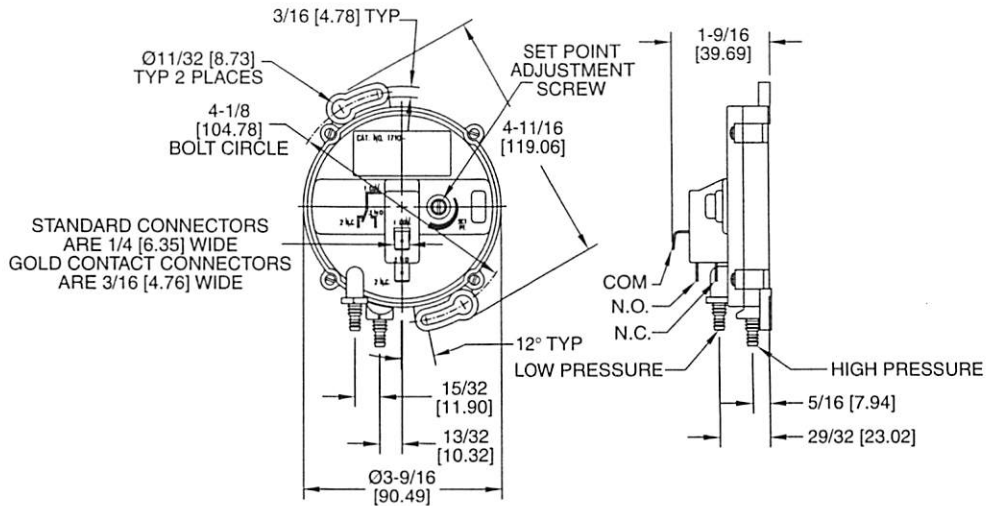
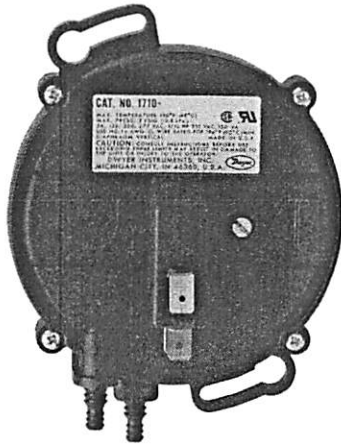




Series 1700 Differential Pressure Switch

Specifications - Installation and Operating Instructions



Series 1700 Pressure Switches
Operating Ranges and Deadbands

Model Number	Ranges Inches W.C. (MM W.C.)	Approximate Deadband	
		At Minimum Set Point	At Maximum Set Point
1710-0	.15-.55 (3.81-13.97)	0.03 (0.77)	0.06 (1.53)
1710-5	.5-7.5 (12.71-190.5)	0.10 (2.55)	0.50 (12.71)
1710-10	7.0-15.0 (177.8-381.0)	1.0 (25.4)	1.5 (38.1)

Note: 1711 models are identical to 1710 models except for a special snap switch with gold contacts designed for low current circuits. See electrical ratings.

CAUTION: USE THESE SWITCHES ONLY WITH AIR OR OTHER NON-CORROSIVE, NON-COMBUSTIBLE GASES.

INSTALLATION

- Select a location free of excessive vibration, oil or water, and corrosive or explosive gases. Ambient temperature must not exceed 190° F.
- Mount switches with diaphragm in vertical plane. If condensation is likely, connections should face down to allow drainage.
- Connect switch to source of pressure, vacuum or differential pressure. Use 1/8" or 3/16" ID vinyl or rubber tubing.
 - Differential pressure: Connect higher pressure to port marked H and lower pressure to port marked L.
 - Positive pressure only: Connect to port marked H and leave other port vented to atmosphere.
 - Negative (vacuum) pressure only: Connect to port marked L and leave other port vented to atmosphere.
- Make electrical connections to the quick connect tabs on the single pole, double throw (SPDT) snap switch. Use only matching 1/4" (F) connectors on standard switches, gold contacts use 3/16" (F) connectors. Do not solder wires directly to switch terminals as damage will result. The normally open contacts will close and the normally closed contacts will open as pressure (or vacuum) increases above the set-point.

CAUTION: Do not exceed maximum electrical rating of 5 amps resistive for Model 1710 and 0.1 amps resistive for Model 1711.

PHYSICAL DATA

- Compatibility:** Use only with air or other non-corrosive, non-combustible gases.
- Temperature Limit:** 190°F (88°C) maximum.
- Maximum Pressure:** 2 psig (14 kPa).
- Pressure Connections:** Dual size for 1/8" and 3/16" ID vinyl or rubber tubing.
- Electrical Ratings:** 1710: 5A @ 125, 250, 277 VAC, 1/10 HP @ 250 VAC, 150 VA. 1711: .1A @ 125 VAC, .1A @ 12 VDC.
- Wiring Connections:** (3) 1/4" quick connect.
- Set Point Adjustment:** External slotted head screw.
- Housing:** Glass filled PBT (polybutylene terephthalate).
- Diaphragm:** Molded silicone rubber.
- Diaphragm Plate:** Aluminum.
- Calibration Spring:** Blue spring steel.
- Weight:** 4 ounces (113 grams).
- Position:** Diaphragm vertical.

ADJUSTMENT

- To change the set-point use the following procedure.
- With the switch in the same position in which it will be used, attach tubing from the high pressure port to one leg of a tee. The second leg should be run to a manometer or pressure gage of known accuracy and in a range appropriate for the switch being set. The third leg should be connected to a controllable pressure source such as Dwyer No. A-396 calibration pump or similar device. Keep tubing lengths as short as possible to assure quick response.
 - Connect a volt/ohm meter or other circuit tester to switch contacts to indicate when switching occurs.
 - Slowly apply pressure to the system until switching occurs and note the pressure required. If adjustment is necessary, turn the set-point adjustment screw clockwise to raise or counter-clockwise to lower the actuation point. When the required setting has been reached, exercise the switch through two or three additional cycles to verify consistent operation. The first actuation of an inactive pressure switch will normally be higher than successive operations.

MAINTENANCE

The moving parts of these switches are sealed and require no periodic maintenance or lubrication. The only adjustment is that of the set-point. Care should be taken to keep the switch dry and reasonably free of dirt and dust.