Overview

Dimensions: 4 3/4" (12Jcm)W x 2 1/4" (5,7cm)D x 4 3/8" (U,lcm)H Conduit
Entrance: One knockout provided fbr 1/2S, conduit.
Enclosure: Cover - Die-cast with textured red powdercoat finish
Base - Steel/Zinc plated
Pressure Connection: Nylon 1/2" NPT Male
Factory Adjustment: 3-5 PSI (0.2 - 0.34 BAR)
Differential: 1 PSI (0,06 BAR) typical
Maximum System Pressure: 250 PSI (17.2BAR)
Switch Contacts: Two SPDT (Form C)
15.0 Amps at 125/250VAC, 2.5 Amps at 30VDC
Environinental Specifications:
Temperature range: -40°F to 140°F (-40°C to 60°C)
Tamper:
Cover incoiporates tamper resistant fasteners that requires a special key for removal.
Service Use:
Automatic Sprinkler
One or two family dwelling
Residential Occupancy up to four stories
National Fire Alarm Code

Installation

The LF-WPS Series Pressure Actuated Switches are designed fbr the detection of a waterflow condition in automatic fire sprinkler systems of particular designs such as wet pipe systems with alarm check valves, dry pipe, preaction, or deluge systems. Itr s also suitable to provide a low pressure supervisoiy signal; adjustable between 4 and 20 psi (0,27 and 1,37 BAR).
1. Apply Teflon tape to the threaded male connection on the device.
(Do not use pipe dope)
2. Device should be mounted in the upright position (threaded connection down).
3. Tighten the device using a wrench on the flats on the device.

Wiring Instructions

1. Remove the tamper resistant screws with the special key provided.
2. Run wires through an approved conduit connector and affix the connector to the device.
3. Connect the wiies to the appropriate terminal connections for the service intended. See Figures 2, 4, and 5.

Testing

The operation of the pressure alarm switch shall be tested upon completion of installation and periodically thereafter in accordance with the applicable NFPA codes and standards and/or the authority having jurisdiction (manufacturer recommends quarterly or more frequently).

Wet System

Method I：When using LF-WPS and control unit with retard - connect it into alaim port piping on the input side of retard chamber and electrically connect it to control unit that provides a retard to compensate for surges. Insure that no unsupervised shut-off valves are present between the alarm check valve and LF-WPS .

Method 2: When using CFUI9E3OO fbr local bell application or with a control that does not provide a retard featuie - LF-WPS must be installed on the alarm outlet side of the retard chamber of the sprinkler system.
Testing: Accomplished by opening the inspector's end-of-line test valve. Allow time to compensate for system or contiol retard.
Note: Method 2 is not applicable fbr remote station service use, if there is an unsupervised shut-ofF valve between the alarm check valve and the CFU19E300.

Wet System With Excess Pressure

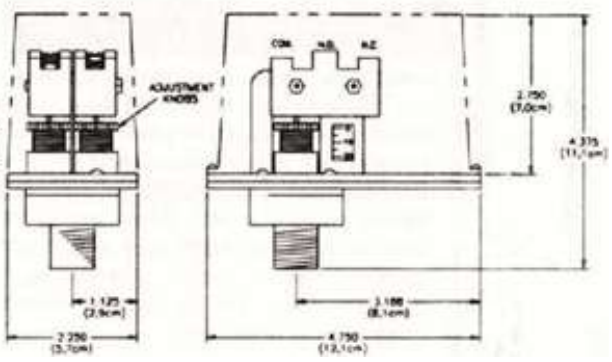
Connect LF-WPS into alann port piping extending from alarm check valve. Retard provisions are not required. Insure that no unsupervised shut-off valves are present between the alaim check valve and the LF-WPS
• Testing: Accomplished by opening the water by-pass test valve or the inspector^ end-of-line test valve. When using end-of-line test, allow time fbr excess pressure to bleed off.

Dry System

Connect LF-WPS into alarm portpiping that extends from the intermediate chamber of the alarm check valve. Install on the outlet side of the in-line check valve of the alarm port piping. Insure that no unsupervised shut-off valves are present between the alarm check valve and the LF-WPS .
Testing: Accomplished by opening the water by-pass test valve.
Note: The above tests may also activate any other circuit closer or water motor gongs that are present on the system.

