PRESSURE SWITCH

Model PS40-1 / PS40-2

Supervisory pressure switch



PRODUCT DESCRIPTION

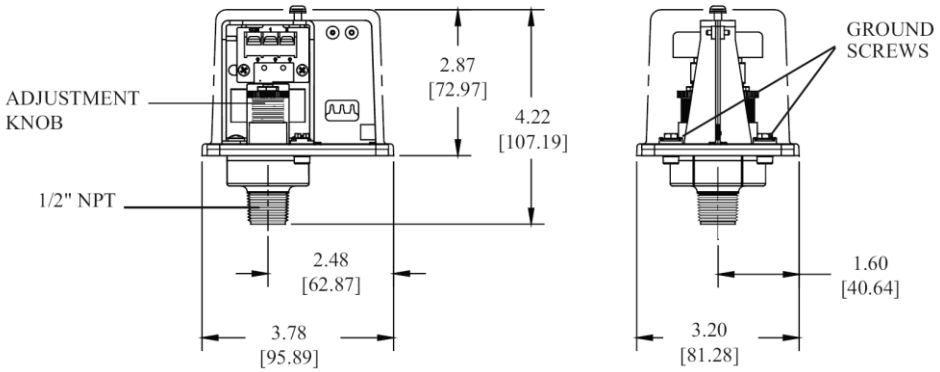
The pressure switch model PS40 can be used in fire sprinkler systems. It is suitable for indoor or outdoor service with a NEMA-4/IP66 rating.

TECHNICAL DATA

Models	PS40-1: One set of SPDT contact (Form C) PS40-2: Two sets of SPDT contact (Form C)
Conduit entrance	Two knockouts provided for 1/2" conduit. Individual switch compartments and ground screw suitable for dissimilar voltages
Enclosure	Cover: Die-cast with textured red powdercoat finish, single cover screw and rain lip Base: Die cast
Pressure connection	Nylon ½" NPT male
Factory adjustment	PS40-1 operates on decrease at 30 psi (2,1 bar) PS40-2 operates in increase at 50 psi (3,5 bar) and on decrease at 30 psi (2,1 bar)
Pressure range	10-60 psi (0,7 - 4,1 bar)
Differential	Typical 1 lb. at 10 psi (0,07 at 0,7 bar) 4 lbs at 60 psi (0,28 at 4,1 bar)
Maximum system pressure	300 psi (20,68 bar)
Switch Contacts	SPDT (Form C) 10.1 Amps at 125/250VAC, 2.0 Amps at 30VDC One SPDT in PS40-1, Two SPDT in PS40-2 15 Amps at 125/250VAC 2,5 Amps at 30VDC resistive
Environmental limitations	-40ºF tot 140ºF (-40ºC to 60ºC) NEMA 4/IP66 Rated Enclosure - indoor or outdoor when used with NEMA 4 conduit fittings
Tamper	Cover incorporates tamper resistant fastener that requires a special key for removal. One key is supplied with each device. Optional cover tamper switch kit must be ordered separately
Service use	Automatic sprinkler NFPA-13 One or two family dwelling NFPA-13D Residential occupancy up to four stories NFPA-13R National Fire Alarm Code NFPA-72

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DIMENSIONS



INSTALLATION

The Supervisory Pressure Actuated Switches model PS40 are designed primarily to detect an increase and/or decrease from normal system pressure in automatic fire sprinkler systems. Typical applications are: Dry pipe systems, pre-action air/nitrogen supervision, pressure tanks, air supplies, and water supplies. The PS40 switch is factory set for 40 psi (2,8 bar) normal system pressure. The switch marked with the word LOW is set to operate at a pressure decrease of 10 psi (0,7 bar) at 30 psi (2,1 bar). The switch marked with the word HIGH is set to operate at a pressure increase of 10 psi (0,7 bar) at 50 psi (3,5 bar). See section heading Adjustments and Testing if other than factory set point is required.

