

Certifications



Specifications (UL/FM)

Service Pressure: 450psi.

Flow Sensitivity Range for Signal: 15-37.8L/min (4-10GPM).

Contact Ratings: 8A at 125/250VAC; 3A at 24VDC; 2.5A at 30VDC.

Operating Temperature Range: 0°C up to 68°C.

Compatible pipe: steel pipe, schedule 10 ~ 40.

Maximum Surge: 5.5m/s (18FPS).

Specifications (CE)

Service Pressure: 16bar.

Flow Sensitivity Range for Signal: 30-57L/min.

Contact Ratings: 8A at 125/250VAC; 3A at 24VDC.

Operating Temperature Range: 0°C up to 68°C.

Compatible pipe: steel pipe, schedule 10 ~ 40.

Maximum Surge: 5.5m/s (18FPS).

UL/ULC Listed, FM Approved, CE Certification.



CAUTION

VANE-TYPE WATER FLOW DETECTORS THAT ARE MONITORING WET PIPE SYSTEMS SHALL NOT BE USED IN DRY PIPE, DELUGE, OR PRE-ACTION SYSTEMS. THE SURGES OF WATER IN SUCH SYSTEMS MAY BREAK THE VANE OR DAMAGE THE MECHANISM. DO NOT USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES.

This box contains:

- 1x installation instructions;
- 1x waterflow detector type WFST;
- 1x vane 1";
- 1x vane 1¼";
- 1x vane 1½";
- 1x vane 2";
- 1x rubber ring;
- 1x security Torx L-Key - TX20;
- 1x cable gland PG16.

General description

Water flow detectors are mounted to water-filled pipes in sprinkler systems. It is used on wet sprinkler systems that use 1" (25mm), 1¼" (32mm), 1½" (38mm) or 2"(50mm) pipe size. See Table 1.

Water flow in the pipe deflects a vane, which triggers a switch after a specified delay period. All water flow detectors have a pneumatically controlled mechanical delay mechanism. Delays reset if the flow of water stops before the entire delay has elapsed. All switches are actuated when the water flow rate is 10 gallons per minute or greater. The installation manual covers the following water flow detectors for sprinkler.

Table 1 Detectors sizes

| Nominal Pipe Size | | Model | Max. Pressure Rating (psig) |
|-------------------|-------|-------|-----------------------------|
| DN25 | 1" | WFST | 450 |
| DN32 | 1.25" | WFST | 450 |
| DN40 | 1.5" | WFST | 450 |
| DN50 | 2" | WFST | 450 |

Installation guidelines

NOTE: Do not remove cover 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 are 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 water flow or within 60cm of a valve or drain.
3. Thread water flow detectors are designed to fit only the appropriate tee fittings (EN 10242/Table 8) as shown in Fig.2.
4. You find four vanes in the packing that correspondent with the correct T-size (indicated 1", 1¼", 1½", 2"). Choose the correct vane corresponding with the pipe diameter, slide the sleeve of the vane over the stem of the flow switch until the end, and tighten it with the included crosshead screw that is mounted into the stem. **THIS WATERFLOW DETECTOR CAN NOT WORK WITHOUT THE CORRECT VANE INSTALLED.**
5. Slide the 8 mm thick rubber ring over the vane and thread (1"BSPT) that will be inserted into the Tee fitting. Apply thread-sealant on the 1" thread (the rubber ring is not supposed to be used as sealing). Carefully bend the vane in the opposite direction of the waterflow and screw the device into the Tee fitting, without hereby compressing the rubber ring more than half-turn; the rubber ring is only indicative to prevent that the vane will collide with the Tee bottom inside. Properly orient the switch in direction of water flow as indicated by the arrow on the cover.
6. The vane must not collide with the inside of the TEE or get stuck in any way. The stem should move freely when operated by hand.

Fig.1 Mounting dimensions

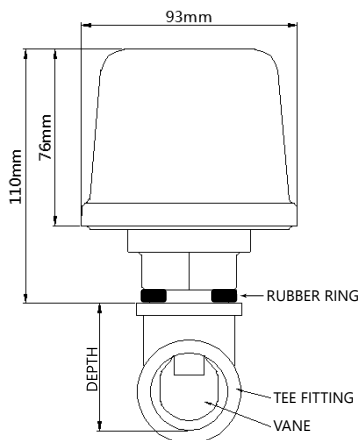
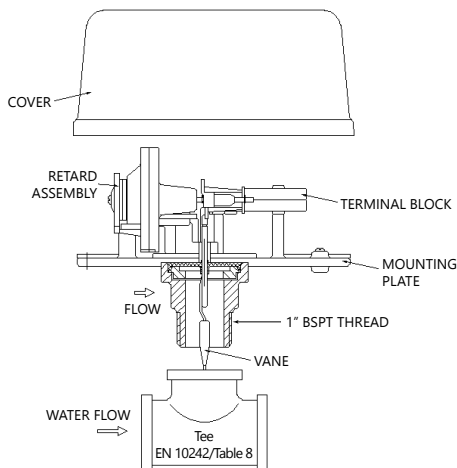


Fig.2 Assembly diagram



7. If the vane is stuck, remove the detector and correct the cause before proceeding.

Notes:

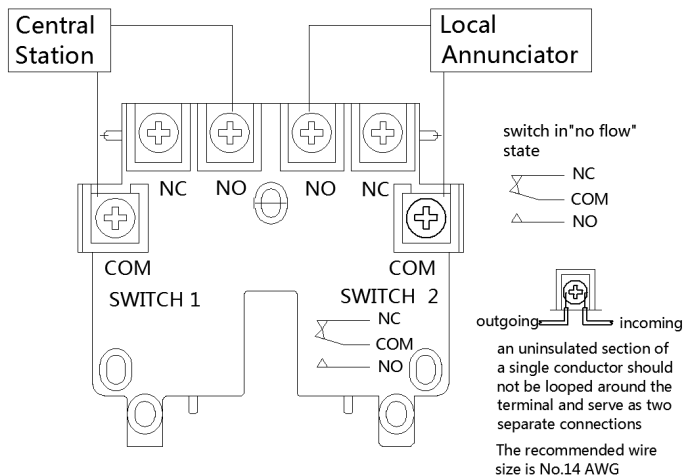
The depth to the inside bottom of the tee should have the following dimensions in Table 3.

| Approximate (minimum) depth requirement | |
|---|-------------|
| Tee Size | Threaded/mm |
| 1" x 1" x 1" | 54 |
| 1¼" x 1¼" x 1" | 62.5 |
| 1½" x 1½" x 1" | 69 |
| 2" x 2" x 1" | 82 |

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.6, depending on the application. The electrical contact resistance shall not exceed 0.2Ω. And the insulation resistance shall not less than 20MΩ.
2. A ground screw is provided with all water flow detectors. See Fig.3. When grounding is required, clamp wire with screw in hole located between conduit entrance holes.
3. Use delivered cable gland PG16 to ensure IP55-class and strain relief of the cables. The total thickness of the cables can be 10-14mm to ensure a correct sealing. Remove the knock out plug from the desired conduit entry. Place screwdriver at inside edge of knockouts, not in the centre.

Fig.3 Typical electrical connections



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. Max retard time does not exceed 30s.

Maintenance

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

Fig.4 Ground screw

