



## VANE TYPE WATER FLOW ALARM SWITCH WITH RETARD 05 VSR-F

### FEATURES

- Vane type Water Flow Switch for use on Wet Sprinkler Systems. UL listed and FM approved for use on Steel Pipes; Schedules 10 thru 40 sizes 2" thru 8"
- May be used as a Sectional Water flow Detector on Large Systems
- Unit contains two Single Pole, Double Throw, Snap Action Switches and an Adjustable, Instantly Recycling Pneumatic Retard
- Switches are Actuated when a flow of 10 gpm (38 lpm) or more occurs downstream of the Device. Flow condition must exist for time period necessary to overcome Selected Retard Period
- Service Pressure up to 450 psi (31 bar).  
Temperature Range - 40 degF/120 degF (4.5° C / 49°C)
- Suitable for Indoor or Outdoor use. Contact Rating - Two sets of SPDT (Form C). NEMA 4/IP55 Rated Enclosure. Rated at 15.0 amps at 125/250 VAC and 2.0 amps at 30 vdc Resistive
- Conduit Entry - Two knockouts for ½" conduit
- Not Intended for Applications in Explosive Environments



The Potter Water Flow Alarm Switches may be mounted on horizontal or vertical pipe. On horizontal pipe they should be installed on the top side of the pipe where they will be accessible. The units should not be installed within 6" of a fitting which changes the direction of the water flow or within 24" of a valve or drain.

Drain the system and drill a hole in the pipe using a circular saw in a slow speed drill. The 2" (50mm) and 2.5" (65mm) devices require a hole with a diameter of 1¼" +1/8" - 1/16" (33mm +/- 2mm). All other sizes require a hole with a diameter of 2" +/- 1/8" (50mm +/- 2mm).

Clean the inside pipe of all growth or other material for a distance equal to the pipe diameter on either side of the hole.

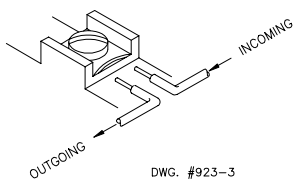


Roll the vane so that it may be inserted into the hole; do not bend or crease it. Insert the vane so that the arrow on the saddle points in the direction of the water flow. Install the saddle strap and tighten nuts alternately to an eventual 50 ft-lb of torque (see Fig.2). The vane must not rub the inside of the pipe or bind in any way.

Testing - The frequency of inspection and testing for the model PGR-VSR-F and its associated monitoring system should be in accordance with applicable NFPA Codes and Standards and/or the authority having jurisdiction (manufacturer recommends quarterly or more frequently). If provided, the inspector's test valve, that is usually located at the end of the most remote branch line, should always be used for test purposes. If there are no provisions for testing the operation of the flow detection device on the system, application of the unit is not recommended or advisable. A minimum flow of 10 gpm is required to activate this device.

**FIG. 1**

**SWITCH TERMINAL CONNECTIONS  
CLAMPING PLATE TERMINAL**



DWG. #923-3

**CAUTION:**

An uninsulated section of a single conductor should not be looped around the terminal and serve as two separate connections. The wire must be severed, thereby providing supervision in the event that the wire becomes dislodged from under the terminal.

**FIG. 2**

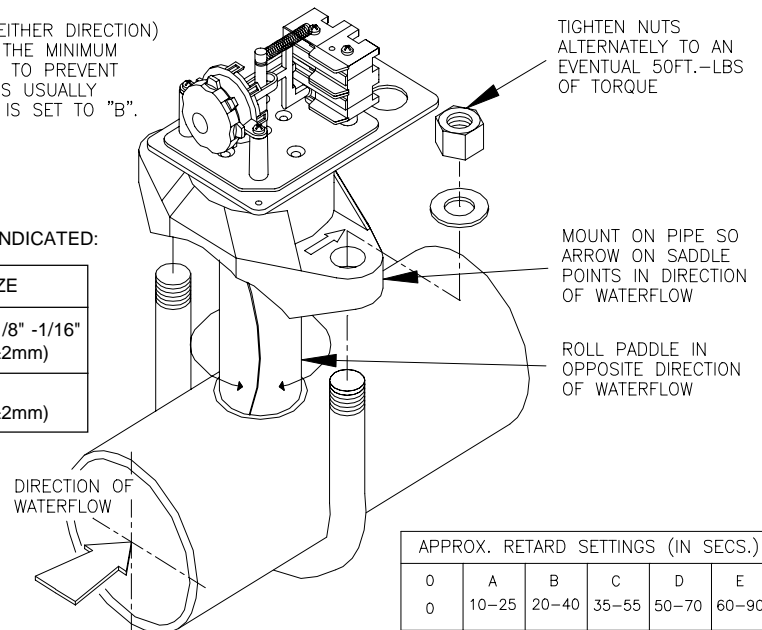
RETARD ADJUSTMENT:  
TO CHANGE TIME TURN KNOB (EITHER DIRECTION) FOR DESIRED TIME DELAY. USE THE MINIMUM AMOUNT OF RETARD NECESSARY TO PREVENT FALSE ALARMS, A "B" SETTING IS USUALLY ADEQUATE FOR THIS. FACTORY IS SET TO "B".

TO INSTALL, DRILL A HOLE AS INDICATED:

PIPE SIZE	HOLE SIZE
2" to 2 1/2" (50mm to 65mm)	1 1/4" +1/8" -1/16" (33mm ±2mm)
3" to 8" (80mm to 200mm)	2" ±1/8" (50mm ±2mm)

DWG. #761-30

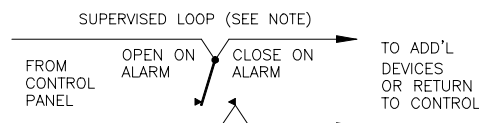
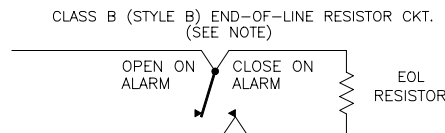
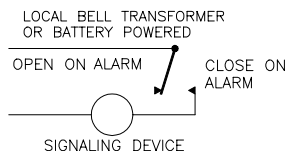
DO NOT LEAVE COVER OFF FOR  
EXTENDED PERIOD OF TIME



APPROX. RETARD SETTINGS (IN SECS.)					
0	A	B	C	D	E
0	10-25	20-40	35-55	50-70	60-90

**FIG. 3**

**TYPICAL ELECTRICAL CONNECTIONS**



Note: For supervised circuits see "Switch Terminal Connections" drawing and caution note (Fig. 1).

DWG. #761-15

**NOTES:**

1. The Model VSR-F has two switches, one can be used to operate a central station, proprietary or remote signaling unit, while the other contact is used to operate a local audible or visual annunciator.
2. A condition of LPC Approval of this product is that the electrical entry must be sealed to exclude moisture.