1. Connect the PS40 to the system side of any shutoff or check valve.
2. Apply Teflon tape to the threaded male connection on the device. (Do not use pipe dope)
3. Device should be mounted in the upright position. (Threaded connection down)
4. Tighten the device using a wrench on the flats on the device.

WIRING INSTRUCTIONS

1. Remove the tamper resistant screw with the special key provided.
2. Carefully place a screwdriver on the edge of the knockout and sharply apply a force sufficient to dislodge the knockout plug.
3. Run wires through an approved conduit connector and affix the connector to the device. A NEMA-4 rated conduit fitting is required for outdoor use.
4. Connect the wires to the appropriate terminal connections for the service intended.

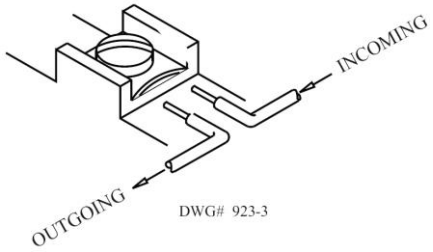
ADJUSTMENT AND TESTING

The operation of the pressure supervisory switch should 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). Note: Testing the PS40 may activate other system connected devices. The use of a BVL is recommended to facilitate setting and testing of the PS40 pressure switch. When a BVL (bleeder valve) is used, the pressure to the switch can be isolated and bled from the exhaust port on the BVL without effecting the supervisory pressure of the entire system. The operation point of the PS40 Pressure Switch can be adjusted to any point between 10 and 60 psi (0,7 - 4,11 bar) by turning the adjustment knob(s) clockwise to raise the actuation point and counter clockwise to lower the actuation point. In the case of the PS40-2, both switches operate independent of each other. Each switch may be independently adjusted to actuate at any point acrosss the switch adjustment range. Initial adjustment can be made with a visual reference from the top of the adjustment knob across to the printed scale on the switch bracket. Final adjustments should be verified with a pressure gauge.

NOTE: To prevent leakage, apply Teflon tape sealant to male threads only.

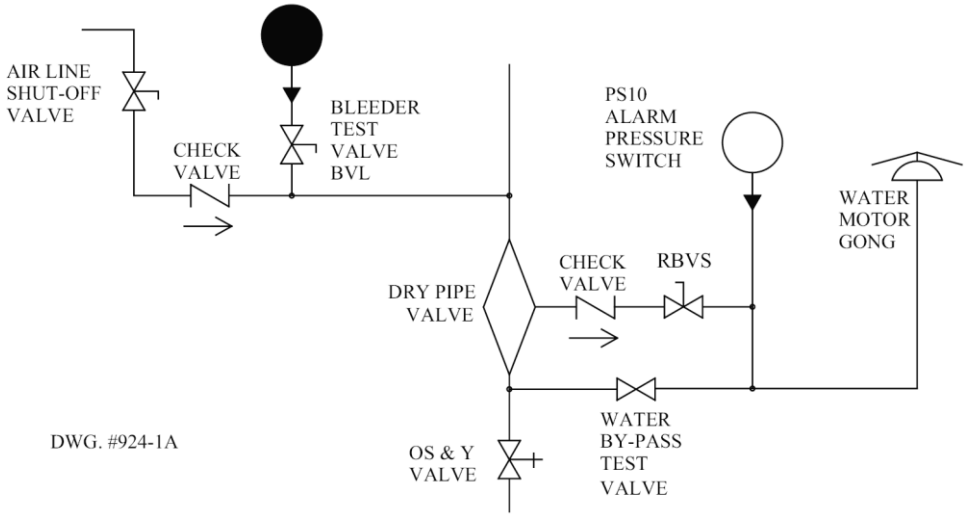
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SWITCH CLAMPING PLATE TERMINAL



