Recirculation with On-Demand Accessories
User Guide

Top Takeaways

■ Understanding how on-demand recirculation works is essential. You need to know there are times when the recirculation pump will not turn on, even if the on-demand accessory is activated.

■ After the module is installed, PC board settings inside the tankless water heater MUST be configured.

■ Learn how to work around Circ-Logic to make sure the accessories are paired correctly.

■ Check out tips and FAQs for successful, stress-free installation.

To get the most from your on-demand recirculation accessories, check out more tips and videos by scanning the QR code, or visit www.rinnai.us/wifi

Rinnai Customer Care  1-800-621-9419  rinnai.us
About This Manual

This manual provides detailed information on Rinnai’s on-demand recirculation accessories; it is designed for field installers and is a supplement to the Control-R™ Wi-Fi Module Installation Manual (supplied inside module package).

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1 What Is Recirculation?

Circ-Logic is Rinnai’s recirculation technology built into Rinnai Tankless Water Heaters. Circ-Logic defines recirculation patterns that coincide with your hot water usage. Hot water is available when and where you want it with the on-demand recirculation components listed below.

Recirculation Components

<table>
<thead>
<tr>
<th>Control-R™ Module</th>
<th>![Control-R™ Module Image]</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>(plus any of the following accessories)</em></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mobile App</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Mobile App Image]</td>
</tr>
<tr>
<td>Once connected and the Rinnai app is downloaded, the Rinnai Tankless Water Heater can be controlled from the user’s smart phone or tablet.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Push Button</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Push Button Image]</td>
</tr>
<tr>
<td>Mounts in a convenient location, such as a kitchen faucet or bathroom sink and operates the recirculation system by pushing the button.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Motion Sensor</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Motion Sensor Image]</td>
</tr>
<tr>
<td>Mounts flush to the wall or in the corner and operates the recirculation system with the detection of motion.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Voice Activation</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Voice Activation Image]</td>
</tr>
<tr>
<td>Start recirculation with a simple voice command with Amazon Alexa or Google Home.</td>
</tr>
</tbody>
</table>

Amazon, Alexa and all related logos are trademarks of Amazon.com, Inc. or its affiliates. Google Home is a trademark of Google LLC.

<table>
<thead>
<tr>
<th>Temperature Sensor</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Temperature Sensor Image]</td>
</tr>
<tr>
<td>Turns off recirculation and is available for purchase if required by local building codes.</td>
</tr>
</tbody>
</table>
# Tankless Water Heaters with Circ-Logic

## Models with Recirculation Capability

<table>
<thead>
<tr>
<th>With Internal Pump</th>
<th>Without Internal Pump</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circ-Logic is included in Rinnai’s SE+ Series featuring ThermaCirc360™ models (Super High Efficiency Plus RUR Models):</td>
<td>The following models include Circ-Logic, but require installation of an external recirculation pump (purchased separately):</td>
</tr>
<tr>
<td>• RUR98i/e</td>
<td>• RLX94i</td>
</tr>
<tr>
<td>• RUR160i/e</td>
<td>• RL75i/e (VC)</td>
</tr>
<tr>
<td>• RUR199i/e</td>
<td>• RL94i/e (VC)</td>
</tr>
</tbody>
</table>

Included in these models are an internal recirculation pump and crossover valve.

SENSEI™ Models:

- CU199i/e (Commercial)
- CU160i/e (Commercial)
- RU199i/e (Residential)
- RU180i/e (Residential)
- RU160i/e (Residential)
- RU130i/e (Residential)
How On-Demand Recirculation Works

1. The on-demand accessory is activated (push button is pressed, motion sensor activated, etc.)

2. A request (not a command) is sent to the water heater to turn on the pump. In other words, the push button or motion sensor is asking the water heater if the pump can turn on to start recirculation.

3. With built-in Circ-Logic, the water heater decides (based on time intervals and current water temperature) if the pump can turn on. The water heater either ignores or accepts the request from the recirculation accessory.

