit display panel. Be sure the distance between the controller and the indoor unit is not more than 19 ft.

4. Connect one end of the shielded 5-core control cable to the indoor unit display panel on the unit. See Fig. 1.

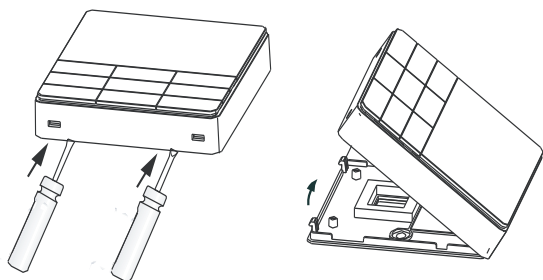


**Fig. 1 — Signal Receiving Panel Connection**

For exposed wall-hung or under-ceiling/floor units, provide a 1-in. by 1-in. square opening in the surface behind the unit to route the shielded 5-core control cable, furred in to connect the indoor unit display panel to the controller.

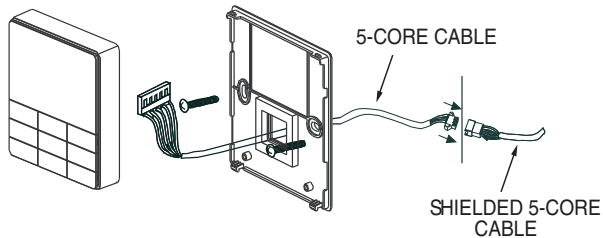
For concealed ducted, high static ducted, cassette, or vertical units, the shielded 5-core cable can be routed through the plenum and the wall to connect the indoor unit display panel and the controller.

5. Insert a flat-head screwdriver into the slots provided on the bottom of the controller to pop open the back mounting plate. See Fig. 2.



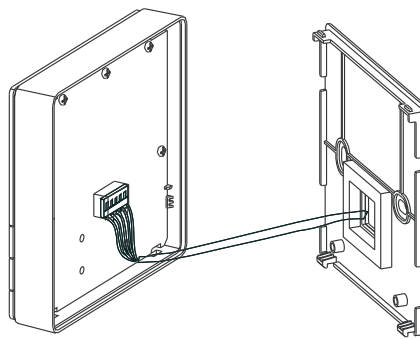
**Fig. 2 — Opening Back Mounting Plate**

6. Provide a 1-in. by 1-in. square opening in the wall where the controller will be mounted to accommodate the control cable.
7. Attach the back mounting plate directly over the opening, using 2 screws, and route the control cable as shown in Fig. 3.



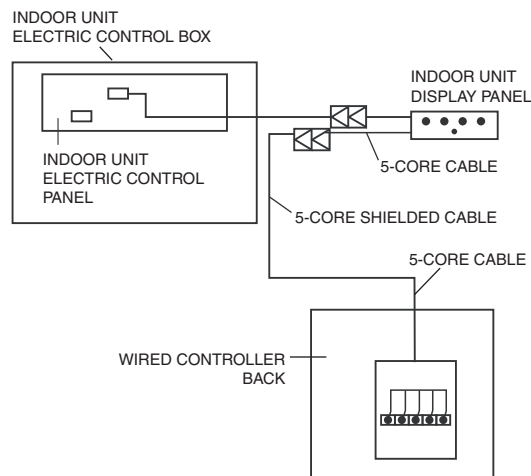
**Fig. 3 — Attaching Back Plate**

8. Connect the control cable to the back of the controller and mount the controller back onto the mounting plate. See Fig. 4.



**Fig. 4 — Mounting Controller**





















See Fig. 5 for a schematic wiring diagram.
















**Fig. 5 — Wired Controller (Non-Programmable) Wiring**

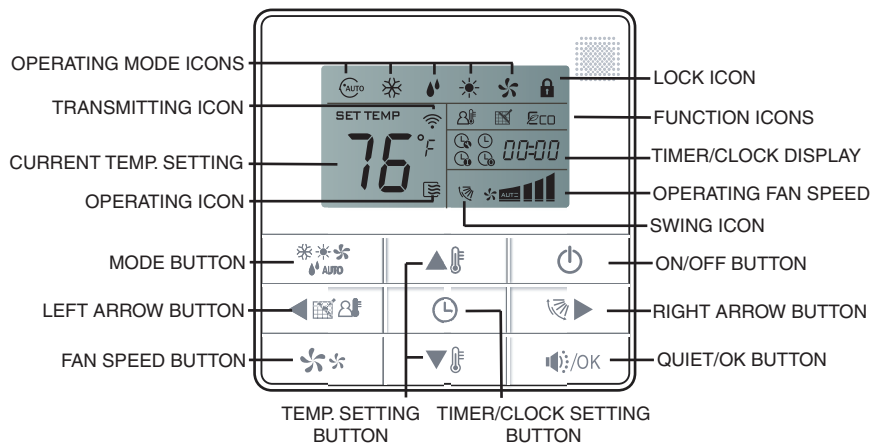
## OPERATION

The wired controller (non-programmable) directly controls the VRF system. The following elements are located on the display interface. See Fig. 6 for item locations.

