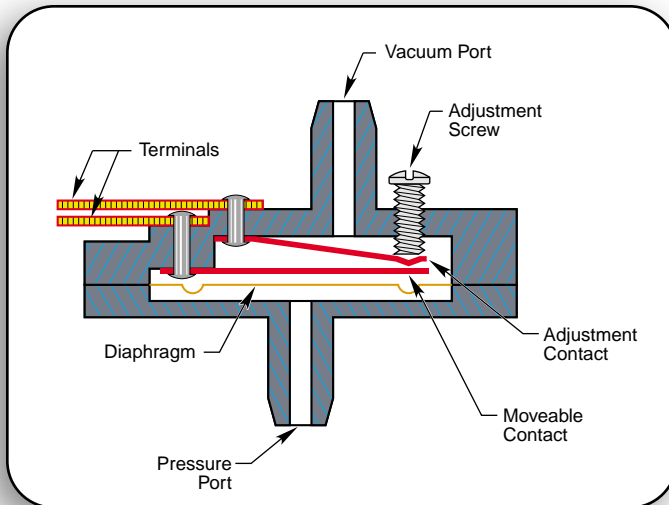


How They Work



MPL 500 Series

Fluid pressure acting against the diaphragm causes the cantilevered (moving) contact blade to deflect. The amount of deflection is a function of contact thickness and pressure.

The moving blade deflects until it contacts the points of the adjustment (fixed) blade, completing the circuit. The relative position of the blades can be changed with an adjustment screw.

In a pressure switch, the medium is connected to the side of the diaphragm opposite the contacts (see drawing, above). As pressure rises, the diaphragm is pushed against the moving contact blade.

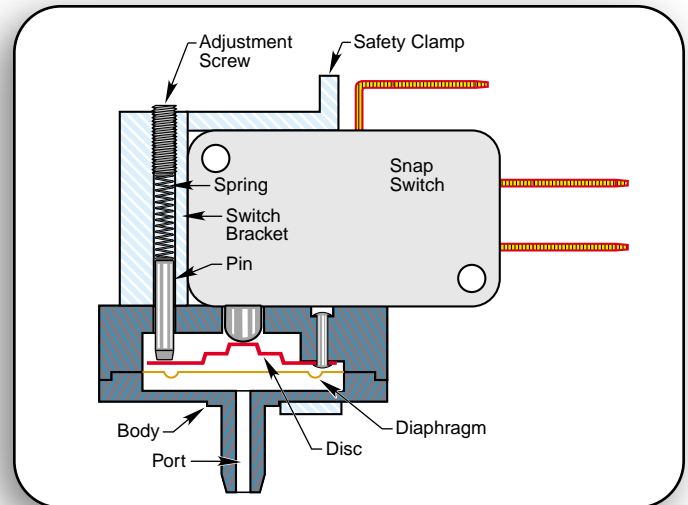
In a vacuum switch, the medium is connected to the same side of the diaphragm as the contacts. As vacuum increases, the diaphragm is drawn against the moving contact blade.

In a differential pressure switch, the medium is connected to both sides of the switch. The diaphragm is either pushed or drawn, depending on the changing differential between the two pressure (or vacuum) sources.

Because there are no sliding or levering parts, as with a snap-action switch, the **MPL 500 Series** switches have virtually no “deadband”, or on-to-off mechanical differential.

Custom Sensing & Switching Solutions

Specialized OEM applications may employ piston, magnetic, flex circuit, transducer, or other means of sensing and switching. Contact *MPL* for details.