4. If the water heater accepts the request to start recirculation, the pump turns on and runs for five minutes or until the water temperature is reached (whichever occurs first).

5. After recirculation completes, the pump enters into a mandatory dormant (inactive) state. **During this time, the pump will not turn on for any reason, even if the push button or motion sensor is activated.**

6. The pump remains dormant for the configured time intervals.

See Visual Illustration on Next Page
**On-Demand Recirculation Example**

**SENDS REQUEST**

Push button is pressed.

**CAN THE PUMP TURN ON?**

Circ-Logic decides if the pump will turn on (based on configured time intervals and current water temperature).

**WATER HEATER IGNORES OR ACCEPTS REQUEST**

**IF REQUEST IS ACCEPTED**

Pump turns on and runs for 5 minutes or until water temperature is reached (whichever occurs first).

**PUMP ON 5 MIN.**

Pump turns off and enters into a mandatory dormant (inactive) state.

**DURING THIS TIME, THE PUMP WILL NOT TURN ON FOR ANY REASON, EVEN IF THE PUSH BUTTON IS Pressed**

The pump remains dormant for the configured time intervals.

**RECIRCULATION CYCLE COMPLETE**

*15 Minutes is an example time frame and is for illustrative purposes only.*
IMPORTANT: If an on-demand request is made while the pump is dormant, the pump WILL NOT turn back on.

The ON signal is still sent to the water heater for a 5-minute timer. If the dormant period completes with time available on the Control-R™ timer, the pump will activate for those remaining minutes (see example below).

5-minute recirculation timer after the on-demand accessory is activated.

Interval when the on-demand accessory is activated.
Recirculation with a Dedicated Return Line

Pump OFF intervals (the amount of time the pump stays off) are different for RUR models and non-RUR models:

- RUR models include an integrated recirculation pump
- Non-RUR models that are equipped with Circ-Logic require installation of an external recirculation pump

**RUR Models**

**RUR Models (Include Internal Recirculation Pump)**

<table>
<thead>
<tr>
<th>Rinnai Temperature Setting °F</th>
<th>Typical Pump OFF Intervals (Minutes)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Economy Mode</td>
<td>Comfort Mode</td>
</tr>
<tr>
<td>140</td>
<td>18</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>20</td>
<td>10</td>
<td></td>
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<tr>
<td>130</td>
<td>22</td>
<td>11</td>
<td></td>
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<tr>
<td>125</td>
<td>24</td>
<td>12</td>
<td></td>
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<tr>
<td>120</td>
<td>28</td>
<td>14</td>
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<tr>
<td>115</td>
<td>32</td>
<td>16</td>
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<td>110</td>
<td>38</td>
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<td>108</td>
<td>40</td>
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<td>106</td>
<td>44</td>
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<td>104</td>
<td>48</td>
<td>24</td>
<td></td>
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<td>102</td>
<td>52</td>
<td>26</td>
<td></td>
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<tr>
<td>100</td>
<td>56</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>98</td>
<td>62</td>
<td>31</td>
<td></td>
</tr>
</tbody>
</table>

See example on following page
• The push button or motion sensor is activated.
• If the water heater accepts the request, the pump runs for five minutes (or until the water temperature is reached) and then turns off.
• The pump remains off in its mandatory dormant (inactive) state for 24 minutes in Comfort mode.

If using a dedicated return line, set the dip switches as outlined in the Tankless water heater Installation and Operation Manual.

