



Installation Manual

FM-180

Operation and Installation Instructions for FloodMaster Wireless Total Water Main Leak Detection Alarm/Shutoff System – Model FM-180 Series

CAUTION: DO NOT PLACE FINGERS OR ANYTHING INSIDE THE VALVE PORTS. DOING SO CAN RESULT IN THE LOSS OF FINGER AND/OR DAMAGE TO THE VALVE.

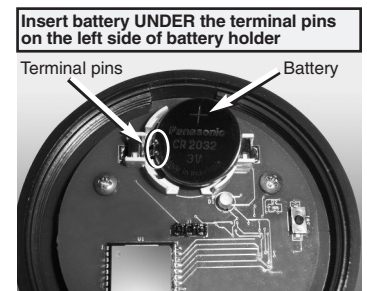
System Overview:

The FM-180 Series Wireless Total Water Main Leak Detection Alarm Shutoff System is designed to sound an audible alarm and shut down the water feed line when a sensor puck comes in contact with conductive liquid (such as water). Wireless Total Water Main units come with two battery operated, pre-programmed sensor pucks. The unit requires a 110VAC wall outlet for power and provides alarm silence and 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 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 17 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, sold separately, 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 building.
2. Cut the water line after the water shut-off valve.
3. Solder female plumbers union to each end of the supply line.
4. Create adapter by soldering a plumbers union to one end of a 3" section of tubing and an NPT adapter on the other end.
5. Apply pipe sealant or Teflon® tape to the NPT threads and tighten the adapter into both ends of the valve (valve is bi-directional and can be plumbed with the "in" as either side of the valve).
6. Line up both unions and tighten.
7. Open water supply and inspect for leaks.
8. Attach the electrical connector on the valve to the mating connector on the FloodMaster alarm box.
9. **DO NOT PUT FINGER INSIDE THE VALVE PORTS.** Plug the transformer into a 110VAC outlet. The green power ON/OFF indicator light on the alarm box will turn on.
10. Mount the alarm box at least 5 feet off the ground. The higher the alarm box placement, the better the signal range.
11. Unscrew and remove the sensor puck cap.
12. 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)
13. Replace the sensor puck cap and screw it into place.
14. Repeat steps 11-13 for each sensor puck.
15. Place sensor pucks on the floor or in the area where the potential flooding may occur and leak detection is desired (example: base of washing machine, hot water heater, upstairs bathroom sink, etc.). It is recommended that a bead of silicone be laid on the floor that encircles the protected area.
16. Close all interior doors in the testing area.
17. Function Test:
 - 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 on to Step 17c. 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 17a. **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. Remove the sensor puck from the paper towel and dry off the metal pins located on the bottom of the sensor puck.
 - e. Open water faucet and inspect for water flow. There should be no flow.
 - f. Press and release the reset button on the alarm box to open the valve and begin the flow of water again.
 - g. Inspect faucet for water flow.
 - h. Repeat steps a-g for each sensor puck on the system.

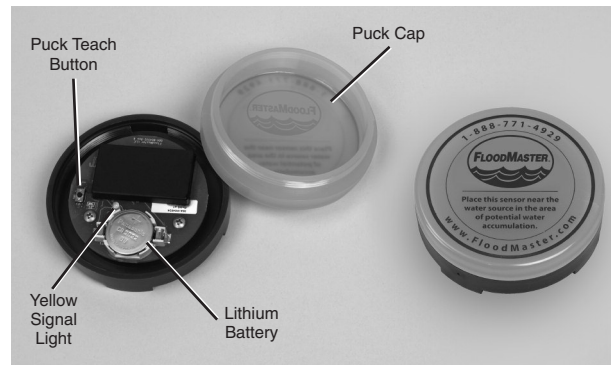
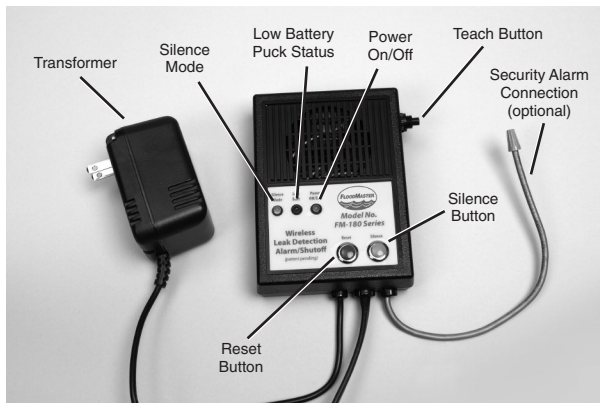




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Maintenance:

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 light on the alarm box will light. In addition, the alarm box will 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. If a sensor puck is moved beyond the wireless range (typically 100') from the alarm box, the alarm box will sound a pulsing, audible alarm and the red indicator light on the alarm box will also turn on. 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 17)

Optional Features 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 17)

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