MPL 600 Series

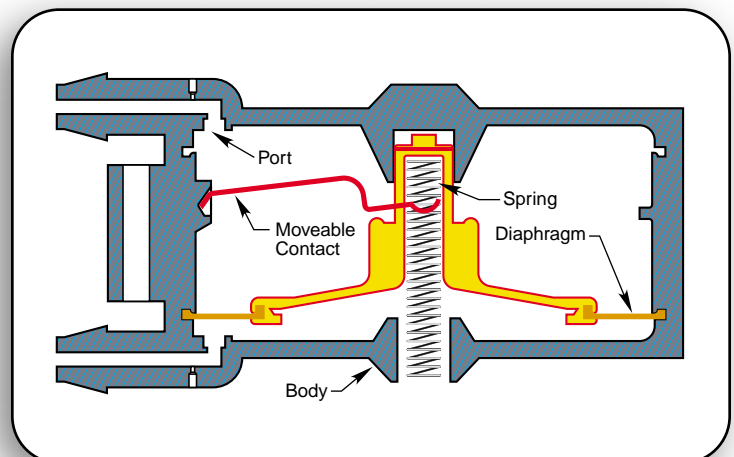
Fluid pressure acting against the diaphragm causes a guide disk to push against the actuator button of a snap-action switch. The disk has a stop to prevent overtravel of the actuator.

Adjustment of the setpoint is provided by an adjustment screw and compression spring, acting against the force of the diaphragm.

Because of the action of the snap switch, the **MPL 600 Series** switches do have a “deadband”, which most designers utilize in their circuit logic.

MPL 9300 Series

Mechanically, the **MPL 9300** is similar to the MPL 600. However, the snap action switch is built into a specialized housing, which allows pressure, vacuum, and differential configurations around an oversized, more sensitive diaphragm.



MPL 600 Series

MPL 600 Series switches offer pressure or vacuum sensors which combine the features of the **MPL 500 Series** with snap action switching for higher current capacity, SPDT contact form, and switch deadbands (also referred to as mechanical differential or hysteresis). Miniature size and low cost make the **MPL 600 Series** ideal for OEM applications.

Description

MPL 600 Series switches utilize high-quality miniature snap-action switches. Like the **500 Series** all are diaphragm operated. Diaphragm material can be selected for the operating medium, temperature range, and other parameters.

During the development of a specification, actuation point can be adjusted by the designer. In production, factory setting is required.

MPL 600, 601, and 602 are single setting models.

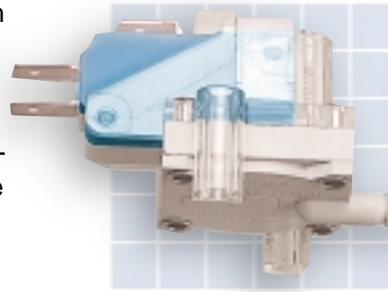
MPL-604 offers two micro switches, each operated by an independent diaphragm

Specifications

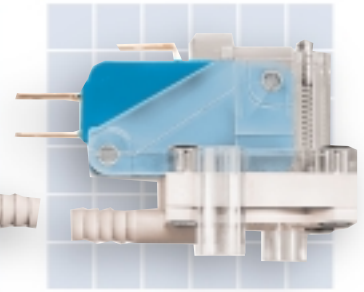
- Body:** glass-filled polyester, grade SEO, standard
- Diaphragm:** polyurethane, fluorosilicone, EPDM, Teflon®, and other materials available
- Snap Switch:** UL & CSA listed, wide selection
- Operating Temperature:** -40° to 85°C (-40° to 185°F), depending on components. Consult factory.
- Operating Pressure:**
Pressure: 1.50 in/H₂O to 45 psi
Vacuum: 4.0 in/H₂O to 14 psi
- Burst:** 45 psi
- Life:** **Mechanical:** Over 1,000,000 cycles
Electrical: depending upon application
- Form:** SPDT
- Resistance:** 1 ohm maximum
- Weight:** 18 grams (MPL-600); 24g (600-V) 45g (604).

Electrical

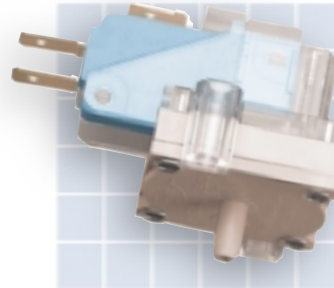
MPL 600 switches are designed for heavy current loads. Depending on pressure setting, ratings are available from 3A to 25A, and 0.1HP to 1.0HP. For low-current applications, special contacts are available for milliamp loads.