**Note:** Instead of dip switches, SENSEI™ units have parameter settings.
### Non-RUR Models with Circ-Logic

**Non-RUR Models (External Recirculation Pump Required)**

<table>
<thead>
<tr>
<th>Rinnai Temperature Setting °F</th>
<th>Typical Pump OFF Intervals (Minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Economy Mode</td>
</tr>
<tr>
<td>140</td>
<td>31</td>
</tr>
<tr>
<td>135</td>
<td>31</td>
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<tr>
<td>130</td>
<td>31</td>
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<td>125</td>
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<td>120</td>
<td>31</td>
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<td>115</td>
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<td>42</td>
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<td>108</td>
<td>45</td>
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<td>49</td>
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<td>104</td>
<td>54</td>
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<tr>
<td>102</td>
<td>60</td>
</tr>
<tr>
<td>100</td>
<td>68</td>
</tr>
<tr>
<td>98</td>
<td>79</td>
</tr>
</tbody>
</table>
Recirculation with a Crossover Valve (RUR Models Only)

The table below illustrates pump OFF intervals for units using a crossover valve.

<table>
<thead>
<tr>
<th>Pump Status</th>
<th>Typical Intervals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Long Loop Mode (201—400 Ft)</td>
</tr>
<tr>
<td>ON</td>
<td>16</td>
</tr>
<tr>
<td>OFF Economy</td>
<td>10</td>
</tr>
<tr>
<td>Comfort</td>
<td>4</td>
</tr>
</tbody>
</table>

Example:

- The push button or motion sensor is activated.
- If the water heater accepts the request, the pump runs for 5 minutes and then turns off.
- The pump remains off in its mandatory dormant (inactive) state for 4 minutes in Comfort mode.

**Important:** If a push button or motion sensor is activated during the mandatory dormant (inactive) state, the pump will not turn back on.

- After 4 minutes, the push button or motion sensor may be activated to turn on the pump.

Important: If a push button or motion sensor is activated during the mandatory dormant (inactive) state, the pump will not turn back on.
You will need:
- On-Demand Accessory and Batteries (supplied with purchase)
- Control-R™ Wi-Fi Module
- Phillips Head Screwdriver (field-supplied)

Additional Items Required for SENSEI™ Water Heaters:
- Water Heater Controller Cable (included in water heater packaging)
- Two Wire Nuts (or other approved wire connectors) (field-supplied)
- Wire Cutter/Stripper (optional) (field-supplied)

IMPORTANT
Before you begin, make sure recirculation settings are disabled (turned off) on the tankless water heater. For instructions, see Appendix B → Recirculation Settings section.

Step 1: Install Module

**Install on Water Heater**
Place magnetic back panel of module to side of water heater. (Indoor Water Heaters Only)

**Install on Wall**
Refer to Appendix A for detailed installation instructions.

Step 2: Connect Module to Water Heater and Configure Settings

**For SENSEI™ Water Heaters**
See Step 2A

**For Non-SENSEI™ Water Heaters**
See Step 2B

Not sure if you have a SENSEI™ or non-SENSEI™ water heater? Refer to the Tankless Water Heaters with Circ-Logic section for a complete list of models.
Step 2A: SENSEI™ Models

Connect Module:

1. Unplug water heater power cord from power outlet.

2. Remove water heater front panel (use a Phillips Head screwdriver to remove 4 screws securing the panel).

3. Connect module wires to PC Board located inside water heater by completing steps a, b, and c below.

   a. If module comes with spade end connectors, cut spade end connectors off the two module wires.

      Next, strip insulation off both ends.

   b. Connect module wires to water heater controller cable (included in water heater packaging) using wire nuts or other approved wire connectors.
c. Connect controller cable to PC Board through grommet portal on bottom, right side of water heater.

4. Plug water heater power cord into a power outlet.
Pair Accessory to Module:

5. Wait for module LED to turn **RED**.
   
   While you are waiting, continue with next step.

6. Insert accessory batteries by following the steps below:

   **Complete remaining steps for EACH ON-DEMAND ACCESSORY to be paired**

   **Push Button Batteries**
   
   - Press both sides. Then, lift and remove cover.
   
   - Press/hold down push button and insert two supplied batteries **at the same time**.
     
     Make sure + (plus) terminals are aligned correctly.
     
     When batteries are installed, release the push button.
     
