

PS10 Pressure Switch

Fire sprinkler pressure-actuated waterflow and supervisory switch



WATERFLOW SIGNAL

LOW PRESSURE SUPERVISION

NEMA 4 / IP66

PRODUCT OVERVIEW

The PS10 Series pressure-actuated switch is designed to detect a waterflow condition in automatic fire sprinkler systems. It may also provide a low-pressure supervisory signal, adjustable from 4 to 15 psi (0.27 to 1.03 bar).

01 One or two SPDT switch models
PS10-1: one SPDT. PS10-2: two SPDT switches.

02 Independent adjustment
Two-switch models allow adjustment without tools.

03 Outdoor-ready enclosure
Weather, UV and flame-resistant composite cover; NEMA 4/IP66 with suitable fittings.

04 Non-corrosive connection
Nylon 1/2 in NPT male pressure connection.

05 Flexible wiring
Two 1/2 in conduit/cable entrances and separate isolated wiring chambers.

06 Fire protection use
Suitable for NFPA 13, 13D, 13R and 72 applications.

Technical Specifications

Key operating data, construction and installation guidance

PRESSURE RANGE
4-15 psi (0.27-1.03 bar)

MAXIMUM SYSTEM PRESSURE
300 psi (20.68 bar)

OPERATING TEMPERATURE
-40 F to 140 F (-40 C to 60 C)

SERVICE USE
NFPA 13, 13D, 13R, 72

PRESSURE CONNECTION
Nylon 1/2 in NPT male

FACTORY ADJUSTMENT
4-8 psi (0.27-0.55 bar)

CONTACT RATINGS
10.1 A @ 125/250 VAC; 2.0 A @ 30 VDC

DIFFERENTIAL
2 psi (0.13 bar) typical

CONDUIT ENTRANCES
Two 1/2 in knockouts

DIMENSIONS
3.78 W x 3.20 D x 4.22 H in

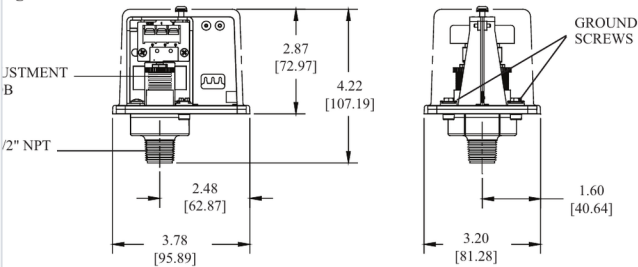
INSTALLATION ESSENTIALS

- 1 Apply Teflon tape to the threaded male connection. Do not use pipe dope or joint compound.
- 2 Mount the switch upright, with the threaded connection facing down.
- 3 Tighten using a wrench on the flats of the device. Do not tighten by grasping the enclosure.
- 4 Use approved conduit connectors. NEMA 4-rated conduit and fittings are required for outdoor installations.
- 5 Connect wiring to the correct terminals for waterflow or supervisory service.

DIMENSIONS AND SWITCH TERMINAL ARRANGEMENT

Dimensions

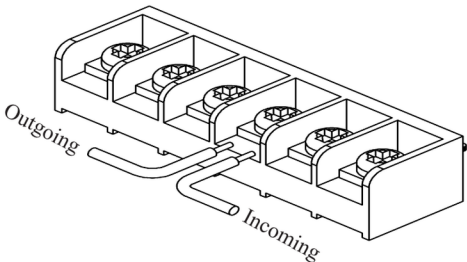
Fig 1



DWG# 930-1

Switch Clamping Plate Terminal

Fig 2



WARNING

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 of the connection in the event that the wire becomes dislodged from under the terminal.

Use the terminal diagram for proper incoming/outgoing conductor supervision. Do not loop an uninsulated single conductor around a terminal as two separate connections.

