

# WFDE Series Waterflow Detector



## Models Available

WFD20E  
WFD25E  
WFD30E  
WFD40E  
WFD60E  
WFD80E

## Replacement Parts

A3008-00	Retard Mechanism
A77-01-02	Terminal Block
546-7000	Cover Tamper Switch Kit
WFDW	Cover Wrench
WFDN4	Gasket Kit



## Product Overview

### IP54 rated enclosure

Sealed retard mechanism assures that the retard is not contaminated by dust and dirt when the cover is removed

Visual switch activation permits installer to accurately set the retard even under extremely noisy conditions

Rugged, dual SPDT switches are enclosed in a durable terminal block for added strength

100% synchronization activates both alarm panel and local bell simultaneously

System Sensor's WFDE series is compatible with pipe diameters ranging from 50mm through 200mm, and can be mounted in a vertical or horizontal position.

**Robust Construction.** The WFDE series consists of a rugged, IP54 rated enclosure. Designed for both indoor and outdoor use, the WFDE series operates across a wide temperature range, from 0°C to 49°C (32°F to 120°F).

**Reliable Performance.** WFDE 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 to assure reliable performance.

**False Alarm Immunity.** The WFDE series incorporates a mechanical retard feature, which minimizes the risk of false alarm due to pressure surges or air trapped in the sprinkler system. In addition, the mechanical retard's unique sealed design is immune to dust and other contaminants.

**Simplified Operation.** The WFDE series is designed to simplify installation. Two conduit openings permit easy attachment to the local alarm system. The retard mechanism and dual SPDT switches are field-replaceable.



## Engineering Specifications

Vane-type System Sensor WFDE series waterflow detectors shall be installed on system piping as designated on the drawings 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 15 cm (6 in.) from any fittings which may change water direction, flow rate, or pipe diameter or no closer than 61 cm (24 in.) from a valve or drain. The detector shall respond to waterflow in the specified direction after a preset time delay which 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. WFDE waterflow detectors shall be approved by Factory Mutual, LPC, VdS and SSL.

## Standard Specifications

### Static Pressure Rating

LPC: 17.25 BAR (250 PSI)  
VDS: PN10 (10 BAR, 145 PSI)

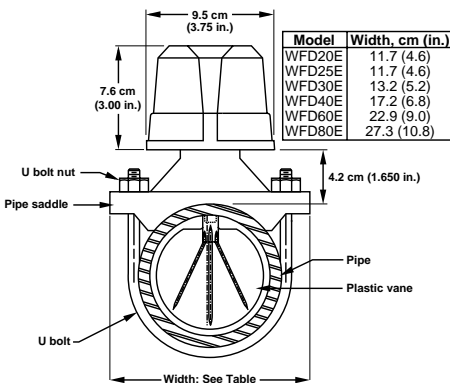
### Triggering Threshold Bandwidth (Flow Rate)

LPC: 20-57 liters/minute  
VDS: 30-57 liters/minute

### Compatible Pipe:

Model	Ref. Pipe Size mm (in.)	Nominal Pipe O.D. (mm)		Wall Thickness (mm)	
		LPC	VDS	LPC	VDS
WFD20E	50 (2)	60.3	60.3	3.6	2.3/2.9
WFD25E	65 (2½)	76.0	76.1	3.6	2.6/2.9
WFD30E	80 (3)	88.8	88.9	4.0	2.9/3.2
WFD40E	100 (4)	114.1	114.3	4.5	3.2/3.6
WFD60E	150 (6)	165.1	168.3	5.0	4.0/4.5
WFD80E	200 (8)	219.1	219.1	6.3	4.5/5.9

### Overall Dimensions Installed:



### Contact Ratings

Two sets of SPDT (Form C)  
LPC: 10.0 A @ 125/250 VAC  
2.5 A @ 24 VDC  
VDS: 2.5 A @ 24 VDC

### Conduit Entrances

Two openings 22.2mm (.875 in.) diameter. One open, one knock-out type

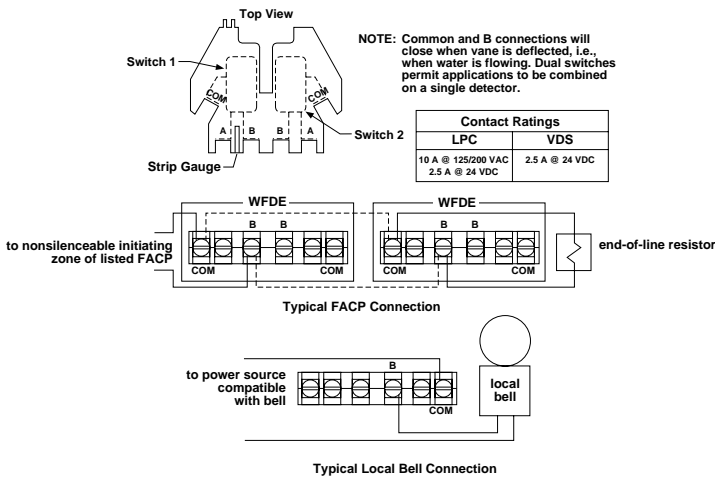
### Operating Temperature Range

0°C to 49°C (32°F to 120°F)

### Enclosure Rating

IP54

### WFDE Field Wiring Diagram



## Ordering Information

Model Numbers	Pipe Size
WFD20E	50mm
WFD25E	65mm
WFD30E	80mm
WFD40E	100mm
WFD60E	150mm
WFD80E	200mm

Part Number	Description
A3008-00	Mechanical retard mechanism
A77-01-02	Terminal block
546-7000	Cover tamper switch kit
WFDW	Tamper proof wrench for cover
WFDN4	Gasket kit

## System Sensor Sales and Service

### System Sensor Headquarters

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Fx: 630/377-6495  
Documents On Demand  
1-800-736-7672 x3  
www.systemsensor.com

### System Sensor Canada

Ph: 905.812.0767  
Fx: 905.812.0771

### System Sensor UK

Ph: 011.44.1403.276500  
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Ph: 011.65.273.2230  
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### System Sensor- Far East

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Fx: 011.852.2736.6580

### System Sensor- Australia

Ph: 011.613.54.281.142  
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