



by Honeywell

WFDN Series Waterflow Detector

Description

The Gamewell-FCI, Water Flow Detector (WFDN) Series is a sturdy, UL-listed, NEMA 4-rated enclosure that was redesigned to include an enhanced damage resistant metal enclosure. The waterflow detector is used for both indoor and outdoor applications. In addition, it offers the widest available temperature range, from 32°F to 150°F. It is also approved for the widest range of pipe schedules, sizes 2 in. thru 4 in. pipe and Schedules 7 thru Schedule 40. The Gamewell-FCI, WFDN Series is compatible with the following Schedules and sizes:

- Schedule 7 thru 40 steel pipe for sizes 2 in. thru 4 in.
- Schedule 10 thru 40 steel pipe for sizes 5 in. thru 8 in.

The WFDN Series can be mounted in a vertical or horizontal position.

UL-listed models are equipped with tamper-resistant cover screws to prevent unauthorized entry. The WFDN Series contains the following enhancements to offer a quick and simple wiring solution.

- two sets of SPDT (Form C) synchronized switches that are enclosed in a durable terminal block.
- a redesigned terminal block layout and wire-ready terminals.
- COM terminals are located on a different elevation.
- a large barrier extends between switches.
- easy-to-read raised textured lettering.
- an optional cover tamper switch is available and securely snaps into place, no tools required.

The WFDN Series incorporates a mechanical time delay feature, which minimizes the risk of false alarms due to pressure surges or air trapped in the fire sprinkler system. This new feature includes a large and easy-to-turn timer dial with high contrast pad printed markings that allows you to easily set the waterflow detector. The dial contains three tabs to allow easy adjustment when turning. The larger tab is located on the dial position to allow you to adjust the time delay approximately 60 seconds. To allow you to easily set the detector in dimly lit locations, the new design includes a notch to allow you to adjust the time delay approximately 30 seconds.

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

UL® is a registered trademark of Underwriter's Laboratories, Inc.

Indoor/Outdoor Waterflow Detector



WFDN

Features

- UL®-listed models are NEMA 4 rated.
- Provides superior water sealing.
- Contains a sealed retard mechanism that is immune to dust and other contaminants.
- Has a reduced product weight.
- Accommodates up to 12 AWG wire.
- Includes upgraded wiring with a new terminal block layout and wire-ready terminals.
- Equipped with a field-replaceable timer/switch assembly with an improved timer repeatability and accuracy.
- Offers a new redesigned directional cover that allows installers and inspectors to easily see the direction of the water flow and includes the following features:
 - superior seal
 - corrosion resistant
 - lightweight cover
 - unpainted
- Has a snap-in optional cover tamper switch.
- Built with tamper-resistant cover screws.
- Less exposed metal reduces shock hazard, plastic cover acts as an insulator and is resistant to arcing.
- Allows for visual and audible switch activation (73 dBA).
- Retains an enhanced switch synchronization that activates the following:
 - alarm panel
 - local bell
 - horn strobe

SIGNALING



GAMEWELL-FCI

12 Clintonville Road, Northford, CT 06472-1610 USA • Tel: (203) 484-7161 • Fax: (203) 484-7118

Specifications are for information only, are not intended for installation purposes, and are subject to change without notice. No responsibility is assumed by Gamewell-FCI for their use.

©2015 by Honeywell International Inc. All rights reserved.

www.gamewell-fci.com

9021-60903 Rev. A page 1 of 3

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 5 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 an 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 Inc. All detectors shall be listed by Underwriters Laboratories Inc. for indoor or outdoor use.

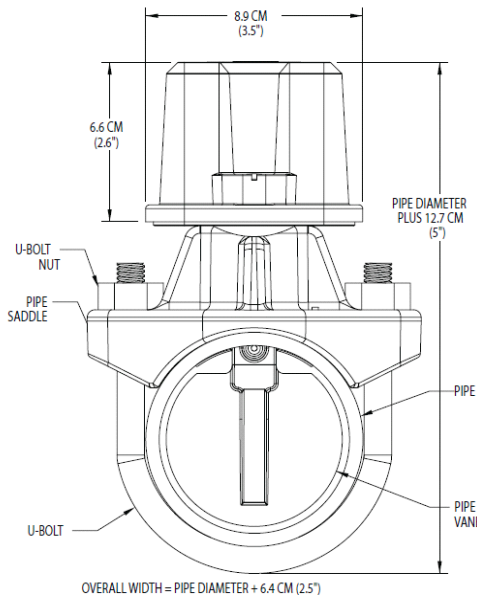
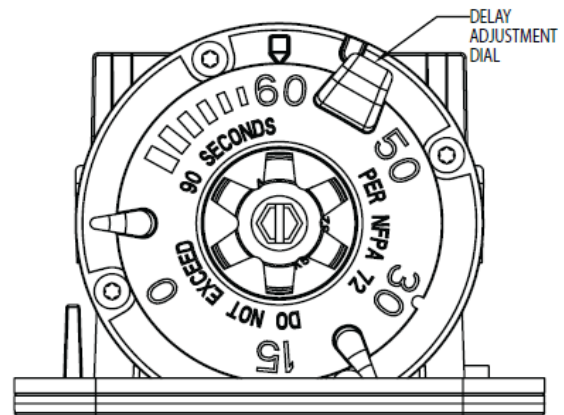


