



# TECHNICAL SUBMITTAL DATA SHEET

## Leak Detection & Automatic Water Main Shut-Off System

Job Name: \_\_\_\_\_

Job Location: \_\_\_\_\_

Engineer: \_\_\_\_\_

Engineer Approval: \_\_\_\_\_

Contractor: \_\_\_\_\_

Contractor Approval: \_\_\_\_\_

Contractor P.O.: \_\_\_\_\_

Representative: \_\_\_\_\_

### MODEL RS-080 with 2-1/2" to 4" Butterfly Valve

#### TYPICAL INSTALLATIONS INCLUDE:

- Common-risk housing – condos and apartments
- Commercial break rooms
- New and retrofit construction
- Mechanical rooms

#### HIGHLY RECOMMENDED FOR:

- Multi-residential complexes
- Commercial office buildings
- Any facility with a history of insurance claims for water damage

#### FEATURES:

- Butterfly valves available from 2-1/2" to 4" dia.; systems with ball valves also available from 3/4" to 2" dia.
- Reusable and testable
- Easy reset button
- Plugs into a standard 120V AC outlet
- Audible alarm (83 dB)
- Supports multiple water sensors for a wider area of leak detection
- N/O and N/C dry contacts
- Factory pre-wired

#### MODIFIED KIT CONFIGURATIONS:

##### RS-080-MK6 Plenum-Rated Kit –

Features plenum-rated wires and step-down transformer (120, 208, 240V AC to 24V AC) with mounting plate in lieu of standard wall wart. Ideal for any application that requires a valve installation on a supply line up in the plenum, with power and leak detection sensing in the work space below.

Power Supply



Receiver Box



NO/C/NC Dry Contacts

Water Sensor



Metal Plate



Actuator & Shut-Off Valve

#### APPLICATION CONSIDERATIONS:

The RS-080 is designed for localized leak detection (one room, one floor, etc.). When a leak is detected, the unit will sound an alarm and automatically shut off the main water supply line, preventing extensive water damage.

#### INSTALLATION OVERVIEW:

The full-port shut-off valve installs on the main water supply line. The receiver box plugs into a standard 120V AC wall outlet. A magnetic sensor is placed in an area where water from a leak is likely to accumulate, mounted either horizontally or vertically using the included metal plate. Up to 5 additional sensors can be added for a wider area of leak detection. Components come pre-wired.

Optional Cable Adder between the receiver and valve assembly allows the receiver to be located up to 100' from the valve (available in standard 10', 25', 50' and 100' lengths). Ideal for situations where the valve is located in hard to reach locations such as in risers, ceilings, crawl spaces, etc.

The system can be performance tested anytime; it is resettable via reset button on the receiver box. Optional dry contact connections (NO/C/NC) are available for fault notification to existing security panel or BMS.

Emergency manual operation of the valve is accomplished by turning the knob on the top of the actuator. In the event of a power failure, the valve will remain in position (either open or closed).



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# RS-080 with 2-1/2" to 4" Butterfly Valve TECHNICAL SUBMITTAL DATA SHEET

## ORDERING INFORMATION:

Valve Size	P/N	UPC
2-1/2"	RS-080-2-1/2	857640005786
3"	RS-080-3	857640005793
4"	RS-080-4	857640005809

## OPERATING SPECIFICATIONS:

### Butterfly Valve

Pressure Rating ..... 250 PSI  
 Max. Temperature ..... 250°F

### Electric Actuator

Voltage ..... 24V AC  
 Absorbed Current ..... 1.0 A  
 Absorbed Power ..... 24V A  
 Frequency ..... 50/60 Hz  
 Working Temp. .... -4° to 131°F

### Receiver Box

Audible Alarm ..... 83 dB

## MATERIALS:

### Butterfly Valve


Body ..... Ductile Iron  
 Seat ..... EPDM (-30° to 250°F)  
 Lug Style  
 Disc ..... Nylon-Coated  
 Ductile Iron  
 Shafts ..... 416 Stainless Steel  
 Locating Pin ..... Carbon Steel  
 Bushing ..... PTFE  
 O-Ring ..... EPDM  
 Mounting ..... Direct Mount\* (see note under Dimensions)

## CABLE LENGTHS:

Power Cord ..... 12'  
 Sensor Cable ..... 8' (custom lengths avail.)  
 Valve Cable ..... 8' (adder lengths avail.)

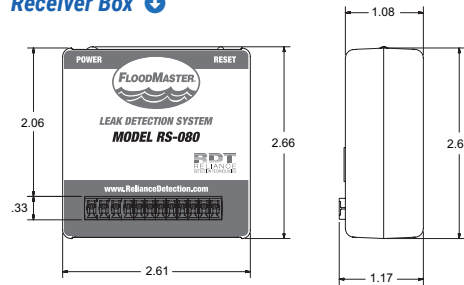
## APPROVALS:

NSF/ANSI 61 and 372 approved valve.  
 MA Board of Registration of Plumbers  
 Approval – Code # P3-0818-66.

