NORITZ

On-Demand Recirculation Installation and Instruction Manual

Kit# IHK - NRCP

Applicable for NRCP series only.

⚠ WARNING

Read this manual carefully and failure to follow these instructions exactly could result in a fire or explosion, serious bodily injury and/or property damage. Installation must be performed by a qualified plumber, a licensed gas fitter, or a professional technician in accordance with all local codes. Improper installation and operation by an unqualified person will void the warranty.

⚠ CAUTION

Electrical Shock Hazard
Do not turn the power on until electrical wiring is finished. Disconnect the power before servicing. Failure to do so may result in death or serious injury from electrical shock.

1. About this Kit

NORITZ IHK-NRCP offers the most efficient way to save energy and water by adding Temperature Sensor and setting on the panel.
This kit is designed to deliver hot water to your entire home with the press of a button (within a few minutes). There are no standby losses, no stack losses, and no need for extra storage tanks.

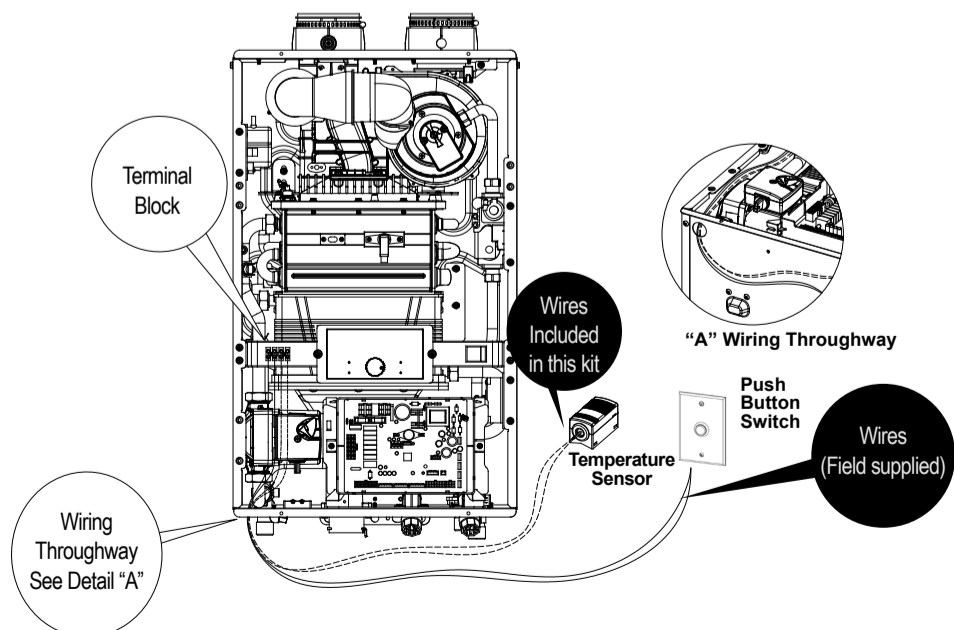This kit can be used only on an external recirculation system with a dedicated return line.

Note> It may take a few minutes depending on the length of the pipe to prepare hot water to the desired fixture.

■ Items included in the kit
Before installation, verify that all the items below are included .

#	Parts	Shape	Q'ty
1	Temperature Sensor (2 ties included)		1
2	Wire for Temperature Sensor (4.0 ft [1.2 m])		1
3	Push Button Switch		2
4	Instruction		1

2. Overall installation schematic

Terminal Block

Wires Included in this kit

"A" Wiring Throughway

Push Button Switch

Temperature Sensor

Wires (Field supplied)

