



# National Fire Equipment Ltd.

## T-Tap Waterflow Detectors 1" - 2"



System Sensor T-Tap Waterflow Detectors are designed for primary signaling in residential systems and branch line signaling in larger systems.

### Features

- Sealed retard mechanism (Model WFDT)
- Visual switch activation (Model WFDT)
- Twelve different flexible plastic paddles
- Vertical or horizontal mount
- Durable, tamper-resistant enclosure
- Dual SPDT switches in durable terminal block
- Sizes marked on flexible plastic paddles
- 100 percent synchronization activates both alarm panel and local bell
- Accommodates up to 12 AWG wire



Both the WFDT retard model and the WFDTNR non-retard model fit any tee that has a 1" NPT branch, including: 1", 1¼", 1½" and 2" NPT threaded ferrous and brass tees; 1", 1¼", 1½" and 2" copper sweat tees; Tyco, Spears®, Victaulic® and NIBO brand 1" CPVC tees; and 1½" polybutylene tees.

**Design.** The design of the WFDT and WFDTNR makes them easy to install and simple to maintain. Either can be mounted in the vertical or horizontal position. Two conduit openings permit easy attachment to the local alarm system. The retard mechanism (Model WFDT only) and switch assemblies are field-replaceable.

**Features.** Twelve different flexible plastic paddles fit 1", 1¼", 1½" and 2" tees. Sizes are marked clearly on the paddles for ease of installation. Plastic paddles slip over the actuating lever and are securely fastened with one screw. The handy depth gauge ensures the proper installation depth and clearance of the detector to the tee.

**Construction.** The WFDT and WFDTNR include a durable, tamper-resistant enclosure and rugged switch assembly. The robust covers completely enclose the electrical components to keep out dust and dirt. Improved self-guiding security screws and removal tools make the detectors resistant to tampering and simplify field maintenance. Dual SPDT switches are enclosed in a durable terminal block for added strength.



# T-Tap Waterflow Detector Specifications

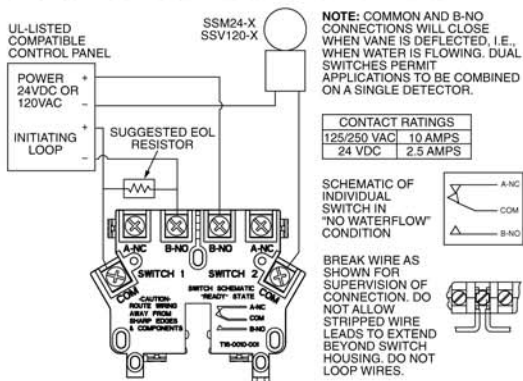
## Architectural/Engineering Specifications

Model shall be a WFDT or WFDTNR as manufactured by System Sensor. T-tap waterflow detectors shall be installed on a tee that has a 1" NPT branch including: 1", 1¼", 1½" or 2" threaded ferrous or brass tee; 1–2" copper sweat tees; Tyco, Spears,® Victaulic,® and NIBCO brand 1" CPVC tees; or 1½" polybutylene tee as designated on the drawings and/or as specified herein. Detectors shall mount on any clear pipe span of the appropriate size, either a vertical or horizontal run at least 6" from any fittings or valves that may change water direction, flow rate, or pipe diameter or no closer than 24" from a valve or drain. Detectors shall have a sensitivity in the range of 4 to 10 gallons per minute and a static pressure rating of 250 psi. The retard t-tap detector shall be a sealed mechanical pneumatic unit with visual indication of actuation. The actuation mechanism shall include a polyethylene vane inserted through the tee fitting and connected by a mechanical linkage to the delay mechanism. The non-retard t-tap detector shall respond with no time delay to waterflow in the specified direction and range. Outputs shall consist of dual SPDT switches (Form C contacts). Two conduit entrances (one of which is a knockout type) for standard fittings of commonly used electrical conduit shall be provided on the detectors. A grounding provision is provided. All detectors shall be listed by Underwriters Laboratories for indoor or outdoor use.