     - Replace cover on push button (cover fits in one direction only).
7. When module LED is RED, press and hold down Connect button on MODULE until LED turns GREEN. Then, release button.
8. You have **five minutes** to complete the bullets below:

**Push Button:**
- Press and hold down push button.
- Push button flashes three times and then rapidly flashes.
- Release push button.

**Motion Sensor and Temperature Sensor:**
- Press and hold the Connect button on the accessory until the accessory LED quickly flashes.
- Release the button.

9. If paired successfully, module LED quickly blinks **GREEN** and turns **RED**.
10. Activate on-demand accessory (press push button, activate motion sensor, etc.).

Module LED quickly blinks **GREEN** and turns **RED**.
(This signifies communication between on-demand accessory and module.)

**IMPORTANT:** After activating on-demand accessory (pressing push button, activating motion sensor, etc.), **DO NOT** activate it again until 5-minute timer is complete (as explained in next step).

Note: Place motion sensor where it cannot detect movement.

11. Set a timer for **5 minutes**.

(Use any type of timer, such as a watch or the timer on a smart phone).

While waiting, continue with next step.
Configure Water Heater Settings to Comfort Mode:

12. Press **On/Off** button on controller to turn **OFF** water heater.

![Image of controller turning off]

**IMPORTANT:** Controller MUST be turned OFF for remaining steps to work correctly.

13. Press and hold down **A** button on PC Board for 1 second.

   The controller turns **ON**.

![Image of controller turning on]

14. Press **Up** arrow until **04A** appears in display.
15. Press **On/Off** button until **04b** appears in display.

16. Press **Up** arrow until **05A** appears in display.

17. Press **On/Off** button until **05b** appears in display.

18. Comfort mode is selected.

   To select additional parameters, see Appendix B.

   When parameter settings are complete, press and hold down **A** button on PC Board for one second to exit parameters. The controller turns **OFF**.
19. Replace water heater front panel.

**COMPLETE REMAINING STEPS ONLY AFTER 5-MINUTE TIMER IS FINISHED FROM STEP 11 ON PAGE 18.**

20. Press **On/Off** button on water heater controller to turn **ON** water heater.

21. Activate the on-demand accessory (press push button, activate motion sensor, etc.)

Module LED blinks **GREEN** and pump turns on.
22. Instructions for pairing one on-demand accessory are complete.

To pair additional accessories, follow the steps below.

<table>
<thead>
<tr>
<th>Pair Additional On-Demand Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Press <strong>On/Off</strong> button on water heater controller to turn <strong>OFF</strong> water heater.</td>
</tr>
<tr>
<td>• Unplug water heater power cord from outlet and then plug it back in.</td>
</tr>
<tr>
<td>• Repeat steps 6-9 on pages 15-17.</td>
</tr>
<tr>
<td>• Press <strong>On/Off</strong> button on water heater controller to turn <strong>ON</strong> water heater.</td>
</tr>
<tr>
<td>• Activate on-demand accessory (press push button, etc.). Pump turns on.</td>
</tr>
</tbody>
</table>

**STOP**

Step 2A for SENSEI™ models is complete.

**SKIP** the next step (Step 2B) and **START** with Step 3.
Step 2B: Non-SENSEI™ Models

Connect Module:

1. Unplug the water heater power cord from power outlet.
2. Remove water heater front panel (use a Phillips Head screwdriver to remove 4 screws securing the panel).
3. Place the two module wires through the bottom opening of the water heater.
4. Attach each module wire to the two screws labeled Terminal for Controls.
   - Partially unscrew each of the two screws.
   - Insert the spade terminal (connected to the end of each wire) between the screw and contact.
   - Tighten the screws.
5. Plug water heater power cord into a power outlet.
Pair Accessory to Module:

6. Wait for module LED to turn **RED**.
   
   While you are waiting, continue with next step.

7. Insert accessory batteries by following the steps below:

   - **Push Button Batteries**
     - Press both sides. Then, lift and remove cover.
     - Press/hold down push button and insert two supplied batteries **at the same time**.
       
