IM6001 Waterflow Detector

2018 Edition

U-Bolt Vane Type Waterflow Detector

MODEL: **IM6001-50/65/80/100/125/150/200**

FLOW SENSITIVITY RANGE: 4 - 10 GPM(15-38LPM)

CONTACT RATING: 8A@250VAC,3A@24VDC,2.5A@30VDC

WORKING PRESSURE: 450PSI

WORKING TEMPERETURE: 0℃ TO 49℃

COMPATIBLE PIPE: STEEL PIPE, SCHEDULE 10~40

MAXIMUM SURGE:18FPS(5.5M/S)

GENERAL INFOMATION

Waterflow detectors are mounted to water filled pipes in sprinkler systems. It is used on steel pipe,schedules 10 through 40, sizes 50mm thru 200mm (2" thru 8"). See Table 1 for detectors sizes.

Waterflow in the pipe deflects a vane, which triggers a switch usually after a specified delay period. All waterflow detectos have a pneumatically controlled mechanical delay mechanism. Delays reset if the flow of water stops before the entire delay has elapsed. All switches are actuate when the water flow rate is 10gallons per minute or greater, but will not actuate if the rate is less than 4gallons per minute. This installation manual covers the following waterflow detectors for sprinkler. It can be mounted in vertical or horizontal position and suitable for indoor and outdoor wet pipe.

Nominal Pipe Size		Model
DN50	2"	IM6001-50
DN65	2.5"	IM6001-65
DN80	3"	IM6001-80
DN100	4"	IM6001-100
DN125	5"	IM6001-125
DN150	6"	IM6001-150
DN200	8"	IM6001-200

Table 1: DETECTOR SIZE

Corrosion Protection

Fusion Bonded Epoxy Coated Interior and Exterior or Enamel Spray Paint, Interior and Exterior.

Installation

NOTE: Do not leave cover off for an extended period of time.

1. These devices may be mounted on horizontal or vertical pipe. On horizontal pipe they shall be installed on the top side of the pipe where they will be accessible. Be sure there is adequate clearance for installation and removal.See Fig.1 for mounting dimensions.
2. The device should not be installed within 15cm of a fitting which change the direction of the waterflow or within 60cm of a valve or drain
3. Drain the system and drill a hole in the

pipe. And be sure the hole is perpendicular to center of the pipe,as show in Fig.2. If the hole is off center, the vane will bind against the inside wall of the pipe. Use a hole saw in a slow speed drill to cut a hole of the proper diameter, as show in Table 2.

4. Remove burrs and sharp edges from the hole. Clean and remove all scale and foreign matter from the inside of the pipe for a distance equal to the pipe diameter on either side of the hole. Clean the outside of the pipe to remove dirt,metal chips, and cutting lubricant.

5. Roll the vane so that it may be inserted into the hole; do not bend or crease it. Seat the gasket against the saddle and mount the detector into the pipe. Insert the vane so that the arrow on the saddle points in the direction of the waterflow. The bushing should fit inside the hole in the pipe.

6. Install the U-bolt and tighten nuts alternately to ensure a uniform seal(see the Table 2 for torque values).

7. The vane must not rub the inside of the pipe or bind in any way. If the vane binds, remove the detector and correct the cause before proceeding.

8. Ensure that the direction of arrow on the saddle point should be consistent with the direction of the waterflow.See Fig.3.

Notes: Remove burrs from edge of hole. Clean out scale and foreign matter from inside wall of pipe