 UL classified actuator.

## DIMENSIONS & WEIGHTS:

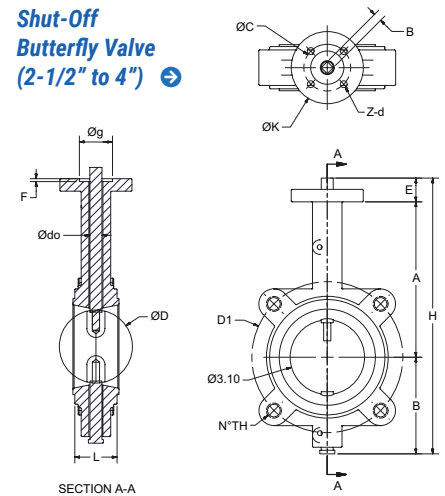
### Receiver Box



Note: Butterfly valves require appropriate mounting flange and hardware (not included). Please see install manual for details.

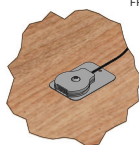
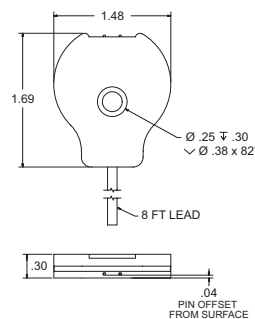
Recommended flange: 316/316L SS forged, threaded NPT-F, 150 lb. ANSI raised-face flange (raised surface on the back).

### Shut-Off Butterfly Valve (2-1/2" to 4")

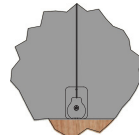


RS-080 Shut-Off Butterfly Valve Specifications: 2-1/2" through 4"																					
Size	C ISO	B1	A	B2	L	D	E	H	R	DO	K	Z-d	g	F	D1	N-TH	LBS	Seat Torque		CV (GPM @ 1 PSI)	
																		100 PSI	200 PSI	50% OP	100% OP
2-1/2"	F05	9mm	6.89	3.50	1.76	2.54	0.47	15.04	10.63	0.50	3.03	4-0.28	1.38	0.12	5.49	4-5/8"-11	9.3	134	167	65	220
3"	F05	9mm	7.13	3.74	1.78	3.10	0.47	15.51	10.63	0.50	3.03	4-0.28	1.38	0.12	6.00	4-5/8"-11	10.4	205	223	70	300
4"	F07	11mm	7.87	4.49	2.05	4.09	0.63	17.00	10.63	0.62	3.54	4-0.35	2.17	0.12	7.50	8-5/8"-11	19.8	339	386	140	605

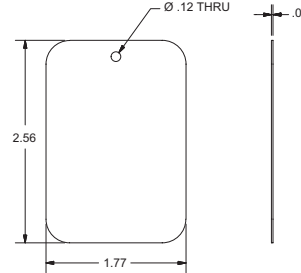
### Water Sensor



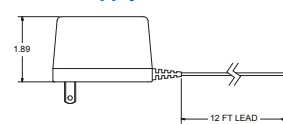
HORIZONTAL  
 INSTALL OPTIONS  
 VERTICAL



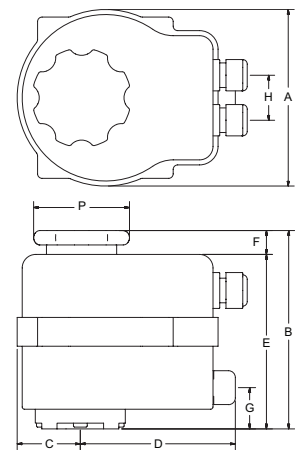
### Metal Plate



### Power Supply (24V AC Wall Wart)



### Actuator



RS-080 Electric Actuator Specifications											
Size	Drilling ISO 5211	A	B	C	D	E	F	G	H	I	P
2-1/2", 3", 4"	F03-F05	6.18	7.40	2.38	5.12	5.75	1.65	1.30	1.42	0.47	2.68

## AVAILABLE ACCESSORIES:

- **Wired Water Sensors** – Up to 5 additional sensors can be wired to a single RS-080 receiver box for a wider area of leak detection.
- **Sensing Rope Kit** – Ideal for use with low tanks, or for room perimeter and sub-floor leak detection applications.
- **Auto Dialer** – Receive automatic alerts whenever the RS-080 identifies a fault condition.
- **Cable Adder** – Allows for positioning of the receiver box up to 100' further from the valve.

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



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