       Make sure + (**plus**) terminals are aligned correctly.
       
       When batteries are installed, release the push button.
       
       - Replace cover on push button (cover fits in one direction only).
8. When the module LED is **RED**, press and hold down the **Connect** button on the MODULE until the LED turns **GREEN**. Then, release the button.
9. You have **five minutes** to complete the following steps:

**Push Button:**
- Press and hold down push button.
- Push button flashes three times and then rapidly flashes.
- Release push button.

**Motion Sensor and Temperature Sensor** — Press and hold the **Connect** button on the accessory until the accessory LED quickly flashes. Then, release the button.

10. If paired successfully, module LED quickly blinks **GREEN** and turns **RED**.
11. Activate on-demand accessory (press push button, activate motion sensor, etc.).

Module LED quickly blinks **GREEN** and turns **RED**.
(This signifies communication between on-demand accessory and module.)

**IMPORTANT:** After activating on-demand accessory (pressing push button, activating motion sensor, etc.), **DO NOT** activate it again until 5-minute timer is complete (as explained in next step).

Note: Place motion sensor where it cannot detect movement.

12. Set a timer for **5 minutes**.

(Use any type of timer, such as a watch or the timer on a smart phone).

While waiting, continue with next step.
Configure Water Heater Settings to Comfort Mode:

13. Press **On/Off** button on controller to turn **OFF** water heater.

![Controller](image)

**IMPORTANT:** Controller MUST be turned OFF for remaining steps to work correctly.

14. On the PC board, adjust switches **#4** and **#8** in the second (or lower) group of switches (DIPSW 2) to **ON**.

![PC Board](image)

**TIP**

For RUR98i/e water heater models, refer to the Tankless Water Heater Installation and Operation Manual for Crossover Mode settings.

15. Replace water heater front panel.
16. Press **On/Off** button on water heater controller to turn **ON** water heater.

17. Activate the on-demand accessory (press push button, activate motion sensor, etc.)

   Module LED blinks **GREEN** and pump turns on.
18. Instructions for pairing one on-demand accessory are complete. To pair additional accessories, follow the steps below.

<table>
<thead>
<tr>
<th>Pair Additional On-Demand Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Press <strong>On/Off</strong> button on water heater controller to turn <strong>OFF</strong> water heater.</td>
</tr>
<tr>
<td>• Unplug water heater power cord from outlet and then plug it back in.</td>
</tr>
<tr>
<td>• Repeat steps 7-10 from pages 24-26.</td>
</tr>
<tr>
<td>• Press <strong>On/Off</strong> button on water heater controller to turn <strong>ON</strong> water heater.</td>
</tr>
<tr>
<td>• Activate on-demand accessory (press push button, etc.). Pump turns on.</td>
</tr>
</tbody>
</table>

STOP

Step 2B for Non-SENSEI™ models is complete.

Continue with Step 3.
Step 3: Testing Accessories with Circ-Logic

Circ-Logic is built-in technology in the tankless water heater to control and limit recirculation when it is not needed.

After a recirculation cycle is complete, a mandatory “off” period begins. The pump will not turn on even if a push button is pressed or a motion sensor is activated. To work around the “off” period for testing a paired on-demand accessory, follow the steps below:

1. Power Off the water heater by pressing the On/Off button on the water heater controller.

2. Unplug the water heater from the electrical outlet. Wait 10 seconds, and plug it back in.

3. Wait for the module to boot up. Boot up is complete when the module LED turns from YELLOW to RED (not connected to a wireless network) or BLUE (connected to a wireless network).

4. Activate the on-demand accessory. Wait 5 minutes.

5. After 5 minutes, power On the water heater by pressing the On/Off button on the water heater controller.

6. Circ-Logic is now reset.

7. You can press a push button, trigger a motion sensor, or use the Rinnai app to start the recirculation pump.

8. If more testing is needed, repeat steps 1-5.
Check out the latest tips and tricks for a successful, stress-free installation.