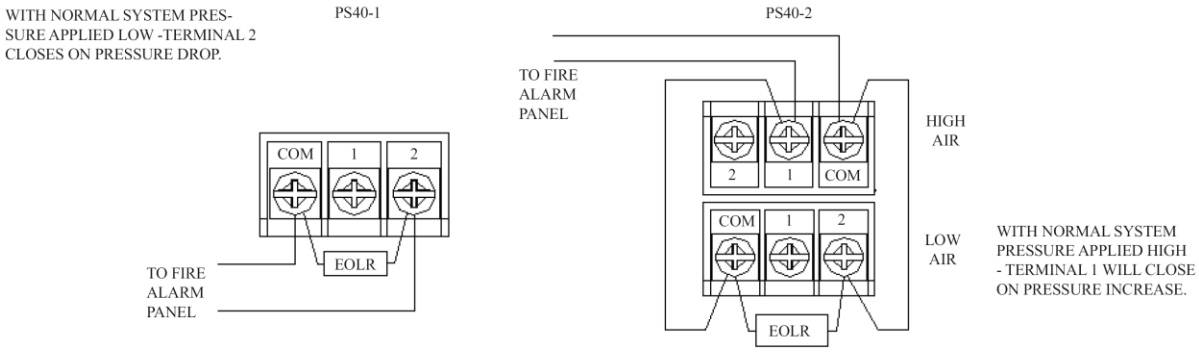
WARNING: An uninsulated section of a single conductor should not be looped around the terminal and serve as two separate connections. The wire must be severed, thereby providing supervision of the connection in the event that the wire becomes dislodged from under the terminal.

TYPICAL SPRINKLER APPLICATIONS



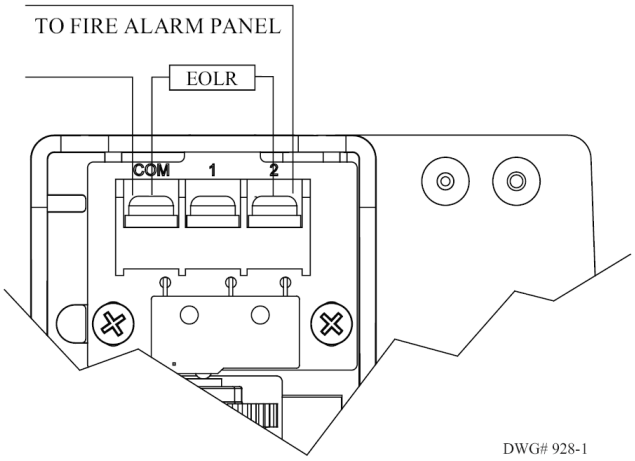
CAUTION: Closing of any shutoff valves between the alarm check valve and the PS10 will render the PS10 inoperative. To comply with IBC, IFC, and NFPA-13, any such valve shall be electrically supervised with a supervisory switch such as Model RBVS.