Fig.1 Mounting dimensions

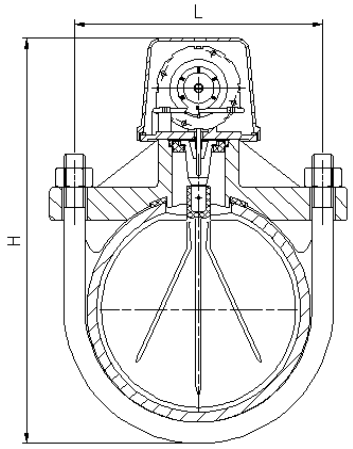


Fig.2 Mounting hole location

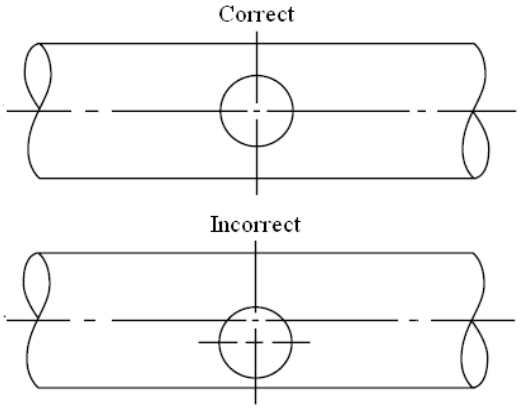
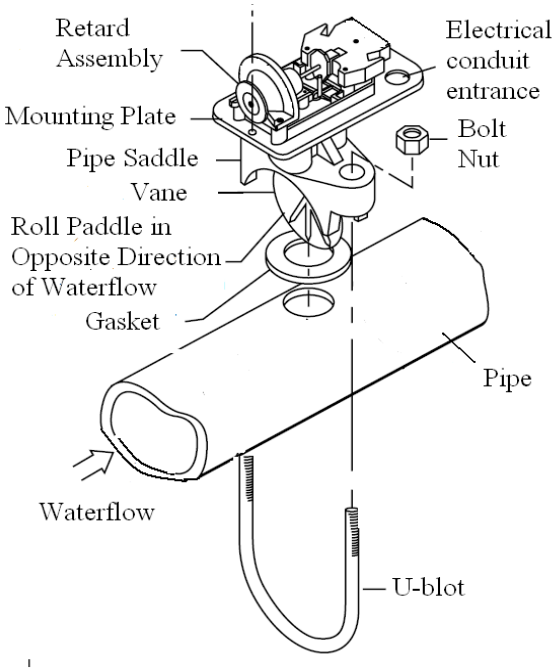


Table 2 Main dimensions

Nominal Pipe Size		Nominal Pipe Size OD.		Pipe Wall thickness				L	H	Hole Size	U-bolt Nuts Torque
				Schedule10		Schedule40					
mm	inch	mm	inch	mm	inch	mm	inch	mm	mm	mm	nm
DN50	2”	60.3	2.375	2.77	0.109	3.91	0.154	84	188	32+2	40-50
DN65	2.5”	73	2.875	3.05	0.12	5.16	0.203	92	200		
DN80	3”	88.9	3.500	3.05	0.12	5.49	0.216	104	220	51+2	70-95
DN100	4”	114.3	4.500	3.05	1.12	6.02	0.237	133	245		
DN125	5”	141.3	5.563	3.40	0.134	6.55	0.258	160	272		
DN150	6”	168.3	6.625	3.40	0.134	7.11	0.280	187	298		
DN200	8”	219.1	8.625	3.76	0.148	8.18	0.322	240	350		

Fig.3 Assembly diagram



Wiring

1.All model have two SPDT switches，one can be used to operate a central station, while the other contact is used to operate a local audible or visual annunciator. Switch contacts COM and NO are closed when water is flowing and open when it is not. Connect the switches, as shown in Fig.4, depending on the application.

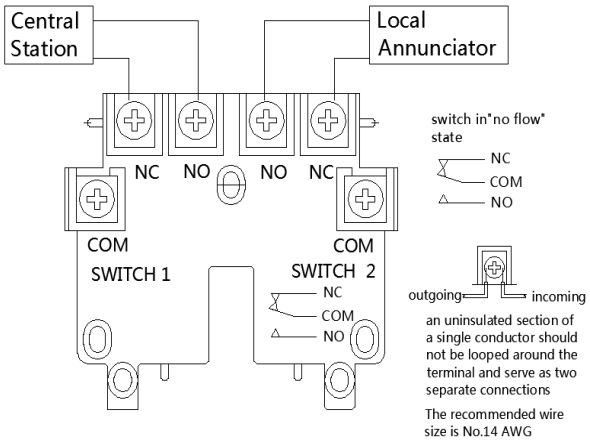
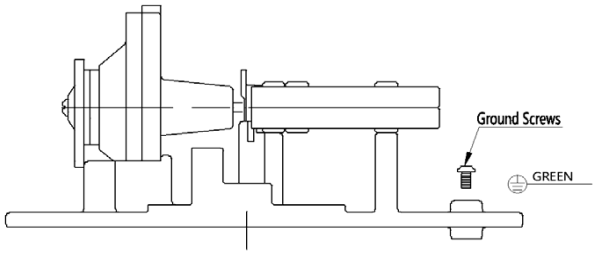


Fig.4 Electric connection

2. A ground screw is provided with all waterflow detectors. When grounding is required, clamp wire with screw in hole located between conduit entrance holes. See Fig.5

Fig.5 Ground screw



3. If a second conduit entry is required, remove the knockout plug: Place screwdriver at inside edge of knockouts, not in the center.

Retard Adjustment

The delay can be adjusted by rotating the retard adjustment knob from 0 to max setting. To adjust the setting, turn the adjustment knob clockwise to increase the delay, counterclockwise to decrease it. The time delay should be set at the minimum required to prevent false alarms.

Maintenance

Inspect detectors monthly. If leak are found, replace the detector.