



Installation Manual

RS-094-MK1

Operation and Installation Instructions for FloodMaster Water Heater Leak Detection Alarm/Shut-Off Systems – Model RS-094-MK1

The RS-094 series of Feed Water (Water Heater) Leak Detection and Shut-Off Systems is designed to monitor and respond immediately to water leaks. When a sensor comes in contact with as little as a 1/16" of water (or any other conductive liquid), it will automatically sound an audible alarm and close the valve to shut down the water feed line, thus mitigating damage caused by an undetected water leak. The unit also provides output signal capabilities (SPDT Relay Output Contact) for connection to a home security panel or for use with an appropriate relay to control a secondary device, such as a pump.



Output signal connections:

Normally Closed Circuit – Terminal Pins 3 & 4

Normally Open Circuit – Terminal Pins 4 & 5

The kit includes the receiver with on-board audible alarm, a full port lead free (ANSI/NSF 61 Annex G) shut-off valve, 110 VAC power supply and leak detection sensor. Additional sensors can be added where a wider area of leak detection is required (additional sensors sold separately).

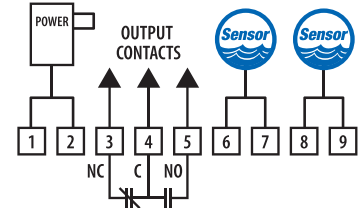
OPERATION:

If the system activates, locate the source of the leak and remove the sensor rope from the water. Correct the problem causing the leak and replace the sensor rope in the desired leak detection location, as required (see step 6d below).

INSTALLATION INSTRUCTIONS:

(FloodMaster recommends that installations be completed by a licensed plumber to ensure that all local code requirements are followed).

- Turn off the water supply feed line to the water heater.
- Thread the valve body into the feed water line after the manual shut-off. Apply pipe sealant or Teflon® tape to the NPT threads and tighten.
- The receiver connector comes pre-wired with basic connection to the power supply and the sensor rope. Using an appropriate screwdriver, make any additional desired electrical connections for output contact or additional sensors per the diagram provided. *(Note: Additional snap-fit sensor rope lengths can also be added to the installed sensor rope at this time if a wider area of coverage is desired.)*
 - Snap the terminal wiring block into the receiver housing at the mating slot provided.
- Secure the valve body in one hand and snap the receiver into place on the valve body mounting pad. *(Note: Improper alignment of the valve stem may interfere with proper receiver mounting. If any resistance is encountered, confirm the witness mark on the valve stem is in alignment with the ports of the valve. Use an appropriate hand tool, such as pliers, to clamp down on the valve stem and turn in the appropriate direction until the desired position is achieved).*
- Plug the power transformer into an 120 VAC wall outlet; the green Power indicator light on the receiver will turn on.
- Function Test the system as follows:**
 - Apply a saturated paper towel to a 4" section at the far end of the Sensor Rope. The FloodMaster receiver should go into an alarm state after a few seconds of contact with the wet paper towel.
 - The audible alarm will sound and the valve will rotate to the closed position.
 - The red Valve Closed LED will turn on when the valve is completely closed (approximately 45-second cycle time). Open a hot water faucet and inspect for absence of water flow. There should be no flow.
 - Remove the paper towel from the Sensor Rope. The Rope may require some time to dry off thoroughly before it can be redeployed. To expedite the drying process, take a wet section of the rope in hand and slap it a few times on a hard surface. The water will be released from the mesh. A hair dryer or similar device may also be used to expedite the drying process. *NOTE: False triggers of the FloodMaster receiver shortly after the initial test would be an indication that the sensor rope is still wet.*
 - Press and release the Reset Button on the receiver to open the valve and begin the flow of water again (approximately 45 seconds to fully open position). The green Power indicator light will flash once to indicate the reset process has begun.
 - Open a hot water faucet and inspect for water flow.



MAINTENANCE:

We recommend an annual test of the unit to ensure proper function. See *Function Test* instructions above. At a minimum, users should exercise (press and release) the reset button on the receiver annually to ensure correct operation and to maintain product warranty status.

EMERGENCY MANUAL OPERATION OF THE VALVE:

The unit is equipped with an emergency feature for the manual rotation of the valve. This can be accomplished by disengaging the actuator from the valve and manually changing the valve to open or closed as follows:

- Unplug the unit from the 120 VAC wall outlet.
- Stabilize the water feed line by grabbing it in one hand near the valve, while grasping the actuator housing in the other hand, pull the actuator housing away from the water feed line.
- Using an appropriate hand tool, such as a pliers, clamp down on valve stem and turn in the appropriate direction until the desired position is achieved. Note the top of the stem is slotted to indicate valve position (in line with water flow would indicate open valve; slot across water line would indicate closed valve).
- Before remounting the actuator, return the valve to the original position prior to the manual rotation.
- Remount the actuator and plug into 120 VAC wall outlet.
- Test for correct operation per the *Function Test* listed above.



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