FLOODMASTER®

RS-080-MK6

– BY –

RDT™ RELIANCE DETECTION TECHNOLOGIES

Ball valve shown. Systems with 2-1/2" to 4" valves feature butterfly valve design.

Plenum-Rated Plumbing Leak Detection & Automatic Water Main Shut-Off System

with Step-Down Transformer & Plenum-Rated Wires

Congratulations on your purchase of a FloodMaster RS-080-MK6 plenum-rated plumbing leak detection system from Reliance Detection Technologies. This product is designed to automatically shut off the water main if a leak is detected.

To ensure proper installation and to maximize the performance of your RS-080-MK6 water leak detection system, please read this manual thoroughly before installing or operating the system.

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.

NOTE: This installation and operating manual contains important information about the operation of the RS-080-MK6 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-080-MK6 System Components (included in kit):

1 – Receiver box

1 – Full port lead-free shut-off valve (NSF/ANSI 61 and 372) and actuator assembly

1 – Water sensor with 8' lead wire

1 – Metal plate for sensor placement

1 – Step-down transformer (120, 208, 240V AC to 24V AC) and mounting plate

NOTE: 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 to the building or plumbing subsection.
2. Cut the water line after the water shut-off valve.
3. Install the valve using best plumbing practices, in adherence to all local plumbing codes.

   Note: Butterfly valves require appropriate mounting flange and hardware (not included). Recommended flange: 316/316L SS forged, threaded NPT-F, 150 lb. ANSI raised-face flange (raised surface on the back).

Valve Size	NPT Dimension	Flange OD	316 SS, 5/8-11 Bolts (Qty.)	316 SS Flat Washers (Qty.)	316 SS Nut 5/8-11 (Qty.)	316 SS Split Lock Washer (Qty.)
2-1/2"	2-1/2"	7"	4	8	4	4
3"	3"	7-1/2"	4	8	4	4
4"	4"	9"	8	16	8	8

4. Open water supply and inspect for leaks.
5. The receiver connector comes prewired with basic connections to the transformer, sensor and electric valve actuator. Using an appropriate screwdriver, make any additional desired electrical connections for output contacts or additional sensors per Figure 1. *(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.
6. Attach the electrical connector on the valve to the mating connector on the receiver box.
7. Place the sensor(s) where leaking water is most likely to first accumulate (such as under a sink, ice maker or beverage dispenser, commercial water heater, valve in a plenum space, etc.). The sensor is magnetic and can be installed horizontally or vertically in conjunction with the metal plate – see Figure 2. We recommend laying a bead of silicone on the floor encircling the protected area.
   - 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.

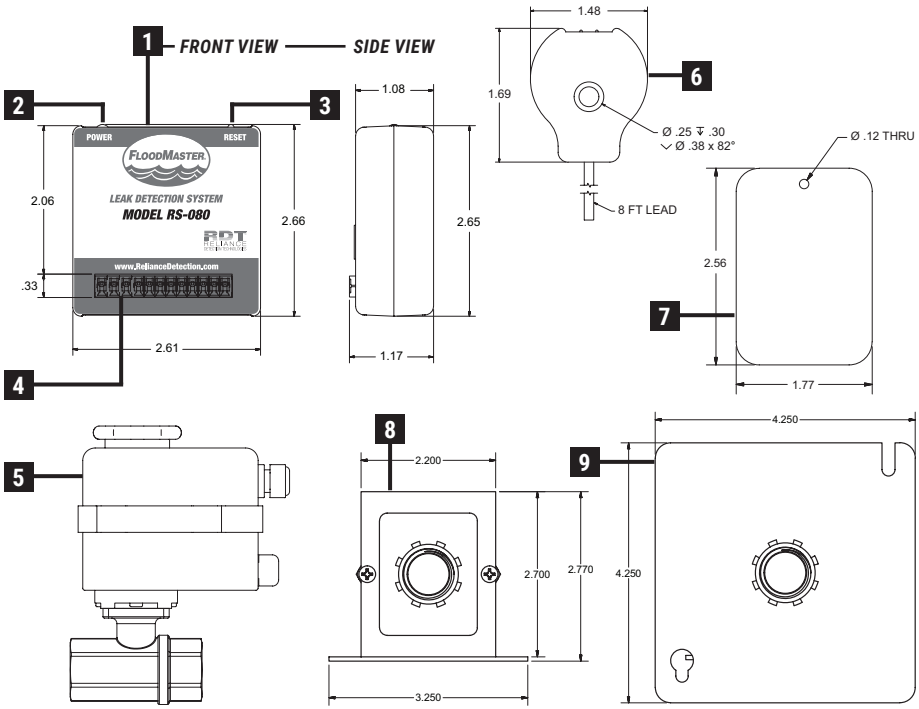
   Note: The sensor features a through-hole that can be used to screw it onto a surface if a more permanent installation is desired or necessary.
8. Mount the receiver box to the wall at least 6" off the ground.
9. Turn off the main power. Wire the appropriate inputs to the main power source. Wire the blue and yellow wires (24V AC output) to the plenum wire that is prewired to the power input of the contact plug. Turn on the main power. The green "Power" indicator light on the receiver will turn on.
10. **Function Test the system as follows**, repeating the steps for each sensor on the system:
    - Place the sensor on a wet paper towel. The audible alarm will sound and the valve will rotate to the closed position.
    - Remove the sensor from the paper towel, dry the contact points, and place it back in the desired location on the metal plate.
    - Open the water faucet and inspect for water flow. There should be no water flow.
    - Press and release the "Reset" button on the receiver to open the valve and restart the flow of water.
    - Inspect faucet for water flow.