Wiring Throughway See Detail "A"
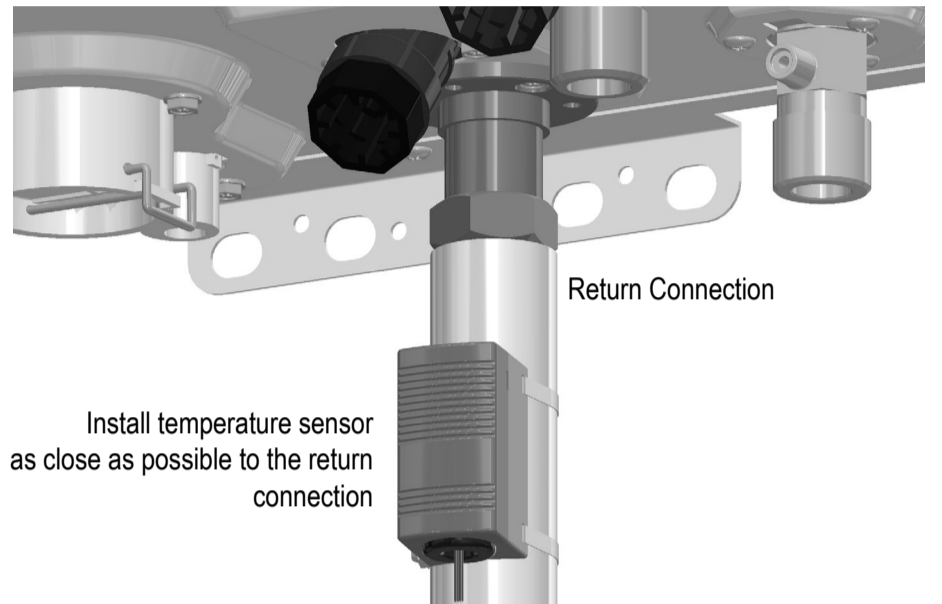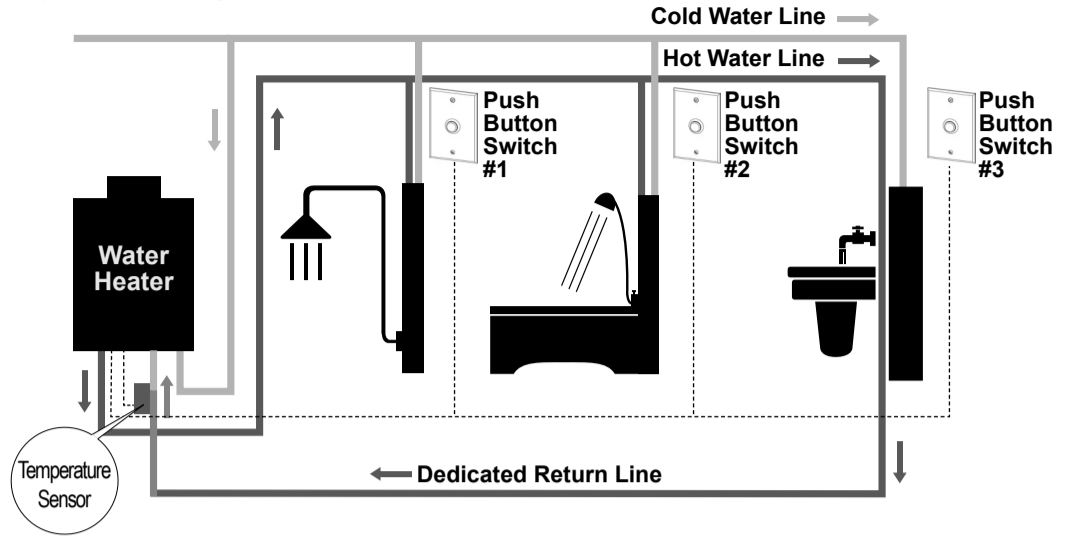
Wires for Push Button Switches and Temperature Sensor should be connected to the terminal block located on the left side of the control panel.

