

# Accuflow™ Series Solid State Waterflow Detectors



## Models Available

AFD20  
AFD25  
AFD30-2  
AFD35  
AFD40  
AFD50  
AFD60  
AFD80

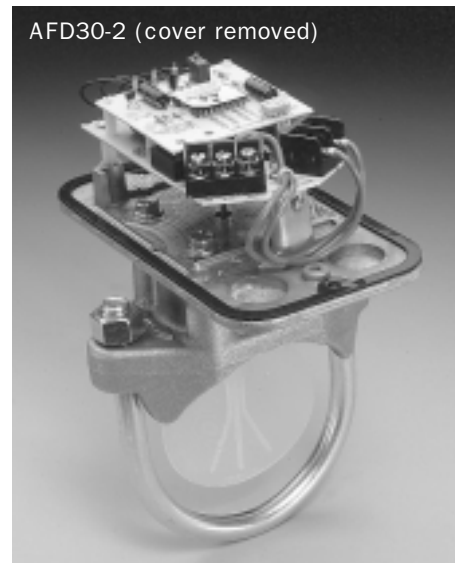
## Replacement Parts

WFDW	Cover wrench
546-9000	Cover tamper switch kit
WFDN4	Gasket kit
AFDPCBRK	Retard PCB kit

AFD30-2



AFD30-2 (cover removed)



## Product Overview

**Solid state retard assures precise timing accuracy**

**Dipswitch selections simplify retard settings**

**Non-polarized, two-wire design allows connection to a local bell and conventional or addressable systems**

**Compatible with a wide range of pipe schedules, including 5 through 40**

**Models are equipped with a NEMA 4 gasket**

**Synchronized switches activate both the alarm panel and local bell simultaneously**

**Field-replaceable retard assembly**

**System Sensor's Accuflow™ series is a new line of solid state waterflow detectors compatible with a wide range of pipe schedules, including 2" schedule 5. Accuflow detectors can be mounted in a vertical or horizontal position.**

**Robust Construction.** The Accuflow series consists of a rugged enclosure for indoor and outdoor use. Like all System Sensor waterflow detectors, Accuflow models operate across a wide temperature range, from 32°F to 120°F (0°C to 49°C).

**Reliable Performance.** Accuflow detectors incorporate a solid state retard to ensure consistently accurate timing. Designed for use within conventional and addressable fire alarm systems, Accuflow detectors include connections for both the panel or addressable module, as well as a local bell or notification device.

**False Alarm Immunity.** The solid state circuitry of the Accuflow series provides greater timing accuracy over traditional mechanical retard designs. This accuracy minimizes the risk of false alarms created by pressure surges or air trapped within the sprinkler system.

**Simplified Operation.** Accuflow detectors are designed to simplify installation. Wired like traditional waterflow detectors, the Accuflow series does not require the installer to run an additional third wire. Two conduit openings permit easy attachment to the local alarm system.



## Engineering Specification

Vane-type waterflow detector with a solid state retard shall be an Accuflow™ Series model number \_\_\_\_\_ manufactured by System Sensor, and 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 on 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 be compatible with schedule 5 through 40 for 2" diameter pipe, schedule 7 through 40 for 2-1/2" - 6" diameter pipe and schedule 10 through 40 for 8" diameter pipe. 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" diameter pipes. The detector shall respond to water flow in the specified direction after a preset time delay. The delay mechanism shall be a solid state unit which is field-adjustable via a dipswitch. The detector's 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 one SPDT switch (Form C contact) and one SPST switch (normally open contact) for wiring to an alarm panel or addressable control module and local bell and/or notification device. Two conduit entrances (one knockout type) for standard fittings of commonly used electrical conduit shall be provided on the detectors. A grounding provision shall be provided. Unless noted, enclosures shall be NEMA 4 listed by Underwriters Laboratories, Inc. for indoor or outdoor use.

## Standard Specifications

### Static Pressure Rating

450 PSI

### Triggering Threshold Bandwidth (Flow Rate)

4 - 10 GPM

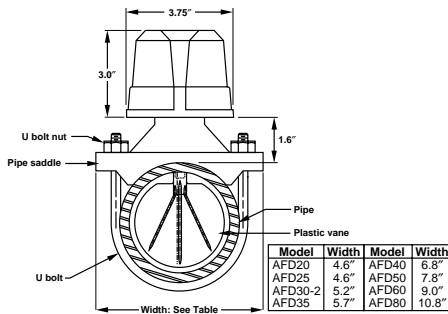
### Maximum Surge

18 Feet Per Second (FPS)

### Compatible Pipe

Steel water pipe,  
2": schedule 5 through 40  
2-1/2" - 6": schedule 7 through 40  
8": schedule 10 through 40

### Overall Dimensions Installed



### Contact Ratings

One SPDT (Form C)  
One SPST (normally open)  
0.6 A @ 125 VAC  
2.0 A @ 30 VDC

### Voltage Range

8.4 - 35 V (DC-FWR)  
108 - 132 VAC

### Current Draw

300 microamps @ 12/24 VDC or FWR  
400 microamps @ 120 VAC

### Compatibility

The Accuflow and Accuflow Low Flow detectors may receive power and operate on a two-wire initiating zone of a fire alarm control panel. When determining compatibility of these devices, the standby operating voltage of the control panel must be between 8.5 and 35 volts. In the standby mode, each Accuflow and Accuflow Low Flow detector acts as a shot across the initiating zone. **For two wire conventional fire alarm control panels, not more than 5 waterflow detectors may be connected to a single initiating zone.** The maximum retard/reset time of the waterflow detector plus the initiating zone shall not exceed 90 seconds.

For two wire addressable control panels, the number of waterflow detectors connected to the panel's signaling line circuit shall be limited by the circuit's current capacity.

### Conduit Entrances

Two openings for 1/2" conduit, one open, one knock-out type

### Operating Temperature Range

32°F - 120°F (0°C to 49°C)

### Enclosure Rating

NEMA 4 - suitable for indoor/outdoor use

### Cover Tamper Switch

Optional, part no. 546-9000

### Shipping Weight

AFD20: 4.1 lbs. (1.8 kg)  
AFD25: 4.2 lbs. (1.9 kg)  
AFD30-2: 4.4 lbs. (2.0 kg)  
AFD35: 4.6 lbs. (2.1 kg)  
AFD40: 5.1 lbs. (2.3 kg)  
AFD50: 6.2 lbs. (2.8 kg)  
AFD60: 6.7 lbs. (3.0 kg)  
AFD80: 7.4 lbs. (3.4 kg)

### 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

### Retard Settings

0 - 90 seconds, in increments of 15 seconds

### Warranty

3 years

## Ordering Information

Model Numbers	Pipe Size
AFD20	2"
AFD25	2-1/2"
AFD30-2	3"
AFD35	3-1/2"
AFD40	4"
AFD50	5"
AFD60	6"
AFD80	8"

### Replacement

Part Number	Description
546-9000	Cover tamper switch kit
WFDW	Tamper proof wrench for cover
WFDN4	Gasket kit
AFDPCBRK	Retard PCB kit

## System Sensor Sales and Service

### System Sensor Headquarters

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