OPERATION & SYSTEM RESET

If the system activates, locate the source of the leak, remove the sensor from the water and dry the metal contacts. Correct the problem causing the leak and replace the sensor in the desired leak detection location. Press and release the "Reset" button on the alarm box to open the valve and restart the flow of water.

RS-080-MK6
WATER MAIN KIT

1. Receiver box
2. Power LED
3. Reset button
4. Wiring terminal block mating slot
5. Shut-off valve/actuator
6. Water sensor
7. Metal plate
8. Step-down transformer
9. Transformer mounting plate



Ball valve shown; see technical data submittal sheets for valve and actuator dimensions.

FIGURE 1 –
WIRING DIAGRAM

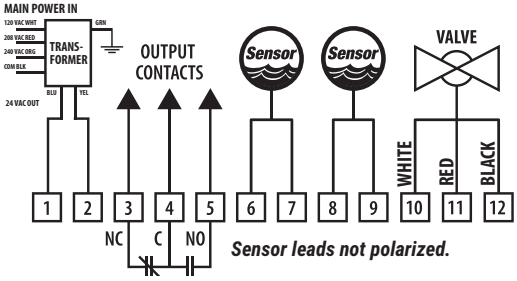
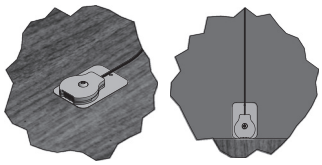


FIGURE 2 –
SENSOR INSTALLATION OPTIONS



HORIZONTAL ***VERTICAL***

MAINTENANCE

Exercise (press and release) the "Reset" button on the receiver box annually to ensure correct operation and to maintain product warranty status.

TRANSFORMER WIRING INSTRUCTIONS

The supplied transformer has multiple input taps to accommodate different line voltages. If the existing line voltage you have at your facility is:

120V AC – The **WHITE** wire from the transformer should be connected to the hot leg of the input voltage and the black wire to the neutral leg.

208V AC – The **RED** wire from the transformer should be connected to the hot leg of the input voltage and the black wire to the neutral leg.

240V AC – The **ORG** wire from the transformer should be connected to the hot leg of the input voltage and the black wire to the neutral leg.

The **GREEN** wire in all cases must be connected to **EARTH GROUND**.

Each wiring combination as stated above yields the same 24V AC output across the **BLUE** and **YELLOW** wires of the secondary winding of the transformer.

TRANSFORMER MOUNTING INSTRUCTIONS

The kit contains a cover plate for a standard junction box. The cover has a hole or knock out in the center of it. The cover plate is designed such that the transformer can be mounted to it and then screwed into the junction box.

1. In order to mount the transformer to the cover, carefully route the primary wires of the transformer through the hole in the cover.
2. Tilt the cover so that the head of the retaining screw on the transformer is over the cover.
3. Back the screw out until the cover slips under the threaded end of the retaining screw.
4. Tighten the screw until the transformer is secured on the cover. The threaded end of the screw is designed to press against the cover to hold the transformer in place.

OPTIONAL FEATURES AND CONNECTIONS

Additional Water Sensors – Wire additional sensors to terminal strip pins 6 & 7 or 8 & 9.

Security Panel Connection – This dry contact relay signal can be wired per your application requirements:
Normally Closed Circuit – Terminal Pins 3 & 4 Normally Open Circuit – Terminal Pins 4 & 5

EXTEND CABLE LENGTH BETWEEN VALVE & ALARM BOX

Splice in up to 100' of additional length per local electrical codes using: 3-conductor; 18 AWG; PVC-jacketed; 75 C; black, red, and white leads; plenum-rated; approximate OD 0.187" wire.

EMERGENCY MANUAL VALVE OPERATION

Switch the actuator to manual mode (MAN) and use the wheel on the top of the actuator to adjust the valve to the desired position. Return the valve to the original position prior to switching the actuator back to "Auto" mode when the system returns to normal operation.

NEED INSTALLATION OR SETUP ASSISTANCE?

Call toll-free: 888-771-4929 or visit www.RelianceDetection.com/support/RS-080

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