3. Installation
1) Schematic diagram

Install temperature sensor as close as possible to the return connection

Return Connection

2) Wiring
① Turn off both gas and water supply to the water heater. Turn the power off.
② Remove the front cover by loosening the 4 screws. (See Figure 1)
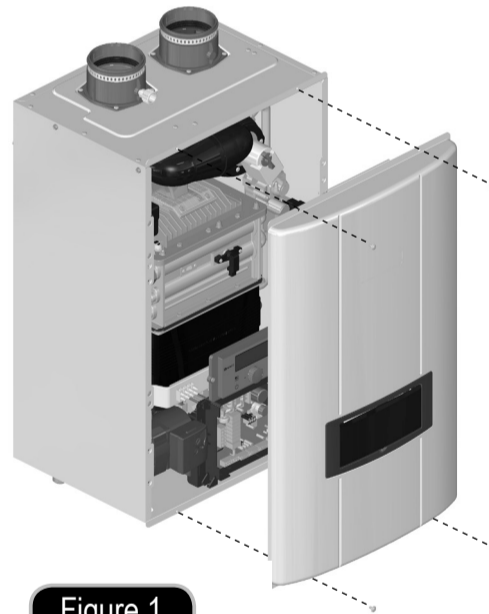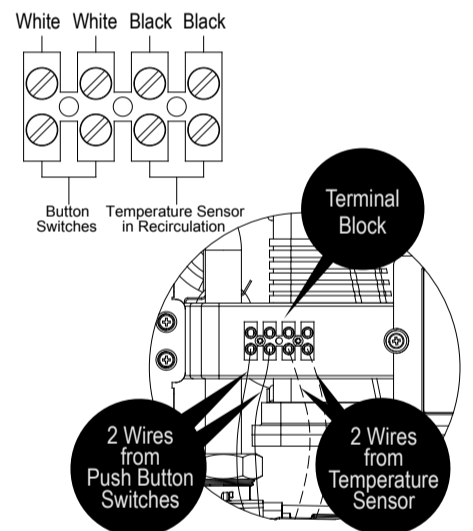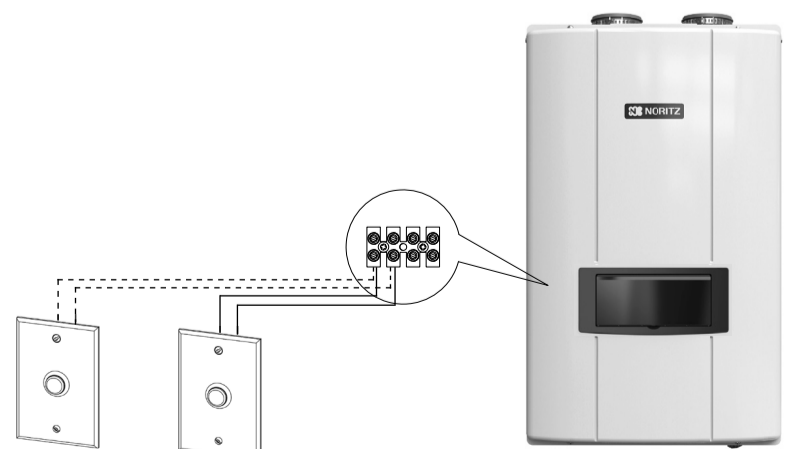

Figure 1

Figure 2

③ Connect both push button switch and temperature sensor to the connector on the terminal block. (See Figure 2)
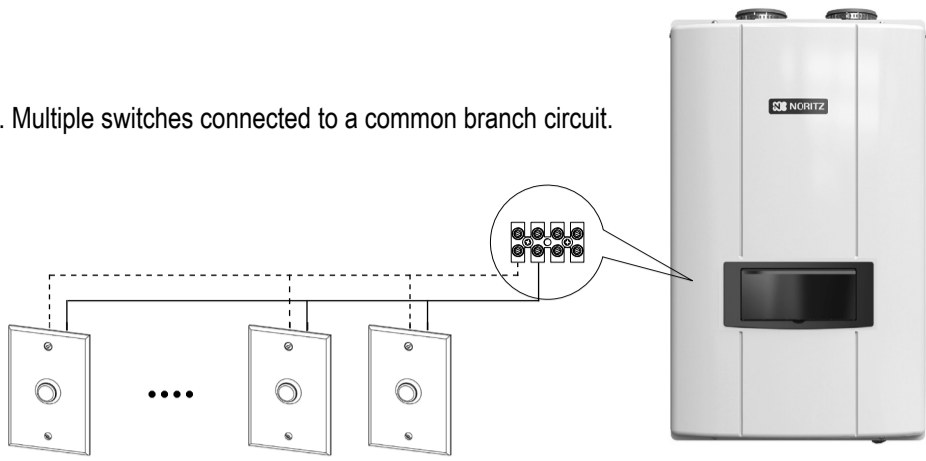④ Close the front cover with secure 4 screws.

