



RS-094-MK4

- BY -

RDT
RELIANCE
DETECTION TECHNOLOGIES



Leak Detection & Automatic Shut-Off System for Conventional Plug-In Power-Vent Gas Water Heaters with Electrical Plug Interrupter

Congratulations on your purchase of a FloodMaster RS-094-MK4 water heater leak detection system from Reliance Detection Technologies. This product is designed to automatically shut off the water supply to a water heater or tank if a leak is detected. This kit also provides output signal capabilities to automatically kill electricity to the water heater power vent when a leak is detected.

To ensure proper installation and to maximize the performance of your RS-094-MK4 water leak detection system, please read this manual thoroughly before installing or operating the system.

PLEASE READ CAREFULLY BEFORE PROCEEDING: If a leak is detected, the RS-094-MK4 will shut off the water going to the water tank. This will stop the continuous flow of water from the water supply to the tank. However, all or some of the water that is already in the tank may still leak out onto the floor.

NOTE: This installation and operating manual contains important information about the operation of the RS-094-MK4 system. If this system is being installed for use by a different user, please be sure a copy of this manual is left with the system for future reference.



Warning: For use with water only. Do not install on gas line. Never install this device on a fire protection or fire suppression system. For indoor use only.

www.RelianceDetection.com

Toll-Free: 888-771-4929

RS-094-MK4 System Components (included in kit):

- | | |
|--|--------------------------------------|
| 1 – Receiver box / actuator | 1 – Water sensor with 8' lead wire |
| 1 – 3/4" full port lead-free shut-off valve
(NSF/ANSI 61 and 372) | 1 – Metal plate for sensor placement |
| 1 – Power supply with 12' lead wire | 1 – Electrical plug interrupter |

NOTE: The RS-094-MK4 can be installed on existing or new water heater installations.

RDT recommends installation by appropriately licensed and certified installers to ensure that all local code requirements are met.

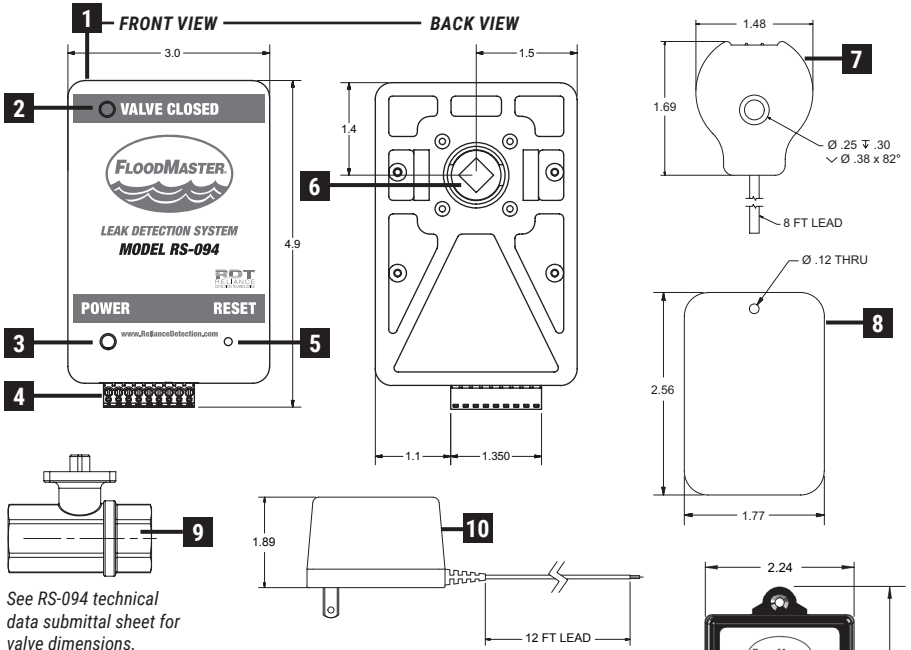
INSTALLATION INSTRUCTIONS

1. Turn off the water supply feed line to the water heater. Confirm that the power-vent water heater is unplugged from the electrical supply.
2. Prior to installation, manually exercise the valve body to fully closed and back to fully open position by holding it in your hand, applying a pliers to the valve stem and turning. 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.
3. The receiver connector comes prewired with basic connections to the power supply, sensor and electrical plug interrupter. Using an appropriate screwdriver, make any additional electrical connections as may be desired for output contacts or additional sensors per wiring Figure 2. *(Note: additional sensors can be connected to either 6 & 7 or 8 & 9, as wiring space allows.)* Then snap the terminal wiring block into the receiver housing at the mating slot provided.
4. 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 valve ports. 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).*
5. Route and secure the 18-2 wire from the power-off relay to the location of the 120V AC wall outlet that supplies the water heater power-vent unit.
6. Plug the power-off relay fully flush into a wall receptacle. Do not plug into an extension cord.
7. Plug the power-vent water heater cord into the power-off relay and activate the power-vent unit.
8. Place the sensor(s) where water is most likely to first accumulate (such as the drain pan or the floor next to the tank). The sensor is magnetic and can be installed horizontally or vertically in conjunction with the metal plate – see Figure 3.
 - Clean the desired location area to ensure the surface is clean for optimum plate adhesion.
 - Peel the backing off the metal plate to reveal the adhesive and stick in place.
 - Place the sensor on the plate as close as possible to the floor, allowing the magnets to secure it in place.