- System ON/OFF — Press the power button  to turn the system on or off. When the system is on, the operating icon  lights.
- Operating mode — Press the mode button  to set the operating mode for the system. Press the button more than once to cycle through the options. The option sequence is as follows:  
AUTO→COOL→DRY→HEAT→FAN→AUTO
- Fan speed — In COOL, HEAT, and FAN operating modes, adjust the fan speed by pressing the fan speed button . Press the button more than once to cycle through the options. The option sequence is as follows:  
AUTO→LOW→MID→HIGH→AUTO.  
NOTE: In AUTO and DRY operating modes, fan speed defaults to AUTO.
- Temperature — In AUTO, COOL, DRY, and HEAT operating modes, press the temperature up  or temperature down  button. The range is 62 to 88 F.  
NOTE: Temperature setting cannot be adjusted in FAN operating mode.
- Clock — Press and hold the timer/clock button  for 3 seconds to enter the clock setting mode. The hour position flashes. Use the temperature up  and temperature down  buttons to set the hour. Press the right arrow button  to move to the minute position. Use the temperature up and temperature down buttons to set the minute value. After setting the clock, press and hold the OK button  for 5 seconds to confirm the setting and exit the clock setting mode.
- Timer on or off — To set the timer on, press the timer/clock button . The timer on icon  and the timer hour icon  are displayed. Press the temperature up  and temperature down  buttons to set the time. Then press the OK button  or wait for 5 seconds. To set the timer off, press the timer/clock button. The timer off icon  and the timer hour icon  are displayed. Press the temperature up  and

temperature down  buttons to set the time. Then press the OK button  or wait for 5 seconds.

- Quiet operation — This function, which reduces operating sound, applies to COOL, HEAT, and FAN operating modes only. Press the OK button  to force the fan into low speed, reducing operating sound.
- Lock or unlock the controller — To lock the controller, press the temperature up  and temperature down  buttons at the same time. The lock icon  lights on the right side of the screen. When the controller is locked, all functions are disabled and the controller does not respond to a wireless controller (hand-held device). To unlock the controller, press the temperature up  and temperature down  buttons at the same time. The lock icon disappears from the right side of the screen.
- Air filter maintenance signal — The controller records the total running hours of the indoor unit. The default running hour time for filter maintenance is 2,500 hours. When the unit passes this point, the filter cleaning button  lights as a reminder to clean or replace the filter. When maintenance is complete, press the button for a few seconds to reset.
- Swing setting — If the indoor unit supports the swing function, press the right arrow button  to adjust the swing angle of the louvers. The swing setting can be set to auto mode by pressing and holding the right arrow button for 3 seconds. The swing icon  is then lit, indicating that swing auto mode is on. To take the swing setting out of auto mode, press and hold the right arrow button for 3 seconds. The right arrow button is then dark, indicating that swing auto mode is off.
- “Follow me” function — When the “follow me” function is active, the system redirects air to the highest load area of the room, typically the area with the most occupants. This function is available when the system is in AUTO, COOL, or HEAT operating mode. To activate the “follow me” function, press the left arrow button . The “follow me” icon  lights. Press the left arrow button again to turn the function off.



**Fig. 6 — Controller Display**

**Setting Parameters for the Wired Remote Controller** — Functions of the controller can be changed by adjusting the parameters shown in Table 2.

NOTE: Parameters do not need to be set unless an adjustment to the default value is required.

The wired remote controller parameter is made up of a two-digit code: the first digit represents the function; the second digit represents detailed configuration of this function.

To change the parameters:

1. Simultaneously press the mode and fan buttons and hold for 5 seconds to enter the parameter setting state.

2. The value of this first code is 0, representing the cool-only/cool-heat selection function. Press the temperature setting button or to adjust the second code value.
3. After setting the second code value, press the button to switch the first code to the next function.
4. When the first code value is 6, press the button again to exit the parameters setting.

**Table 2 — Parameters**

FIRST CODE	FUNCTION	SECOND CODE				
		0	1	2	3	4
0	Cool-only/Cool-Heat selection	Cool-Heat (Default)	Cool-only	—	—	—
1	Indoor unit communication address setting	Yes (Default)	None	—	—	—
2	Power-off memory	Yes (Default)	None	—	—	—
3	Filter cleaning reminding (hours)	Cancel the reminding function	1250	2500 Default	5000	1000
5	Remote receiving function	Yes (Default)	None	—	—	—
6	Centigrade/Fahrenheit display	Centigrade	Fahrenheit (Default)	—	—	—