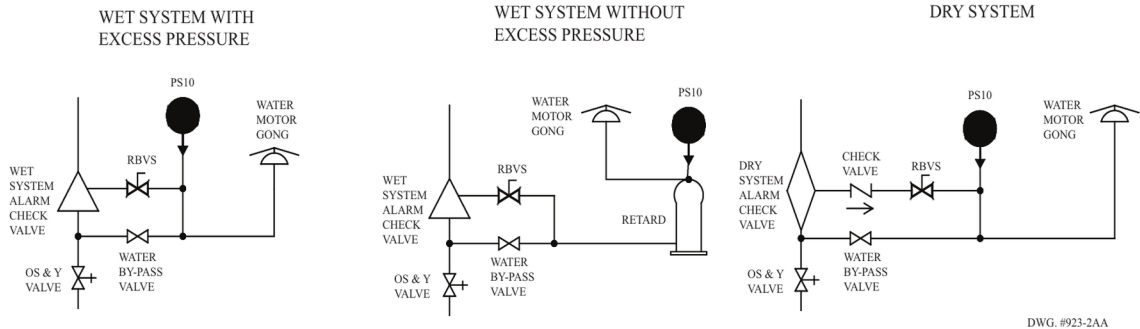
Typical Fire Sprinkler Applications

Installation locations and signal connection reference

TYPICAL SPRINKLER SYSTEM LOCATIONS

Typical Sprinkler Applications

Fig 3

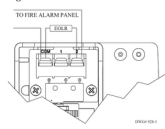


CAUTION

Closing any shutoff valve between the alarm check valve and the PS10 will render the PS10 inoperative. NFPA 72 requires any such valve to be electrically supervised.

Low Pressure Signal Connection

Low Pressure Signal Connection
Fig 4

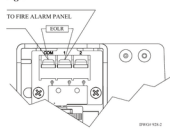


One Conduit Wiring
Fig 7

Use the low-pressure supervisory terminal arrangement. Switch contact changes on pressure drop.

Waterflow Signal Connection

Waterflow Signal Connection
Fig 5

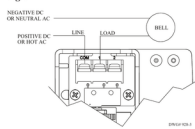


Switch Open
Fig 8

Use the waterflow signal terminals. The switch closes upon detection of pressure.

Local Bell Connection

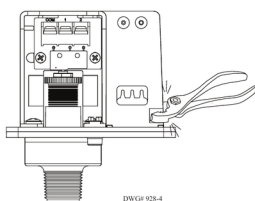
Local Bell for Waterflow Connection
Fig 6



Use the local bell wiring arrangement with appropriate AC/DC supply and load wiring.

ONE-CONDUIT WIRING AND SWITCH OPERATION

both switches from one conduit entrance.



DWG# 928-4

Terminal
C: Common
1: Closed when installed under normal system pressure.
2: Open when installed under normal system pressure. Closes on pressure drop. Use for low pressure supervision.

W/ PRESSURE APPLIED



Terminal
1: Open with no pressure supplied. Closes upon detection of pressure. Use for waterflow indication.
2: Closed with no pressure applied.

W/O PRESSURE APPLIED



DWG# 18078-6

Engineering and Ordering Reference

Pressure type waterflow switch model selection, safety and maintenance

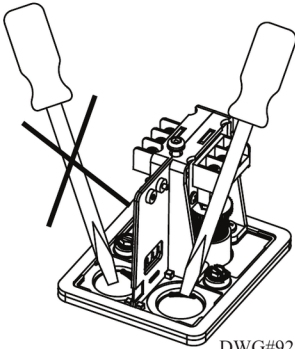
ENGINEERING / ARCHITECT SPECIFICATION SUMMARY

Specify Potter Model PS10 pressure type waterflow switch for wet pipe alarm valves, dry pipe valves, pre-action valves, or deluge valves. The device uses a 1/2 in NPT male pressure connection and actuates when alarm-line pressure reaches 4-8 psi. It provides one or two Form C contacts, a maximum service pressure of 300 psi, and a weather/UV/flame-resistant high-impact composite cover with a tamper-resistant fastener. Suitable for indoor or outdoor service when installed with NEMA 4/IP66-compliant fittings.

KNOCKOUT REMOVAL

Removing Knockouts

Fig 9



Use the special key for the tamper-resistant cover fastener. Carefully remove knockouts as

WARNING

Installation must be performed by qualified personnel and in accordance with national and local codes. Disconnect power before servicing. Not for use in hazardous locations.

CAUTION

Use wrenching flats on the bushing only. Apply Teflon tape to male threads only. Do not over-tighten the device.

NOTICE

Typical service life is 10-15 years. Environmental conditions may significantly reduce service life; inspect and test periodically in accordance with applicable codes.

ORDERING INFORMATION

MODEL	DESCRIPTION	PART NO.
PS10-1	Pressure switch with one set SPDT contacts	1340103
PS10-2	Pressure switch with two sets SPDT contacts	1340104
Hex Key	Tamper resistant cover key	5250062
Cover Tamper Switch Kit	Optional tamper switch kit	0090200

APPROVALS & LISTINGS

UL / ULC / CSFM listed; FM and LPC approved; NYMEA accepted (per manufacturer data sheet).