T-Tap
Waterflow Detectors



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; Central, Spears®, and Victaulic® 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 insures 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 long lasting covers completely enclose the electrical components to keep out dust and dirt. Improved self-guiding security screws and removal tools make detectors resistant to tampering and simplify field maintenance. Dual SPDT switches are enclosed in a durable terminal block for added strength.

Agency Listings

UL LISTED S739

ULC CS169

7770-1209:149

MEA approved 167-93-E

T-Tap Waterflow Detector Specifications

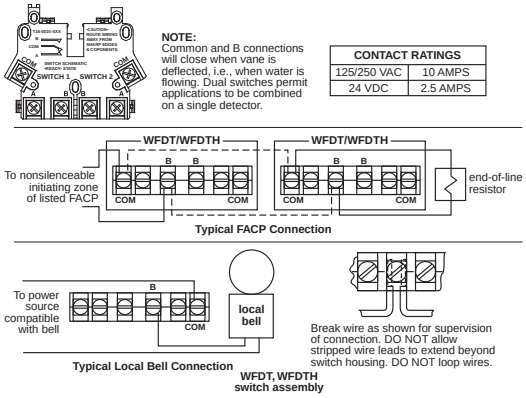
Architectural/Engineering Specifications

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; Central, Spears,® and Victaulic® 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 which 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.

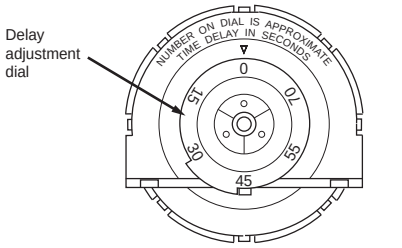
Physical/Operating Specifications

Static Pressure Rating	250 PSI	**Operating Temperature Range**	32°F to 120°F (0°C to 49°C)
Maximum Surge	18 FPS	**Enclosure Rating**	UL indoor/outdoor rated
Triggering Threshold Bandwidth (Flow Rate)	4–10 GPM	**Cover Tamper Switch**	UL models: optional P/N 546-7000 ULC/Canadian models: factory installed
Overall Dimensions, Installed	WFDT: 4.5˝ H × 3.75˝ W × 6.7˝ L (11.4cm H × 9.5cm W × 17cm L) WFDTNR: 3.75˝ H × 3.25˝ W × 4.25˝ L (9.5cm H × 8.2cm × W × 10.8cm L)	**Service Use**	Automatic Sprinkler: NFPA 13 One or Two Family Dwelling: NFPA 13D Residential Occupancies up to 4 Stories: NFPA 13R National Fire Alarm Code: NFPA 72
Contact Ratings	Two sets of SPDT (Form C) 10.0 A @ 125/250 VAC 2.5 A @ 24 VDC	**Shipping Weight**	WFDT: 2.6 lbs. (1.2 kg.) WFDTNR: 1.5 lbs. (0.7 kg.)
Compatible Tee Fittings	Threaded ferrous and brass tees, copper sweat tees, CPVC tees, and polybutylene tees	**Warranty**	3 years
Conduit Entrances	Two openings for ½˝ conduit.	**U.S. Patent Numbers**	3,845,259; 4,782,333; 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.

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	WFDTNRA	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
S07-66-02	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)

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A05-0195-011 • 4/07 • #1676