Series 1800 Low Differential Pressure Switches for General Industrial Service

Specifications - Installation and Operating Instructions

Installation
1. Select a location free from excessive vibration and where oil or water will not drip upon the switch. See special housings for unusual conditions.
2. While not required, positioning the pressure connections down is recommended. Mount the switch with the diaphragm in a vertical plane. Switch with the diaphragm in a vertical plane. Switch must be recalibrated for each change in operating position.
3. Connect switch to source of pressure differential. Metal tubing with 1/4" O.D. is recommended but any tubing system which will not restrict the air flow is satisfactory. Note that the low pressure connection may be made to the 1/2" spud at the back of the switch if desired. If so connected, drill 1 1/6" diameter holes in the Spring Retainer flange and the head of Adjustment Screw to provide opening to the switch interior and plug the other low pressure connection.
4. Electrical connections to the standard single pole, double throw snap switch are screw type, SPDT. Switch Type: Single-pole double-throw (SPDT).
5. Set Point Adjustment: ±2% repeatability for enough accuracy for all but the most demanding applications. One of our most popular pressure switches. Combines small size and low price with 2% repeatability for enough accuracy for all but the most demanding applications. Note: All models are designed for a maximum of 15 amperes, continuous, 25 psig (172.4 kPa) surge.

Adjustment
1. If the switch has been factory preset, check the set-point before placing in service to assure it has not shifted in transit.
2. If switching has not been preset or it is desired to change the point, observe the following procedure:
   a. To adjust the set point turn the slotted Adjustment Screw clockwise to increase the set point and counterclockwise to decrease the set point.
   b. The following is a recommended procedure for calibrating or checking calibration: Use a "T" assembly with three rubber tubing leads, all as short as possible and the entire assembly offering minimum flow restriction. Run one lead to the pressure switch, another to a manometer of known accuracy and appropriate range, and apply pressure through the third tube. Make final approach to the set point slowly. Note the manometer and pressure switch will have different response characteristics due to different internal volumes, lengths of tubing, oil drainage, etc. Be certain the switch is checked in position it will assume in use, i.e. vertical, horizontal, etc.

Model 1823 pressure switch. UL and CSA Listed, FM and CENELEC approved.

One of our most popular pressure switches. Combines small size and low price with 2% repeatability for enough accuracy for all but the most demanding applications. Set point adjustment inside the mounting switch on one side of a wall or panel with adjustment easily accessible on the opposite side.

*Model 1823 shown; (1823 replaces 1820, 1821 and 1822 which are similar).

Environmental (MIL) Switch
Unlisted Model 1820 can be furnished with special snap switch sealed against the environment for high humidity and/or for government applications. Similar to standard Model 1823 except dead band is slightly greater. Specify Model 1820 (Range No.) "MIL" in ordering.

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SPECIFICATIONS
Service: Air and non-combustible, compatible gases.
Wetted Materials: Consult factory.
Temperature Limits: -30 to 180°F (-34 to 82°C). 1823-00, -20 to 180°F (-29.0 to 82°C).
Pressure Limits: 10 psig (68.95 kPa) continuous, 25 psig (172.4 kPa) surge.
Switch Type: Single-pole double-throw (SPDT).
Repeatability: ±2%.
Electrical Rating: Single-pole double-throw (SPDT), 60 Hz. Resistive 1/8 HP @125 VAC, 1/4 HP @ 120-480 VAC, 15 A @ 120-480 VAC.
Agency Approvals: CE, UL, CSA, FM.

Explosion-Proof Housing

Weatherproof Enclosure
16 ga. steel enclosure for unusually wet or oily conditions. Withstands 200 hour salt spray test. Gasketed cover. Weight 6 lb (2.7 kg). Switch must be installed at factory. Specify "WP" in addition to switch catalog number.
Uno de nuestros mas populares interruptores de presión. Combina un pequeño tamaño y bajo precio, con una repetibilidad del 2%, exactitud suficiente para las aplicaciones con mas demanda. El ajuste del punto de operación en un extremo, permite instalar el interruptor de un lado en las pared o tablero, permitiendo acceso al tornillo de ajuste.

Interruptor para Ambiente Húmedo (MIL)
El modelo 1820 puede ser fabricado son un sello especial a prueba de intemperie, o para aplicaciones con alta humedad. Similar al modelo 1823, excepto que la banda de operación es mayor.

Especifique el modelo 1820 (Rango No.) “Mil” en su orden.

### Model 1823 pressure switch. UL and CSA Listed, FM approved.

**Especificaciones:**

- **Interrupor para presión diferencial tipo simple polo doble tiro.**
- **Diaphragm in vertical position.**
- **Consult factory for other position orientations.**
- **For operation at high cycle rates.**
- **Air and non-combustible, compatible gases.**
- **Wetted Materials: Consult factory.**
- **Temperature Limits: -30 to 180°F (-34 to 82.2°C).**
- **Pressure Limits: 10 psig (68.95 kPa) continuous, 25 psig (172.4 kPa) surge.**
- **Switch Type: Single-pole double-throw (SPDT).**
- **Repeatability: ±2%.**
- **Electrical Rating: 15 A @ 120-480 VAC, 60 Hz. Resistive 1/8 HP @125 VAC, 1/4 HP @ 250 VAC, 60 Hz. De-rate to 10 A for operation at high cycle rates.**

**Conversion:**

- **Model 1823 pressure switch. UL and CSA Listed, FM approved.**
- **Pressure Limits: 1 to 15 psig (6.89 to 103 kPa).**
- **Operating Range: 0.15 to 5.0, 2.0 to 10, 1.5 to 5.0, 0.5 to 2.0, 0.15 to 0.5, 0.07 to 0.22, 0.06 to 0.14, 0.06 to 0.14, 0.05 to 0.13, 0.05 to 0.13.**
- **Set Point Approximate Dead Band:**
  - At Min. Set Point: 0.05, 0.06, 0.06, 0.08, 0.08, 0.10, 0.10, 0.14, 0.18, 0.35, 1.30.
  - At Max. Set Point: 0.05, 0.06, 0.06, 0.08, 0.08, 0.10, 0.12, 0.28, 0.45, 0.70, 3.0.

**Model 1823 Pressure Switch**

**Construction and dimensions. Series 1823 pressure switches.**

**Encapsulado a Prueba de Intemperie**

Encapsulado de acero para condiciones húmedas y/o acelotadas, soporta pruebas de 200 horas de spray salino, peso 5-1/2 libras. El interruptor debe ser instalado en la planta al momento de su fabricación. Especifique "WP" mas el modelo del interruptor en catalogo.

**Encapsulado a Prueba de Explosión**

Encapsulado a base de Hierro y Aluminio, peso aproximadamente 7-1/2 libras. Especifique "EXPL" mas el modelo del interruptor en catalogo.