- Additional wiring can run up to 300 feet (91 m) away from water heater (18-22 gauge wire required).
- Running cold water through the recirculation line will not force the pump to turn on.
- The OFF cycles for Circ-Logic are determined by configuration settings of the water heater PC Board. For maximum usage of the on-demand accessories, the water heater must be set to Comfort mode. Comfort mode cycles the pump more frequently ensuring the loop temperature remains higher.
- Power cycling or factory resetting the module will not reset Circ-Logic.
- For best results and maintaining hot water in the loop, all lines should be insulated.

Push Button Installation Tips:

- The maximum distance from the module to a push button is 250 ft. (76 m).
- The push button requires two CR2450 watch batteries (available at most retail stores including Walmart, Home Depot, etc.). Battery life is up to two years.
Q: How many push buttons and motion sensors are supported per each module?

Up to 30 on-demand recirculation accessories are supported per module. There is no limit per the type of accessory as long as the total number of accessories do not exceed 30.

Q: Is the homeowner’s wi-fi necessary for recirculation with on-demand accessories?

No. Setting up on-demand recirculation does not require the homeowner’s wi-fi network.

Q: How do I factory reset the module?

Press and hold the Connect button on the module until the LED blinks WHITE, and then release. This will restore the module back to original factory settings.

Q: How do I configure the tankless water heater dip switches or parameter settings to enable recirculation?

PC Board settings inside the tankless water heater must be configured to enable recirculation. For more information, see section: Step 2: Connect Module to Water Heater and Configure Settings.

Q: How do I maximize the frequency of when the on-demand accessory will activate the pump?

Set the water heater to Comfort mode. Comfort mode is recommended with on-demand recirculation accessories as it cycles the pump more frequently, ensuring the loop temperature remains higher. Comfort mode is selected by dip switches/parameter settings inside the water heater. For more information, see section: Step 2: Connect Module to Water Heater and Configure Settings.
Q: Can I disable Circ-Logic and turn on the recirculation pump with no restrictions?

No. Circ-Logic keeps the pump from running when it does not need to. Placing the water heater in Comfort mode will lessen the wait time between pump cycles. If the pump does not turn on, the water in the pipes should already be warm; therefore, recirculation is not needed.

Q: I pressed the push button and the pump didn’t turn on. What’s up?

- Is the push button paired properly? You can check by pressing the push button. Does the LED on the module turn green? If yes, then the push button is paired properly. If no, try re-pairing. See section: Step 2: Connect Module to Water Heater and Configure Settings.

- Make sure the water heater dip switches/parameter settings are set to Comfort mode (for steps, see section: Step 2: Connect Module to Water Heater and Configure Settings).

- The pump may be in a mandatory dormant (inactive) state due to Circ-Logic (see section: How On-Demand Recirculation Works for more information).

Q: How long do I have to pair the on-demand accessory when the LED turns green?

You have five minutes to complete the pairing process before it times out. If pairing mode times out, press and hold down the Connect button on the module until the LED turns GREEN.

When pairing multiple on-demand accessories, you must enter pairing mode for each accessory. For more information, see section: Step 2: Connect Module to Water Heater and Configure Settings.

Q: How do I know if the module is in pairing mode for the on-demand accessory?

If the module is in pairing mode, the LED on the module is solid green.

Q: What happens when the power goes out?

No settings are affected by a power outage.
Q: If I swap out the module for any reason, do I need to re-pair the Push Button or Motion Sensor?

Yes because push buttons and motion sensors are paired to the module. If the module is swapped, the on-demand accessory (push button, motion sensor, etc.) must be factory reset and paired to the new module.

Q: How do I Factory Reset an On-Demand Recirculation Accessory (Push Button, Motion Sensor, etc.)?

Remove the accessory batteries, and then reinsert the batteries while simultaneously pressing down on the accessory Connect button.

