



# Installation Manual

FM-194  
FM-194-1  
FM-194-2

## Operation and Installation Instructions for FloodMaster Wireless Water Heater Leak Detection Alarm/Shutoff System – Model FM-194 Series

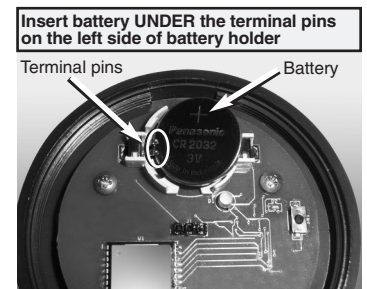
### System Overview:

The FM194 line of Wireless Water Heater Leak Detection Alarm Shutoff Systems is designed to sound an audible alarm and shut down the water feed line when the sensor puck comes in contact with conductive liquid (such as water). Wireless units come with one battery-operated, pre-programmed sensor puck. The unit requires a 110VAC wall outlet for power and provides alarm silence and easy reset buttons. In the event the alarm activates, silence the audible alarm by pressing and releasing the silence button on the alarm box; the yellow silence indicator light on the alarm box will turn on to indicate the system is in silence mode. Locate the source of the leak, remove the sensor puck from the water and dry the metal contacts at the bottom of the sensor puck. Correct the problem causing the leak and place the sensor puck in the desired leak detection location once again as required. Press and release the red reset button on the alarm box to open the valve and begin the flow of water again. The green power ON/OFF indicator light on the alarm box will flash once to confirm the reset. When placing the sensor puck in a new location, function test the unit to confirm it is still within signal range of the alarm box (see step 13 below). It is also recommended that you function test the sensor puck after an event or alarm status has been cleared, to confirm location is within range. All units provide an optional connection to a home security alarm system or control panel. Additional sensor pucks can be added to the system where a wider area of leak detection is required.



### Installation Instructions:

1. Turn off the water supply to the hot water heater.
2. As appropriate, either solder (FM194) or thread (FM194-1; -2) the valve body into the feed water line with arrow pointing towards the tank. For threaded installation, apply pipe sealant or Teflon® tape to the NPT threads and tighten. For solder installations, be careful not to get any flux or solder residue inside of the valve body.
3. Install valve stem assembly into valve body. Tighten with an appropriate size box wrench. Do not over-tighten.
4. Install power head and hand-tighten knurled nut.
5. Open water supply valve and inspect for leaks.
6. Plug the transformer into a 110VAC outlet. The green power ON/OFF indicator light on the alarm box will turn on.
7. Unscrew and remove the sensor puck cap.
8. Place the lithium battery into the battery holder slot in the sensor puck base – positive (+) or label side up.  
**Note:** With the battery holder at 12 o'clock, the battery should slide under the terminal pins on the left side of the battery holder. (See photo on right)
9. Replace the sensor puck cap and screw it into place.
10. Place the sensor puck on the floor or in the pan near the pressure relief valve drain tube.
11. If the unit is used without a pan, it is recommended that a continuous bead of silicon be laid on the floor that encircles the hot water heater and sensor. This will help direct water flow towards sensor.
12. Close all interior doors in the testing area.
13. Function Test the system as follows:
  - a. Place a damp paper towel on the floor in the desired leak detection area where the sensor puck will be located. Place the sensor puck on top of the damp paper towel, making sure the probes on the bottom of the puck make contact with the paper towel. Step five feet away from the puck.
  - b. The audible alarm will sound and the valve will rotate closed. To confirm good signal strength, press and release the reset button on the alarm box and the alarm should activate again in 10 to 15 seconds. Press and release the reset button again after alarm activation. If the unit activates three times in quick succession (10 to 15 seconds apart), you have good signal strength and can move onto Step 13c. If you are unable to get the alarm to activate repeatedly, relocate the sensor puck a few inches from the original test spot and repeat Step 13a. Note: If you are unable to get the alarm to activate in a particular room or critical location, a wireless signal repeater may be required to overcome signal interference - see Optional Features and Connections for more information.
  - c. Press and release the silence button on the alarm box to silence the audible alarm. The yellow silence mode light will turn on to indicate the unit is in silence mode.
  - d. Once the valve has completely closed (30 sec.), open the hot water faucet and inspect for water flow. There should be no flow.
  - e. Remove the sensor from the paper towel, dry the contact points and place the sensor back in the desired leak detection location on the floor.
  - f. Press and release the red reset button on the alarm box. The green power ON/OFF indicator light on the alarm box will flash once to indicate the reset has occurred.
  - g. Open the hot water faucet and inspect for water flow.