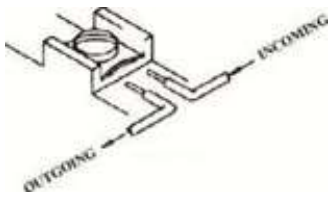
Dimensions
Fig. 1

NOTE:
To prevent leakage, apply Teflon tape sealant to male threads only Do not use Pipe Dope



Switch Clamping Plate Terminal

Fig. 2



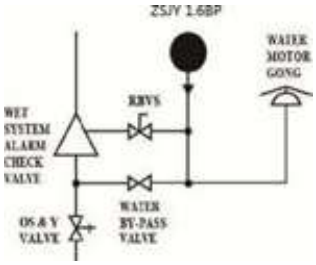
⚠ WARNING

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

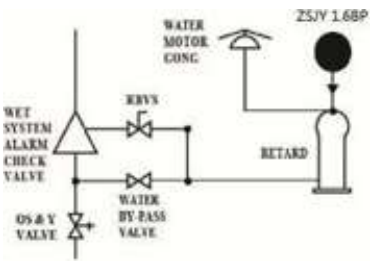
Typical Sprinkler Applications

Fig. 3

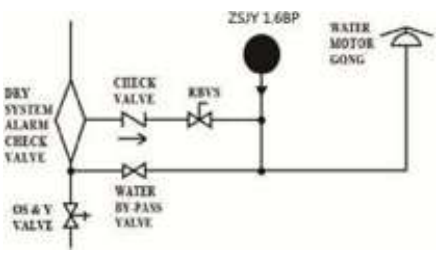
WET SYSTEM WITH EXCESS PRESSURE



WET SYSTEM WITHOUT EXCESS PRESSURE



DRY SYSTEM



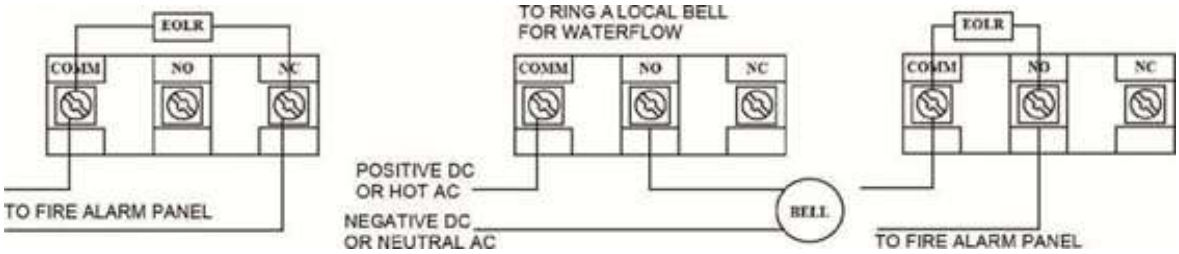
⚠ CAUTION

Closing of any shutoff valves between the alann check valve and the LF-WPS will render the LF-WPS inoperative comply with NFPA-72 any such valve shall be electrically supervised with a supervisory switch.

Typical Electrical Connections

Fig. 4

FOR LOW PRESSURE SIGNAL
USED ON DRY OR PRE-ACTION SYSTEMS
WITH LESS THAN 20 PSI ONLY



Switch Operation

Fig. 5

Tenninal
NO: Closed when installed under normal system pressure.
NC: Open when installed under normal system pressure. Closes on pressure drop. Use for low pressure supervision.

W/PRESSURE APPLIED

⚠ WARNING

- Installation must be performed by qualified personnel and in accordance with all national and local codes and ordinances.
- Shock hazard. Disconnect power source before servicing. Serious injury or death could result.
- Read all instructions caiefiilly and understand them before starting installation. Save instructions for future use. Failure to read and understand instructions could result in improper operation of device resulting in serious injury or death.
- Risk of explosion. Not for use is hazardous locations. Serious injury or death could result.

Tenninal
NO: Open with no pressure supplied. Closes upon detection of pressure. Use for waterflow indication.
NC: Closed with no pressure applied.

W/O PRESSURE APPLIED

⚠ WARNING

- Do not tighten by grasping the switch enclosure. Use wrenching flats on the bushing only. Failure to install properly could damage the switch and cause improper operation resulting in damage to equipment and property.
- To seal threads, apply Teflon tape to male threads only. Using joint compounds or cement can obstruct the pressure port inlet and result in improper device operation and damage to equipment.
- Do not over tighten the device, standard piping practices apply.

Engineer/Architect Specifications Pressure Type Waterflow Switch

Pressure type waterflow switches; shall be a Model LF-WPS and shall be installed on the fire sprinkler system as shown and or specified herein.

Switches shall be provided with a NPT male pressure connection and shall be connected to the alarm port outlet of; Wet Pioe Alarm Valves, Dry Pipe Valves, Pre-Action Valves, or Deluge Valves. The pressure switch shall be actuated when the alann line pressure reaches 3 - 5 PSI (0.2 - 0.34 BAR)

Pressure type waterflow switches shall have a maximum service pressure rating of 250 PSI (17.2 BAR) and shall be factoiy adjusted to operate on a pressure increase of 3 _ 5 psi (0.2 - 0.34 BAR)

Pressure switch shall have two form C contacts, switch contact rating 15.0 Amps at 125/250 VAC, 2.5 Amps at 30 VDC.

The cover of the pressure type waterflow switch shall be die-cast and shall attach with tamper resistant screws. The Pressure type waterflow switch shall be suitable for indoor or outdoor service with a NEMA 4/ IP66 rating.