Q: What is the difference between factory reset and power cycle?

- **Factory Reset** restores the module back to its factory default values. Factory resetting also erases all current settings and wireless network history.

  A Factory Reset must be performed when changing wireless networks (you must factory reset first, and then select the new network). A Factory Reset must also be performed when starting over on the pairing process (you must factory reset first, and then start the pairing process).

  **How To Factory Reset:** Press and hold the Connect button (see below) on the module until the LED blinks WHITE, and then release. The module will reboot and the module LED turns RED when complete.

- **Power Cycle** shuts down power to the module and then restarts power (which is the same function as removing the water heater plug from the power outlet and then plugging it back into the outlet). When trying to connect or disconnect power to the tankless water heater, Rinnai recommends using the water heater power plug instead of using the Reset feature on the module. If you are ever required to use the Reset feature on the module, insert a small pin into the Reset opening (see below).
Appendix A: Install the Module on a Wall

Guidelines:

- The module must be installed indoors (including outdoor water heaters).
- Mount the module to a wall or side of water heater (with the use of a magnetic backing).

Mount to Water Heater

This option is for indoor water heaters only.

Place the magnetic back side of the module to the side of the water heater.

Mount to Wall

You will need:

- Module (supplied)
- Two wall anchors and two screws (supplied)
- Tools (field-supplied): Phillips head screwdriver, drill with bit set, level and pencil

To mount the module to a wall:

1. The module’s back panel contains two keyhole slots that support the module. Mark the location of each slot on the wall with a pencil. The distance between the two slots is 1.9 in. (48 mm).
2. Use a level to ensure the slots are even.

Use a power drill to drill pilot holes for the module screws and anchors.

3. Insert the two wall anchors (supplied) into each hole until they sit flush against the wall.

4. Insert the screws (supplied) into the anchors and fasten to the wall leaving 1/4 in. exposed.

5. Mount the module by placing the keyhole slots (on back of module) onto the screws.
Appendix B: Additional Parameter Settings

TIP
Parameter settings can be set with the water heater turned OFF.

IMPORTANT
Refer to “Rinnai Tankless Water Heater Installation and Operation Manual” for complete list of water heater parameter settings.

High Altitude (Installation Location)

1. Press On/Off button on controller to turn OFF water heater.
2. Press A button on PC Board for 1 second.
3. Press Up arrow until 02A appears in display.
4. Press On/Off button until the following appears in display:
   - 02A 0 to 2,000 ft
   - 02b 2,001 - 5,400 ft
   - 02c 5,401 - 7,700 ft
   - 02d 7,701 - 10,200 ft
5. To exit parameter settings, press and hold down A button on PC Board for 1 second.

Service Soon

1. Press On/Off button on controller to turn OFF water heater.
2. Press A button on PC Board for 1 second.
3. Press Up arrow until 03A appears in display.
4. Press On/Off button until the following appears in display:
   - 03A Disabled
   - 03b 0.5 Year
   - 03c 1 Year
   - 03d 2 Years
5. To exit parameter settings, press and hold down A button on PC Board for 1 second.
Recirculation Settings

SENSEI™ Models

1. Press **On/Off** button on controller to turn **OFF** water heater.
2. Press **A** button on PC Board for 1 second.
3. Press **Up** arrow until **04A** appears in display.
4. Press **On/Off** button until the following appears in display:
   - **04A** No Recirculation
   - **04b** Dedicated Mode
5. To exit parameter settings, press and hold down **A** button on PC Board for 1 second.

Non-SENSEI™ Models

To turn **OFF** recirculation settings on Non-SENSEI™ models:

On the PC board, adjust switches **#4, #7 and #8** in the second (or lower) group of switches (DIPSW 2) to **OFF**.
Learn more about Rinnai high-performance Tankless Water Heaters, Hybrid Water Heating Systems, Boilers, Vent-Free Fan Convectors and EnergySaver® Direct Vent Wall Furnaces at:

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