



RS-094-MK1

- BY -

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Water Heater / Tank Leak Detection & Automatic Shut-Off System *with Rope-Style Water Sensor*

Congratulations on your purchase of a FloodMaster RS-094-MK1 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. It includes a rope-style water sensor, making it ideal for monitoring low-profile tanks.

To ensure proper installation and to maximize the performance of your RS-094-MK1 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-MK1 will shut off the water going to the water heater. 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-MK1 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.*

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RS-094-MK1 System Components (included in kit):

- | | |
|--|----------------------------------|
| 1 – Receiver box / actuator | 1 – 10' rope sensor |
| 1 – 3/4" full port lead-free shut-off valve
(NSF/ANSI 61 and 372) | 1 – 6' sensor lead wire |
| 1 – Power supply with 12' lead wire | 2 – Sensing rope hold-down clips |

NOTE: The RS-094-MK1 can be installed on existing or new water heater installations. RDT recommends that installations be completed by a licensed plumber to ensure that all local code requirements are followed.

INSTALLATION INSTRUCTIONS

1. Turn off the water supply feed line to the water heater.
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 and the rope sensor. Using an appropriate screwdriver, make any additional electrical connections as may be desired for output contacts or additional sensors per wiring Figure 1. (*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.*) 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. Place the rope sensor where water is most likely to first accumulate (such as the drain pan or the floor next to the tank).
6. Plug the power supply into a 120V AC wall outlet. The green "Power" indicator light on the receiver will turn on.
7. **Function Test the system as follows:**
 - Apply a saturated paper towel to a 4" section at the far end of the rope sensor. The 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 confirm that there is no water flow.
 - Remove the paper towel from the rope sensor. 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 receiver shortly after the initial test would be an indication that the rope sensor 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 re-open). 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.

OUTPUT SIGNAL CONNECTIONS

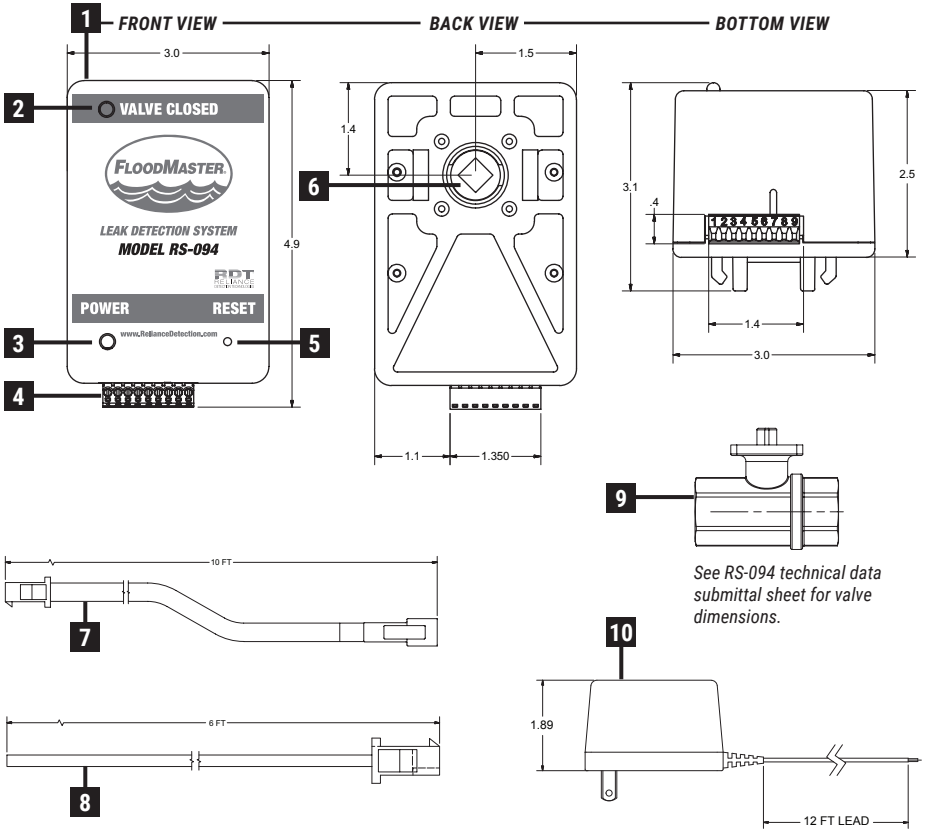
The unit also provides output signal capabilities (SPDT Relay Output Contact) for connection to a home security panel or for use with an appropriate relay to control a secondary device, such as a pump. See Figure 1 for wiring diagram.

Normally Closed Circuit – Terminal Pins 3 & 4

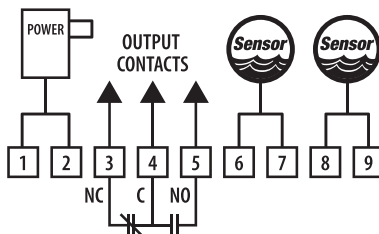
Normally Open Circuit – Terminal Pins 4 & 5

RS-094-MK1 WATER HEATER KIT

1. Receiver box
2. Valve Closed LED
3. Power LED
4. Wiring terminal block
5. Reset button
6. Valve actuator
7. Rope sensor
8. Sensor lead wire
9. Shut-off valve
10. Power transformer



**FIGURE 1 –
WIRING DIAGRAM**



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.

MAINTENANCE

Test the system annually per the function test (install step 7) to ensure correct operation and to maintain product warranty status. At a minimum, users should exercise (press and release) the "Reset" button on the receiver annually.

EMERGENCY MANUAL VALVE OPERATION

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:

1. Unplug the unit from the 120V AC wall outlet.
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 would indicate open valve; slot across water line would indicate closed valve).
4. Before remounting the actuator, return the valve to the original position prior to the manual rotation.
5. Remount the actuator and plug into 120V AC wall outlet.
6. Test for correct operation per the function test listed in install step 7.



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.

NEED INSTALLATION OR SETUP ASSISTANCE?

Call toll-free: 888-771-4929

www.RelianceDetection.com/support/RS-094

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