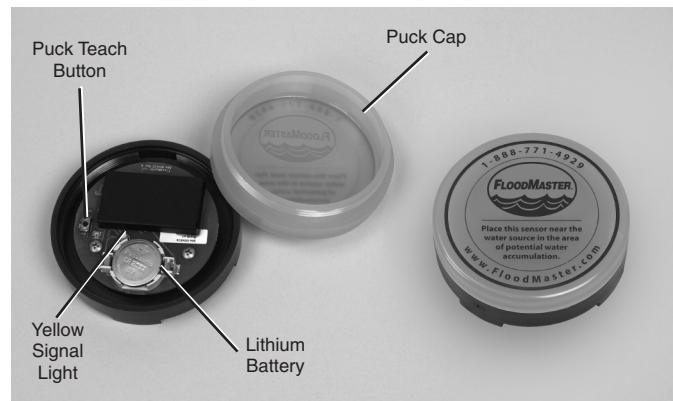
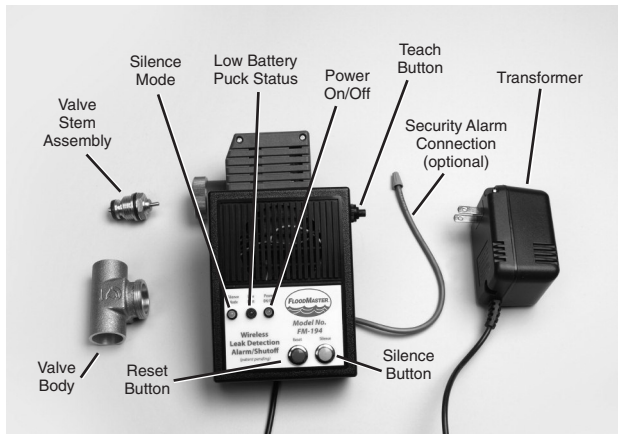




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### Maintenance:

**Alarm Box** – Exercise (press and release) the reset, silence and teach buttons on the alarm box annually to ensure correct operation and to maintain product warranty status.

**Sensor Puck Status** – In the event a sensor puck reaches a low battery status, the sensor puck will begin to flash a yellow signal light and the red indicator light on the alarm box will turn on. The alarm box will also sound a pulsing, audible alarm. Identify the low battery sensor puck and replace the battery. Press and release the reset button on the alarm box after the battery has been replaced. Model #CR2032 replacement batteries are commercially available at national retailers. In the event a sensor puck is moved beyond the wireless range (typically 100') from the alarm box, the red indicator light on the alarm box will turn on. The alarm box will also sound a pulsing, audible alarm. Identify the out-of-range puck and relocate it within the range of the alarm box (typically 100'). Press and release the reset button on the alarm box after the sensor puck has been relocated.

**To Delete a Sensor Puck** – In the event that a sensor puck needs to be or has been removed from the system, the programming memory of the alarm box will have to be cleared and remaining sensor pucks reprogrammed. Failure to do so will result in Low Battery (lost signal) Alarms. The instructions for clearing of the system memory and reprogramming remaining sensor puck(s) are as follows:

1. Press and hold the teach button on the alarm box for 45-50 seconds to clear the memory.
2. Confirm the sensors are NO LONGER linked to the alarm box by placing a damp paper towel under the sensor puck. There should be no response from the alarm box.
3. Unscrew and remove sensor puck cap.
4. Place the lithium battery into the battery holder slot in the sensor puck base – positive (+) or label side up. **Note:** With the battery holder at 12 o'clock, the battery should slide under the terminal pins on the left side of the battery holder. (See photo under Installation Instructions)
5. Press and release the black teach button on the side of the alarm box.
6. Press and release the black teach button located in the sensor puck base. Red light in sensor base will flash once to confirm signal.
7. Repeat Steps 3-6 for each sensor.
8. Test the unit for functionality per the function test listed above. (See Installation Instructions, Step 13)

### Optional Feature and Connections:

**Additional Sensor Pucks** – For applications where a wider area of leak detection coverage is desired, additional sensor pucks can be added to the system. They are sold separately and require an extra step to teach them to communicate with the alarm box. To program additional sensor pucks:

1. Unscrew and remove the sensor puck cap.
2. Place the lithium battery into the battery holder slot in the sensor puck base – positive (+) or label side up. Note: With the battery holder at 12 o'clock, the battery should slide under the terminal pins on the left side of the battery holder. (See photo under Installation Instructions)
3. Press and release the black teach button located on the side of the installed alarm box.
4. Press and release the black teach button located in the sensor puck base. Red light in sensor puck base will flash once to confirm signal.
5. Replace the sensor puck cap and screw it into place.
6. Test the unit for functionality per the function test listed above. (See Installation Instructions, Step 13)

**Wireless Signal Repeater** – Use for applications where wireless signal strength is not sufficient due to range or environmental interference. While some weak signals can be overcome by avoiding placement of the sensor puck in corners or moving the sensor puck a few inches one way or the other, some installations may require a signal repeater to achieve reliable signal strength. These Wireless Signal Repeaters are sold separately and can be added to an existing installation at any time.

**Security Alarm Connection** – Use for applications where connection to a home security system or control panel is desired. This dry contact relay signal can be wired per your application requirements as follows:

- Red/White – Normally Closed Circuit
- Black/White – Normally Open Circuit

