



National Fire Equipment Ltd.

WFDNA Series Waterflow Detector

The System Sensor WFDNA series is compatible with schedule 7 through 40 steel pipe, for sizes 2 in. through 4 in. and compatible with schedule 10 through 40 steel pipe, sizes 6 in. through 8 in., and can be mounted in a vertical or horizontal position.



Features

- Directional cover allows installers and inspectors to easily see the direction of flow
- ULC-listed models are NEMA 4 rated
- Sealed retard mechanism immune to dust and other contaminants
- Non-metallic, corrosion resistant cover reduces shock hazards
- Audible and visual switch activation
- Field-replaceable timer/switch assembly
- Accommodates up to 12 AWG wire
- Switch Synchronization activates both alarm panel and local bell or horn strobe
- Tamper-resistant cover screws
- Ergonomic terminal block layout with wire-ready terminals
- Snap-in optional cover tamper switch
- Improved timer repeatability and accuracy

The new WFDNA Series waterflow detectors from System Sensor consists of a rugged, NEMA 4-rated enclosure that is more damage resistant than previous metal designs. The waterflow detector is designed for both indoor and outdoor use, with the widest available temperature range, from 0°C to 66°C (32°F to 150°F). They are also approved for installation on the widest range of pipe schedules, sizes 2 in. through 4 in. are approved for installation on pipe schedules 7 through 40.

ULC-listed models are equipped with tamper-resistant cover screws to prevent unauthorized entry. Inside, two sets of SPDT (Form C) synchronized switches are enclosed in a durable terminal block with new layout designed to make wiring easy with wire ready terminals, COM terminals are on a different elevation, large barrier between switches and easy to read raised textured lettering all make wiring easy. An optional cover tamper switch is available, securely snaps into place, no tools required.

The WFDNA series incorporates a mechanical time delay feature, which minimizes the risk of false alarm due to pressure surges or air trapped in the fire sprinkler system. The larger and easy to turn timer dial makes setting the waterflow detector easy with high contrast pad printed markings. The dial offers three tabs to help with turning, with one larger tab located on the dial position for approximately 60 seconds, a notch is also indicated on the dial to locate approximately 30 seconds making setting the detector in dimmly lit locations easy.

The WFDNA series is designed for accuracy and repeatability. The detector also offers improved performance during vibration in riser applications where detectors are exposed to a large in rush of water.

Agency Listings



National Fire
Equipment Ltd.

TORONTO: (905) 761-6355
Toll Free: (800) 267-8508

OTTAWA: (613) 723-6071

VANCOUVER: (604) 420-1131
Toll Free: (800)-667-2138

BURNABY: (604)-299-4498

EDMONTON: (780) 455-3870
Toll Free: (888)-891-1008

CALGARY: (403) 236-5661

MONCTON: (506) 859-7277
Toll Free: (877) 816-3473

MISSISSAUGA: (905) 565-1385

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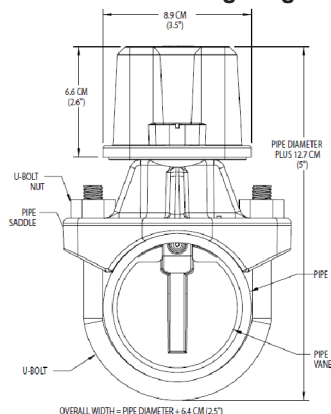
Waterflow Detector Specifications

Engineering Specifications

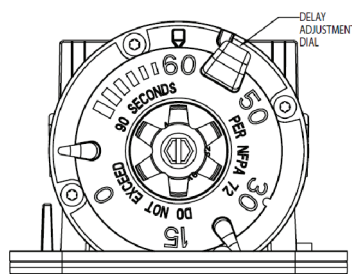
Vane-type waterflow detectors shall be installed on system piping as designated on the drawing and/or as specified herein. Detectors shall mount on any clear pipe span of the appropriate nominal size, either a vertical upflow or horizontal run, at least 6 in. from any fittings that may change water direction, flow rate, or pipe diameter or no closer than 24 in. 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 450 psi for 2 in. – 8 in. pipes. The detector shall respond to waterflow in the specified direction after a preset time delay that is field adjustable. The delay mechanism shall be a sealed mechanical pneumatic unit with visual and audible indication of actuation. The actuation mechanism shall include a ethylene vinyl acetate vane inserted through a hole in the pipe and connected by a mechanical linkage to the delay mechanism. Outputs shall consist of dual SPDT switches (Form C contacts). Two conduit entrances for standard fittings of commonly used electrical conduit shall be provided on the detectors. A grounding provision is provided. Unless noted, enclosures shall be NEMA 4 listed by Underwriters Laboratories of Canada. All detectors shall be listed by Underwriters Laboratories Inc. for indoor or outdoor use.

Standard Specifications			
Static Pressure Rating	450 PSI	Operating Temperature Range	32°F to 150°F (0°C to 60°C)
Maximum Surge	18 Feet Per Second (FPS)	Enclosure Rating*	NEMA 4 – suitable for indoor/outdoor use
Triggering Threshold Bandwidth (Flow Rate)	4 – 10 GPM	Cover Tamper Switch	Optional, part no. CTS
Conduit Entrances	Two openings for ½ in. conduit.	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, ½ HP @ 125/250 VAC 2.5 A @ 6/12/24 VDC	Warranty	3 Years
Compatible Pipe	Steel water pipe, schedule 7 through 40*		

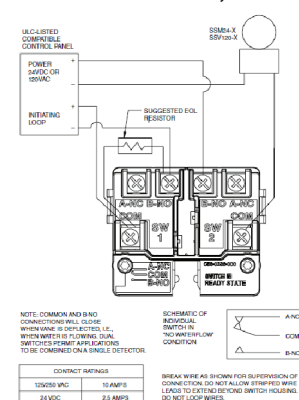
WFDNA Field Wiring Diagram



Delay Adjustment Dial



Overall Dimensions, Installed



Ordering Information

Model	Description		
ULC Model	Pipe Size	Hole Size	Shipping Weights
WFD20NA	2 in.	1¼ in.	2.6 lbs.
WFD25NA	2½ in.	1¼ in.	2.6 lbs.
WFD30NA	3 in.	2 in.	3.1 lbs.
WFD40NA	4 in.	2 in.	4.0 lbs.
WFD50NA	5 in.	2 in.	4.9 lbs.
WFD60NA	6 in.	2 in.	5.6 lbs.
WFD80NA	8 in.	2 in.	7.3 lbs.
Accessories			
FS-RT	Delay mechanism and switch assembly		
CTS	Tamper-proof switch kit		
WFDW	Tamper-proof wrench for cover		

* 2 in. - 4 in. rated for use with Schedule 7 through 40 pipe, 6 in. - 8 in. rated for use with Schedule 10 through 40 pipe



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