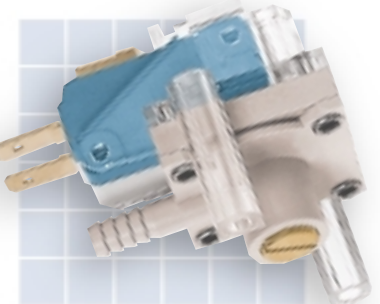
MPL 600



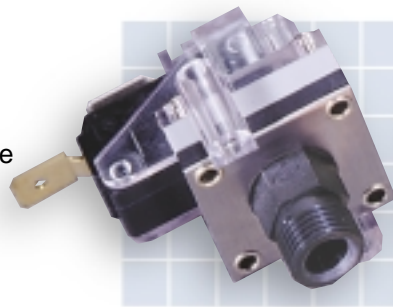
MPL 601



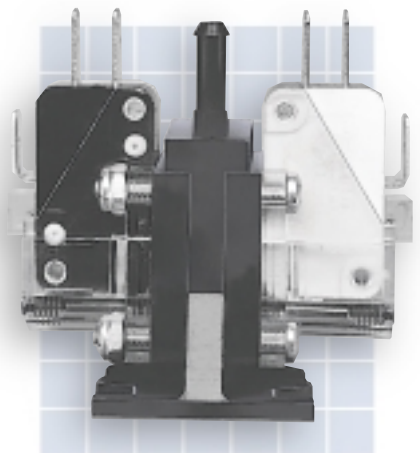
MPL 602



MPL 601 V



MPL 628



MPL 604

Terminals

Three 0.020" x 0.187" male tabs are standard (0.032" x 0.250" available). Special OEM terminals are available.

Actuation

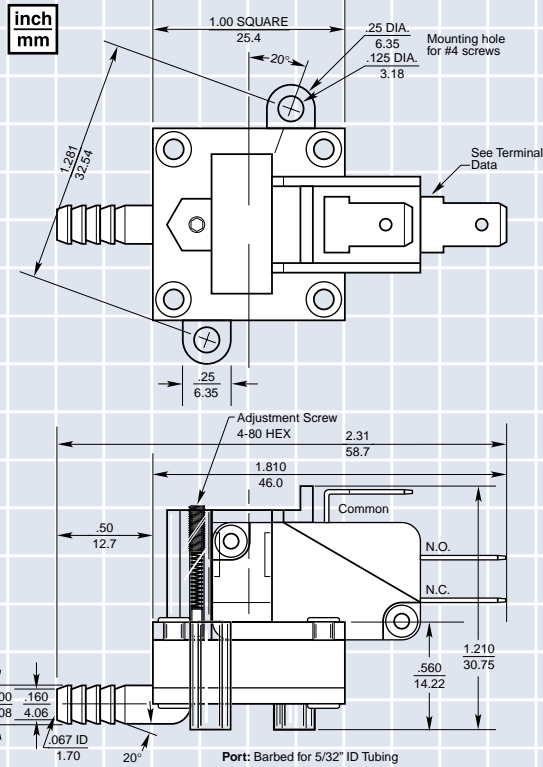
MPL 600 pressure models are available from 1.5 in/H₂O to 45 psi. Vacuum models are available from 4.0 in/H₂O to 14 psi. Tolerance is typically +/- 10% of setpoint.

Special Ports and Mounting

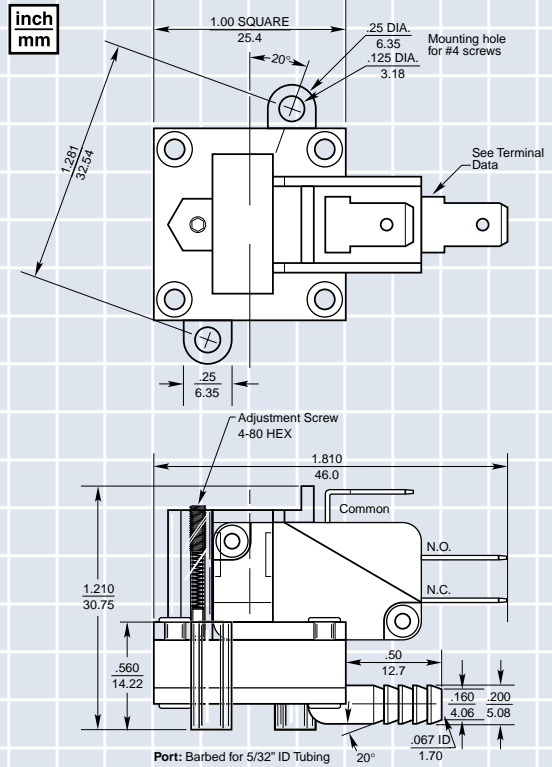
MPL 628 adds a molded (or die-cast) 1/8" NPT fitting to the model 602 features. **MPL 609** adds a 5/32" barbed brass fitting, with a nut and washer, for panel mounting.