3) Wiring for Push Button Switches

There are two acceptable methods for connecting the push button switches to the water heater:

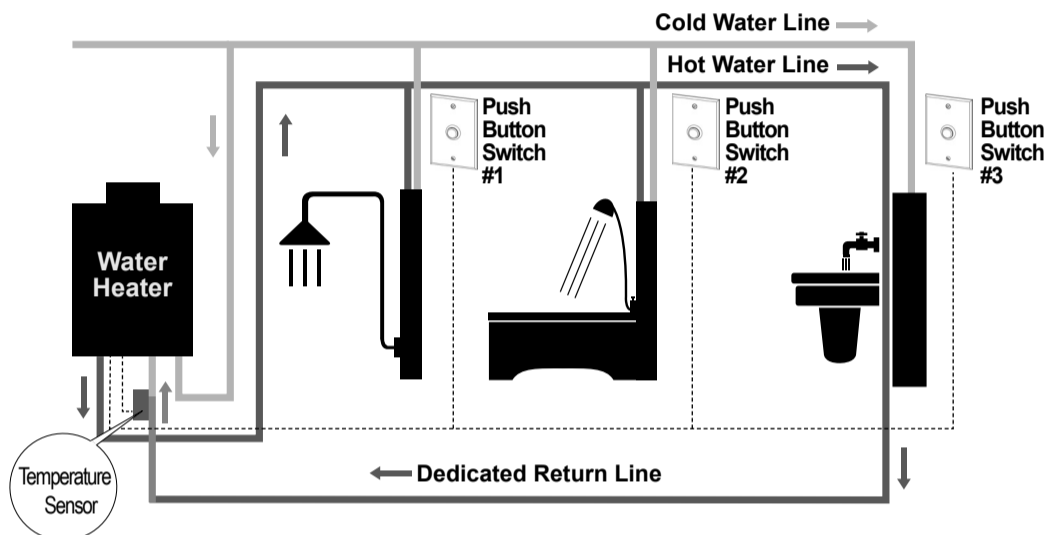1. Multiple switches connected directly to the same terminal at the terminal block.

2. Multiple switches connected to a common branch circuit.

Note> ① You can connect up to 10 push button switches to one terminal.
② Use cables with a diameter of AWG24 or greater.
③ Make sure that the total cable length does not exceed 328 feet (100 meters).

5. Installing temperature sensor on recirculation system

The sensor should be installed as close to the return connection of the unit as possible in order to measure the return temperature accurately.

Cold Water Line ⟶
Hot Water Line ⟶

Push Button Switch #1
Push Button Switch #2
Push Button Switch #3

Water Heater

Temperature Sensor

⟵ Dedicated Return Line

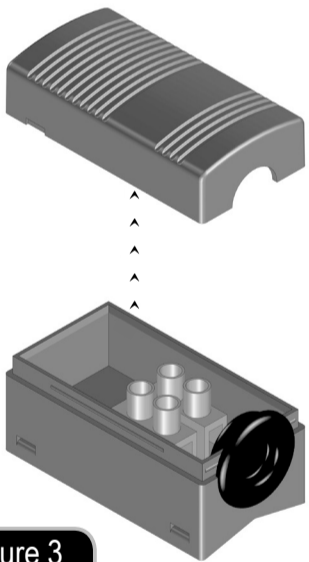1) Open the cover of temperature sensor package. (See Figure 3)
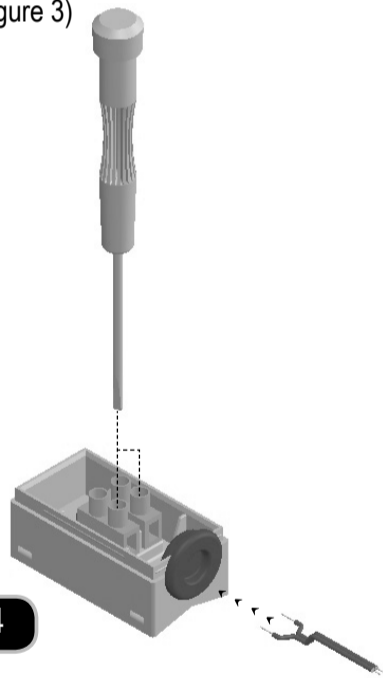

