WFDEXP
Explosion Proof
Waterflow Detector

The System Sensor WFDEXP series is designed to handle extreme conditions.



Features

- New WFD30-2EXP models install in 2″ hole sizes
- Designed and approved to operate in hazardous locations
- NEMA 4 enclosure rating
- Sensitivity-setting spring mechanism located outside of explosion environment
- Sealed retard mechanism
- Visual switch activation
- Synchronized activation circuit
- Field-replaceable terminal block and retard mechanism
- Only one conduit entrance required for hook-up

Agency Listings

UL LISTED E200116

ULC C169

7770-1653:145

FM APPROVED 3006195

MEA approved 44-00-E

These units are ideal for installation in hazardous locations classified as follows:

Class I, Groups B, C, D, Division 1 & 2
Class II, Groups E, F, G, Division 1 & 2
Class III, Division 1 & 2

Robust Construction. The WFDEXP series consists of a rugged, NEMA 4-rated cast aluminum housing. Designed for both indoor and outdoor use, the WFDEXP series operates across a wide temperature range, from 32°F to 160°F. Inside, two sets of SPDT (Form C) synchronized switches are enclosed in a rugged terminal block to assure reliable performance.

Reliable Performance. The WFDEXP series offers unique features that assure greater operational reliability. By housing the spring mechanism separately from the explosion environment, the sensitivity of the adjustment spring and the detector is protected at all times. Adding to WFDEXP's reliability is its sealed retard mechanism, which prevents contamination by dust and dirt when the cover is removed.

Simplified Operation. Like all System Sensor waterflow detectors, the WFDEXP series is designed for easy installation. With its visible switch activation, the WFDEXP's retard timing can be verified, even during noisy conditions.

WFDEXP Series Specifications

Architectural/Engineering Specifications

Vane-type, explosion-proof waterflow detectors shall be installed on system piping on the drawing and/or as specified herein. Detectors shall be mounted in hazardous locations classified as: Class I, Div. 1 and 2, Groups B, C, D; or Class II, Div. 1 and 2, Groups E, F, G; or Class III, Div. 1 and 2. Detectors shall mount on any clear pipe span of the appropriate nominal size, either a vertical upflow or horizontal run, at least 6″ from any fittings 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 450 psi for 2″–8″ 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 indication of actuation. The actuation mechanism shall include a polyethylene 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 (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. Enclosures shall be NEMA 4 listed by Underwriters Laboratories Inc. All detectors shall be listed by Underwriters Laboratories Inc. for indoor or outdoor use.

Physical/Operating Specifications

Hazardous Locations Classifications	Class I, Div 1 and 2, Groups B, C, D Class II, Div 1 and 2, Groups E, F, G Class III, Div 1 and 2
Static Pressure Rating	450 psi (max.)
Triggered Threshold Bandwidth (Flow Rate)	4 to 10 GPM
Maximum Surge	18 Feet Per Second (FPS)
Contact Ratings	Two sets of SPDT (Form C) 10.0 A @ 125/250 VAC 2.5 A @ 24 VDC
Compatible Pipe	Steel water pipe, schedule 10 through 40
Conduit Entrances	Two openings for ½″ conduit
Operating Temperature Range	32°F to 120°F (0°C to 49°C)
Enclosure Rating	NEMA 4 – suitable for indoor/outdoor use
Service Use	Automatic Sprinkler: NFPA-13 National Fire Alarm Code: NFPA-72
Overall Dimensions	6″H × 9″L × 6.5″W
Weight	(see Ordering Information)
Warranty	3 years
U.S. Patent Numbers	5,213,205

Ordering Information

Model Number	Pipe Size	Hole Size	Weight
WFD20EXP	2″	1¼″	10.6 lbs.
WFD25EXP	2½″	1¼″	10.7 lbs.
WFD30-2EXP	3″	2″	10.9 lbs.
WFD35EXP	3½″	1¼″	11.2 lbs.
WFD40EXP	4″	2″	11.5 lbs.
WFD50EXP	5″	2″	12.1 lbs.
WFD60EXP	6″	2″	12.5 lbs.
WFD80EXP	8″	2″	13.5 lbs.
Accessories			
A3008-0	Replacement retard mechanism for all sizes 2″–8″		
A77-01-02	Replacement terminal block		
WFDRK	Replacement hardware kit (contains tamper screws, wrench and conduit plug)		

SYSTEM SENSOR®

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