

Series SWT Pressure Switch

Corrosion-Resistant Design with No Wetted Metals or Elastomers



Features:

- PTFE diaphragm with no wetted metals or elastomer.
- PVC, CPVC, Natural Polypro or PVDF body; 1/2" NPT connection. For alternate connections consult factory.
- Adjusts easily with adjusting screw.
- Maximum operating pressure of 150 PSI via three easy-to-change spring ranges.
- NEMA 4X design and patented Fail-Dry® enhance system safety.
- Electrical switch is UL recognized and CSA approved.
- Corrosion-resistant plastic cord grip and 18" cable simplify installation.
- Better piston design and piston guidance vs. competition enhances reliability and accuracy.
- Tested to 1,000,000 cycles in laboratory conditions.
- Versatile snap-action 16 Amp/3 terminal switch is standard; 25 Amp and low deadband 3 Amp switches optional.

How It Works:

The Plast-O-Matic Series SWT Pressure Switch can be used to activate or de-activate equipment when pressure in a piping system either rises or falls to a set pressure. Liquid in the piping system acts against a PTFE diaphragm. The diaphragm works against a piston and spring, which triggers an electrical switch within the upper chamber of the unit. Spring pressure is set by simply threading the adjusting screw in and out.

Series SWT contains a snap-action electric switch with three terminals. One is common, one is normally-open, and one is normally-closed. The normally-open switch will close upon reaching the set pressure, and the normally-closed switch will

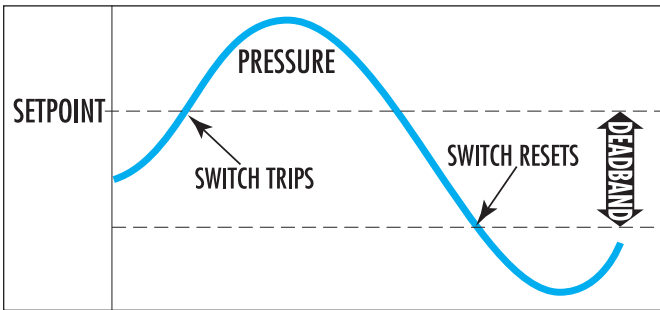
open when set pressure is reached. Set pressure can be reached by higher system pressure falling to the set value, or when lower system pressure rises to the set value.

As an example, the switch can be set to actuate at 50 PSI, rising pressure (switch actuates when pressure rises to 50 PSI). When the pressure rises to 50 PSI the normally-open contact will close, and the normally-closed contact will open. Therefore, depending on how the switch is wired, a light, or a pump, etc. can be energized or de-energized... or one item could be energized and another de-energized at the same moment. As the pressure continues to rise, no further changes occur.

SERIES SWT PRESSURE SWITCH

Hysteresis:

If and when the pressure decreases, the switch will reverse, but not at 50 PSI. Because of hysteresis (also known as “deadband”), the reversal will occur at approximately 40% lower pressure.



Deadband helps to prevent oscillation or “hunting”. In other words, without sufficient deadband, the switch will be actuating and de-actuating too often. For applications where it is critical to de-actuate with less deadband, a 3 Amp switch is available. See specifications below.

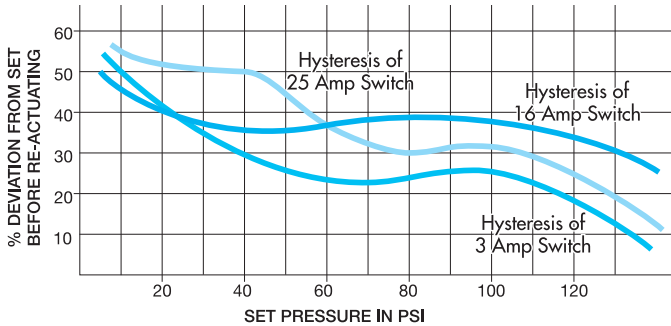


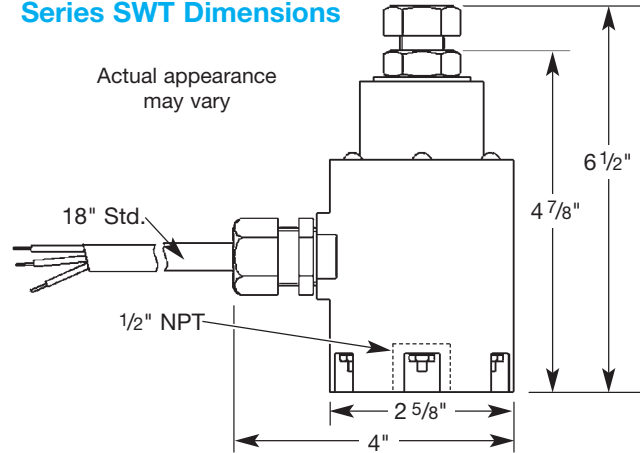
Chart shows hysteresis or “deadband” as a percentage of set pressure. Shows where electrical switch will de-actuate under falling pressure, after actuating at set pressure. This chart is a reasonable approximation of performance under laboratory conditions.

Installation:

The SWT can be mounted in any orientation. Performance may vary if the SWT is set in one orientation and changed to another; it should be set in the orientation in which it will be used (rising or falling pressure).

The SWT has been laboratory tested to 1,000,000 cycles. Cycle life in field use may vary due to amperage, chemical attack, temperature and pressure variations, or other environmental factors. For example, using the switch at its maximum amperage rating will dramatically reduce the life of the electrical switch. The electrical switch is readily replaceable.

Series SWT Dimensions



Series SWT Specifications

Part Number	Pipe Size NPT	Seal Material	Amperage
SWT050T-16A-PV	1/2" NPT	PTFE	16
SWT050T-25A-PV	1/2" NPT	PTFE	25
SWT050T-3A-PV	1/2" NPT	PTFE	3

Part numbers shown with PVC body. For CPVC, change -PV suffix to -CP; for Natural Polypro, change to -PP, for PVDF change to -PF.

ADDITIONAL SPECIFICATIONS

Wetted Parts	PTFE diaphragm with choice of Geon® PVC, Corzan® CPVC, Natural Polypropylene or Kynar® PVDF
Non-Wetted Parts	PVC, Stainless Steel, Ethylene Propylene Rubber, Nylon, Buna-Nitrile
Pressure Rating	Maximum 150 PSI @ 70°F
Operating Pressure	3 Ranges: 15-50 PSI, 50-100 PSI, 100-150 PSI according to the spring installed. All three springs are included, the middle range (50-100) is installed by the factory unless otherwise specified.
Standard 16 Amp. Switch Rating	16 Amps @ 125 VAC, 1/3 HP; 6 Amps @ 250 VAC, 1/2 HP. UL Recognized and CSA Approved.
Optional 3 Amp Switch Rating	3 Amps @ 125 VAC and 250 VAC. UL Recognized and CSA Approved.
Optional 25 Amp Switch Rating	25 Amps @ 125 VAC, 1 HP; 25 Amps @ 250 VAC, 2 HP. UL Recognized and CSA Approved.
Electrical Cable	18" 3-wire stranded copper cable with .015 PVC jacket indoor/outdoor, unshielded, 90°C, 600 volts. UL Recognized

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