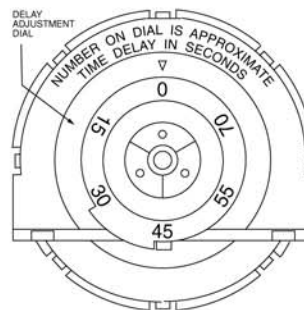
## Physical/Operating Specifications

|   |   |                                    |  |
|---|---|------------------------------------|--|
| <b>Static Pressure Rating</b>                     | 250 PSI   | <b>Operating Temperature Range</b> | 32°F to 120°F (0°C to 49°C)  |
| <b>Maximum Surge</b>                              | 18 FPS  | <b>Enclosure Rating</b>            | UL indoor/outdoor rated  |
| <b>Triggering Threshold Bandwidth (Flow Rate)</b> | 4–10 GPM  | <b>Cover Tamper Switch</b>         | UL models: optional P/N 546-7000<br>ULC/Canadian models: factory installed   |
| <b>Overall Dimensions, Installed</b>              | WFDT: 4.5" H x 3.75" W x 6.7" L<br>(11.4cm H x 9.5cm W x 17cm L)<br>WFDTNR: 3.75" H x 3.25" W x 4.25" L<br>(9.5cm H x 8.2cm W x 10.8cm L) | <b>Service Use</b>                 | Automatic Sprinkler: NFPA 13<br>One or Two Family Dwelling: NFPA 13D<br>Residential Occupancies up to 4 Stories: NFPA 13R<br>National Fire Alarm Code: NFPA 72 |
| <b>Contact Ratings</b>                            | Two sets of SPDT (Form C)<br>10.0 A @ 125/250 VAC<br>2.5 A @ 24 VDC   | <b>Shipping Weight</b>             | WFDT: 2.6 lbs. (1.2 kg.)<br>WFDTNR: 1.5 lbs. (0.7 kg.)   |
| <b>Compatible Tee Fittings</b>                    | Threaded ferrous and brass tees, copper sweat tees, CPVC tees, and polybutylene tees  | <b>Warranty</b>                    | 3 years  |
| <b>Conduit Entrances</b>                          | Two openings for ½" conduit.  | <b>U.S. Patent Numbers</b>         | 5,213,205  |

## Electrical Connections for WFDT



## Delay Adjustment Dial



NOTE: RETARD TIME MAY EXCEED 90 SECONDS. ADJUST AND VERIFY THAT TIME DOES NOT EXCEED 90 SECONDS. NUMBER ON DIAL IS APPROXIMATE TIME DELAY IN SECONDS WITH AN ACCURACY OF +/- 50%.

## Ordering Information

| UL Model    | ULC Model  | Description  |
|-------------|--|--|
| WFDT        | WFDTA  | Waterflow Detector, Fits 1", 1¼", 1½", 2" ferrous and brass threaded tees; 1", 1¼", 1½", 2" copper sweat tees; 1" CPVC tees; and 1½" polybutylene tees |
| WFDTNR      | —  | Waterflow Detector, non-retard, fits same tees as Model WFDT   |
| Accessories | Description  |  |
| A77-01-02   | Replacement terminal block for WFDT  |  |
| A77-01-08   | Replacement terminal block for WFDTNR  |  |
| A3008-00    | Replacement retard mechanism   |  |
| PRK9        | Replacement paddle kit – 12 paddles for WFDT and WFDTNR (see WFDT for sizes) |  |
| 546-7000    | Cover tamper switch kit for WFDT   |  |
| 507-66-02   | Replacement tamper screws for covers of WFDT, WFDTNR                         |  |
| WFDW        | Replacement tamper-proof wrench for cover of WFDT, WFDTNR                    |  |
| WFDN4       | NEMA-4 gasket kit  |  |
| C58-164-01  | Replacement metal cover  |  |
| C58-195-01  | Replacement plastic cover (WFDTNR)   |  |