MPL 600 Series Dimensions

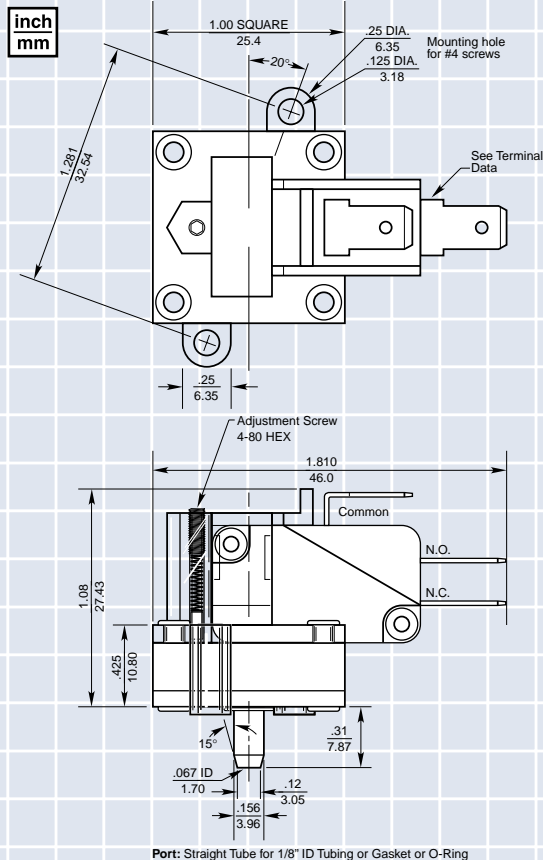
MPL 600



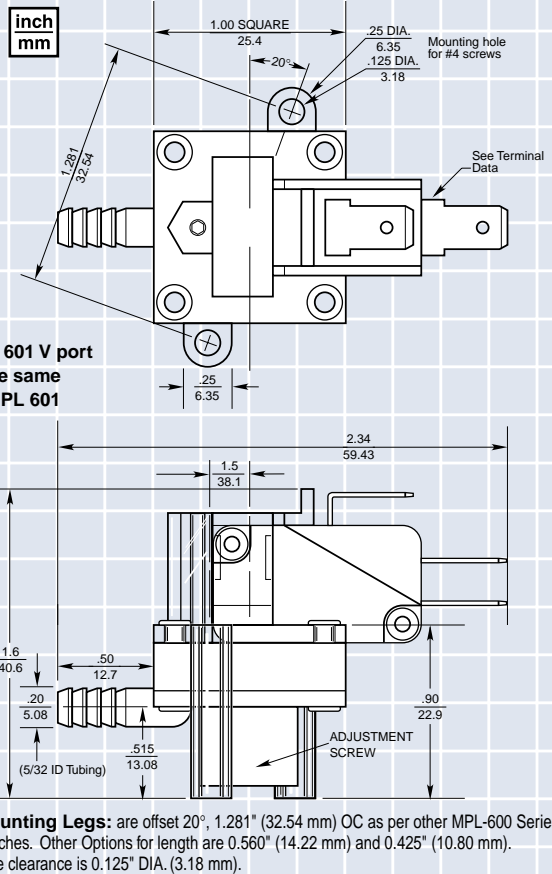
MPL 601



MPL 602



MPL 600 V



Mounting Legs: are offset 20°, 1.281" (32.54 mm) OC as per other MPL-600 Series switches. Other Options for length are 0.560" (14.22 mm) and 0.425" (10.80 mm). Hole clearance is 0.125" DIA. (3.18 mm).