Figure 3

Figure 4

2) Connect cables to terminal block. (See Figure 4)
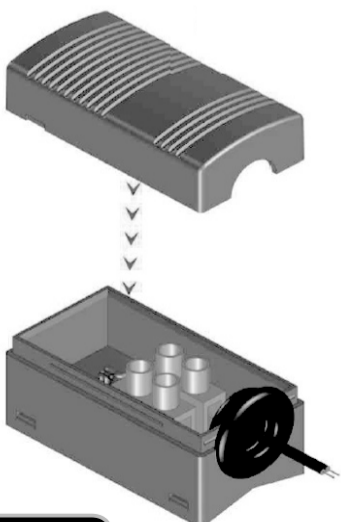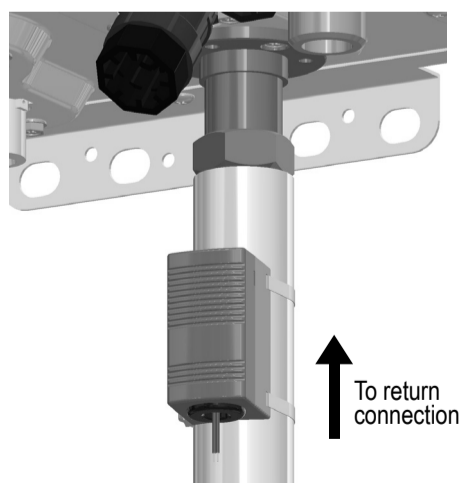
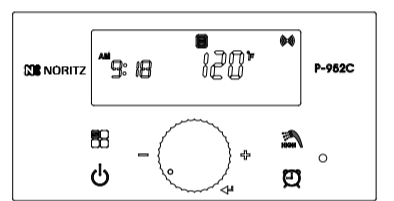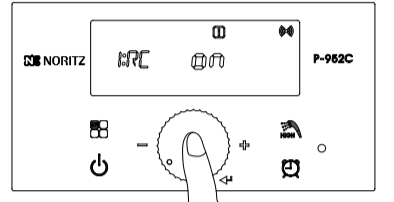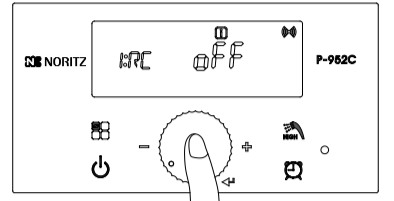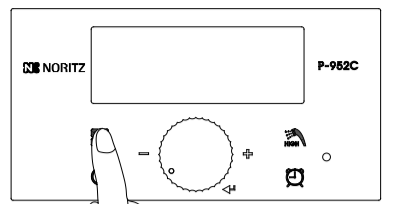3) Close the cover. (See Figure 5)

Figure 5

Figure 6

To return connection

4) Install the temperature sensor:
① Fasten to the pipe using the included stainless steel tie bands.
② Temperature sensor must be installed in the vertical position.
③ Sensor orientation must be installed as pictured. (See Figure 6)

6. Setting on the control panel

To activate the function, follow the procedure below.

1) Turn the power off on the remote.

2) Press and hold the 'Function Button' to enter 'Installer Mode', '[1:RC]' will be displayed.

3) Press the 'Dial Button' so 'oFF' is flashing. (Default setting is 'oFF' and recirculation function is not activated.)

4) Turn the 'Dial Button' clockwise so 'on' is flashing. (This will active the recirculation function.)

5) Press the 'Dial Button' to store the current setting mode and return back to 'Installer Mode'.

6) Turn the 'Dial Button' to '[2:RM]' then press the 'Dial Button' to save the setting.

7) Turn the 'Dial Button' to '[tt24]' (On-Demand Recirculation Mode) then press the 'Dial Button' to save the setting.

Note> ① '[tt24]' (On-Demand Recirculation Mode) will not be accessible if the temperature sensor is not connected.
② '▤' icon will display on the control panel if the temperature sensor is connected properly.

⚠ **NOTICE** Normal recirculation control is overwritten by the following:

1. Set to External recirculation automatically.
2. Recirculation is initiated by pressing a Push Button Switch.
3. Disables automatic timer function.
4. When the temperature reaches 102°F at the Temperature Sensor, recirculation will stop.
5. Or when 5 minutes have passed after pressing the Push Button Switch, recirculation will stop.

7. How to Use

1) Before hot water is required, press any of the push button switches.

2) Pump will begin to circulate and prime the lines with hot water. The pump will continue to run until water reaches the most remote fixture.

Note> Pump run time and delivery time are determined by water pipe distance and size. Longer runs will result in longer run times.

3) Pump will shut down automatically once hot water is available.

4) Do not repeatedly press the push button switch.