TYPICAL CONNECTIONS

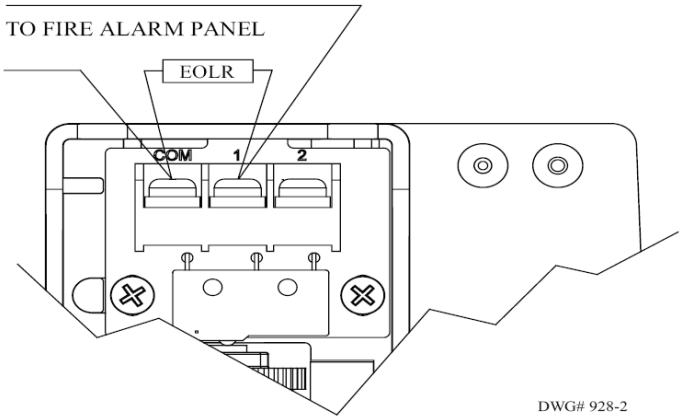


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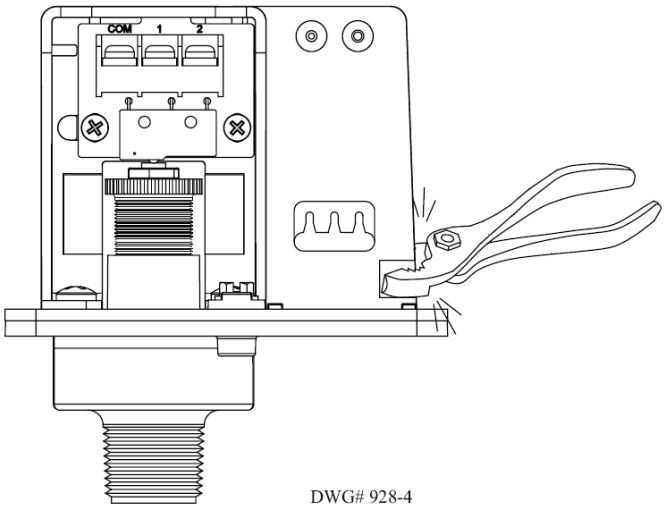
LOW PRESSURE SIGNAL CONNECTION



HIGH PRESSURE SIGNAL CONNECTION



ONE CONDUIT WIRING



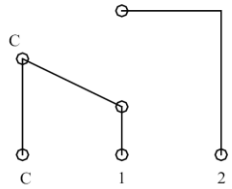
Break out thin section of divider to provide path for wires when wiring both switches from one conduit entrance.

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CHANGING PRESSURE

(With normal system pressure)

LOW PRESSURE SWITCH



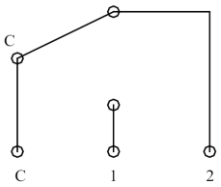
Terminal

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 air signal.

HIGH PRESSURE SWITCH

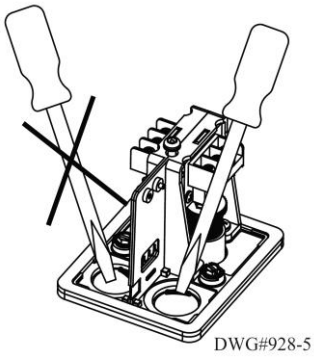


Terminal

1: Open when installed under normal system pressure. Closes on increase in pressure. Use for high air signal.

2: Closed under normal system pressure.

KNOCKOUT REMOVAL



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 carefully 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.

CAUTION:

•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.

•Do not apply any lubricant to any component of the pressure switch.

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ORDERING INFORMATION

MODEL	CODE
PS40-1	SY1340403
PS40-2	SY1340404

Specify:

Model	
Quantity	
Number of contacts	

AG FIRE SPRINKLER

AG Fire Sprinkler offers a wide selection of components. Then a list of products is presented by AG Fire Sprinkler, we can offer all these components, made with precision to protect people, anywhere, anytime.

- Sprinklers
  - Standard Coverage
  - Extended Coverage
  - Storage
  - Dry
  - Accessories
- System Valves
  - Wet
  - Dry
  - Preaction Equipment
  - Accessories
- Spray System Open Nozzles
  - High Velocity Nozzles
  - Medium Velocity Nozzles
  - Window Nozzles
  - Hydroshield Nozzles
  - Mushroom Type Nozzles
- Foam equipment
  - Tanks
  - Proportioners
  - Foam Discharge Equipment
  - Foam Concentrates
- Deluge equipment for Water Spray and Foam
  - Clapper Deluge Valves
  - Diaphragm Deluge Valves
- Monitors
  - Manual Monitors
  - Remote Monitors
  - Monitor Nozzles
  - Towers and Trolleys
- Valves
  - Butterfly Valves
  - Gate Valves
  - Check Valves
  - Pressure Control Valves
  - Test and Drain
  - Hose, Hydrant and Fire Connection Valves
  - Fire Department Connections

The equipment presented in this data sheet is to be installed in accordance with the latest published Standards of the national fire protection association (NFPA), FM Global, LPCB, VdS or other similar organizations, also with the provisions of governmental codes or ordinances whenever applicable.
This documentation is not contractual. AG Fire Sprinkler reserves the right to any kind of change without notice.

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