Note: The sensor features a through-hole that can be used to screw it onto a surface if a more permanent installation is desired or necessary.
9. Plug the RS-094 power transformer into a wall outlet. The green “Power” indicator light on the receiver will turn on. Open the water supply feed line.
10. **Function Test the system as follows:**
 - Place the sensor on a wet paper towel. The audible alarm will sound and the valve will rotate to the closed position. The power-off relay will also respond to kill power to the power-vent unit.
 - 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 confirm that there is no water flow. Confirm deactivation of the power-vent water heater.
 - Remove the sensor from the paper towel, dry the contact points, and place it back in the desired location on the metal plate.
 - 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 re-open). The green “Power” indicator light will flash once to indicate the reset process has begun. Confirm reactivation of the power-vent unit. Open a hot water faucet and inspect for water flow.

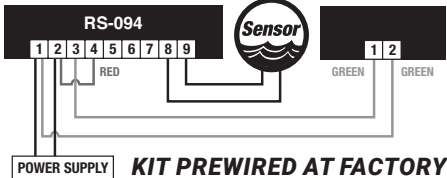
RS-094-MK4 WATER HEATER KIT

1. Receiver box
2. Valve Closed LED
3. Power LED
4. Wiring terminal block
5. Reset button
6. Valve actuator
7. Water sensor
8. Metal plate
9. Shut-off valve
10. Power transformer
11. Electrical plug interrupter

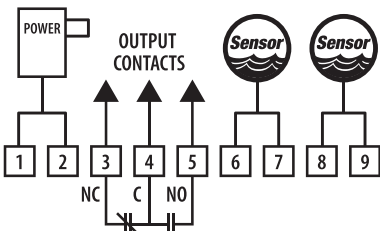


See RS-094 technical data submittal sheet for valve dimensions.

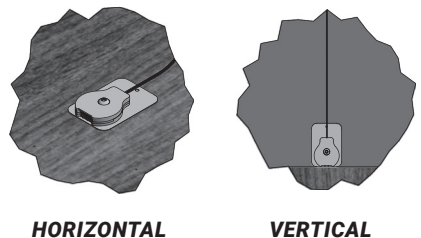
FIGURE 1



**FIGURE 2 –
WIRING DIAGRAM**

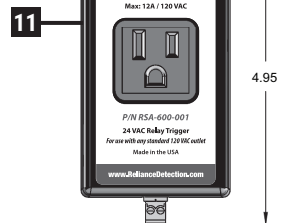


**FIGURE 3 –
SENSOR INSTALLATION OPTIONS**



HORIZONTAL

VERTICAL



OUTPUT SIGNAL CONNECTIONS

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. See Figure 2 for wiring diagram.

Normally Closed Circuit – Terminal Pins 3 & 4

Normally Open Circuit – Terminal Pins 4 & 5

OPERATION & SYSTEM RESET

In the event the system activates, locate the source of the leak, remove the sensor from the water and dry the metal contacts on the bottom. Correct the problem causing the leak and replace the sensor in the desired leak detection location once again as required. Press and release the “Reset” button on the receiver to open the valve and begin the flow of water again. The green “Power” indicator light on the receiver will flash once to confirm the reset. Confirm reactivation of the power-vent unit.

MAINTENANCE

Test the system annually per the function test (install step 10) to ensure correct operation and maintain product warranty status. At a minimum, exercise (press and release) the “Reset” button on the receiver.

EMERGENCY MANUAL VALVE OPERATION

The unit is equipped with an emergency feature for the manual rotation of the valve. Disengage the actuator from the valve and manually changing the valve to open or closed as follows:

1. Turn off the main power to the transformer.
2. 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.
3. 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 indicates open valve; slot across water line indicates closed).
4. Before remounting the actuator, return the valve to the original position prior to the manual rotation.
5. Remount the actuator and restore the main power to the transformer.
6. Test for correct operation per the function test listed in install step 10.



DANGER – Electrocutation Hazard

For use in dry locations only. Always unplug the relay module before servicing or installation. For continued protection against electric shock, plug into grounded outlets only and do not remove the ground pin.

DANGER – Risque d'électrocution

À utiliser dans des endroits secs uniquement. Toujours débrancher le module de relais avant l'entretien ou l'installation. Pour une protection continue contre l'électrocution, uniquement brancher à des prises mises à la terre et ne pas retirer la broche de terre.

NEED INSTALLATION OR SETUP ASSISTANCE?

Call toll-free: 888-771-4929 or visit www.RelianceDetection.com/support/RS-094



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