Figure 1 WFDN Dimensions

Standard Specifications

Static Pressure Rating	450 PSI
Maximum Surge	18 Feet Per Second (FPS)
Triggering Threshold Bandwidth (Flow Rate)	4–10 GPM
Conduit Entrances	Two openings for ½ in. conduit. One open, one knock-out type
Contact Ratings	Two sets of SPDT (Form C) 10.0 A, ½ HP @ 125/250 VAC 2.5 A @ 6/12/24 VDC
Compatible Pipe	Steel water pipe, schedule 7 through 40
Operating Temperature Range:	32°F to 150°F (0°C to 66°C)
Enclosure Rating	NEMA 4 – suitable for indoor/outdoor use
Cover Tamper Switch	Standard with ULC models, optional for UL models, part no. CTS
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
Warranty	3 Years



NOTE: RETARD TIME MAY EXCEED 90 SECONDS. ADJUST AND VERIFY THAT TIME DOES NOT EXCEED 90 SECONDS. NUMBER ON DIAL IS APPROXIMATE TIME DELAY IN SECONDS

Figure 2 WFDN Delay Adjustment Dial

GAMEWELL-FCI

12 Clintonville Road, Northford, CT 06472-1610 USA • Tel: (203) 484-7161 • Fax: (203) 484-7118

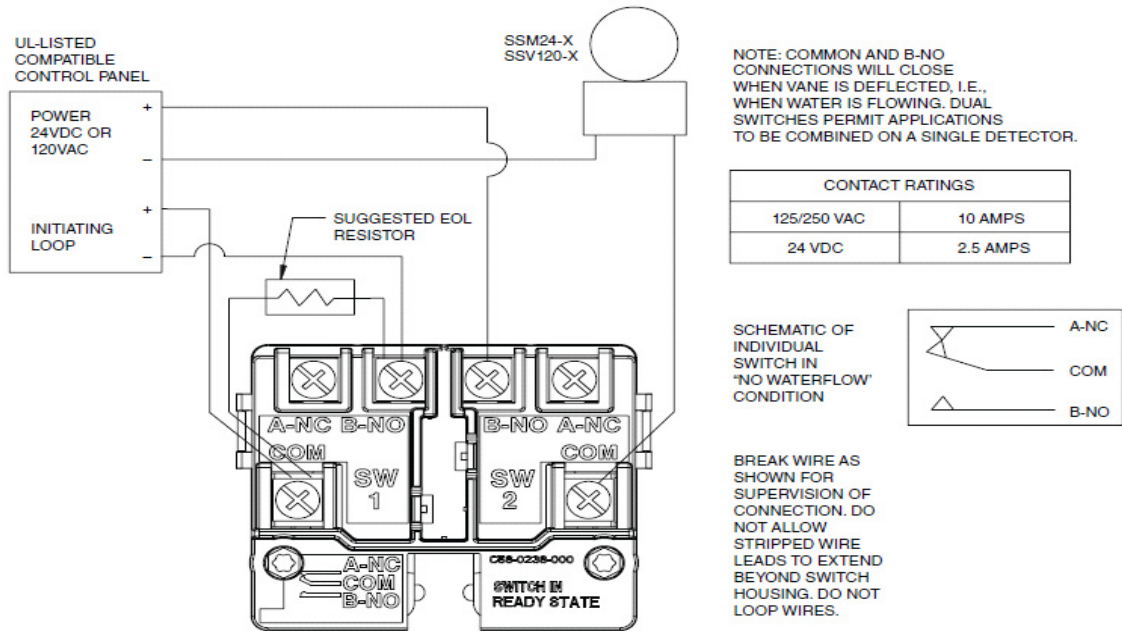


Figure 3 WFDN Field Wiring Diagram

Ordering Information

Part Number		Description		
UL Model	ULC Model	Pipe Size	Hole Size	Shipping Weight
WFD20N	WFD20NA	2 in.	1¼ in.	2.6 lbs.
WFD25N	WFD25NA	2½ in.	1¼ in.	2.6 lbs.
WFD30N	WFD30NA	3 in.	2 in.	3.1 lbs.
WFD40N	WFD40NA	4 in.	2 in.	4.0 lbs.
WFD50N	WFD50NA	5 in.	2 in.	4.9 lbs.
WFD60N	WFD60NA	6 in.	2 in.	5.6 lbs.
WFDN80	WFD80NA	8 in.	2 in.	7.3 lbs.
WFDTN	N/A	Compatible with 1 in., 1 ¼ in., 1 ½ in., and 2 in. Tee branch pipes.	1 in., NPT	N/A
Accessories				
FS-RT	Delay mechanism and switch assembly			
CTS	Tamper-proof switch kit			
WFDW	Tamper-proof wrench for cover			
Note: The Schedule 7 through 40 steel pipe are rated for use with sizes 2 in. to 4 in. The Schedule 10 through 40 steel pipe are rated for use with sizes 5 in. to 8 in.				

GAMEWELL-FCI

12 Clintonville Road, Northford, CT 06472-1610 USA • Tel: (203) 484-7161 • Fax: (203) 484-7118

www.gamewell-fci.com

9021-60903 Rev. A page 3 of 3