



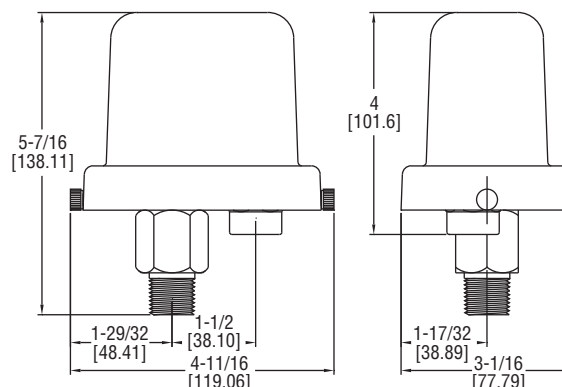
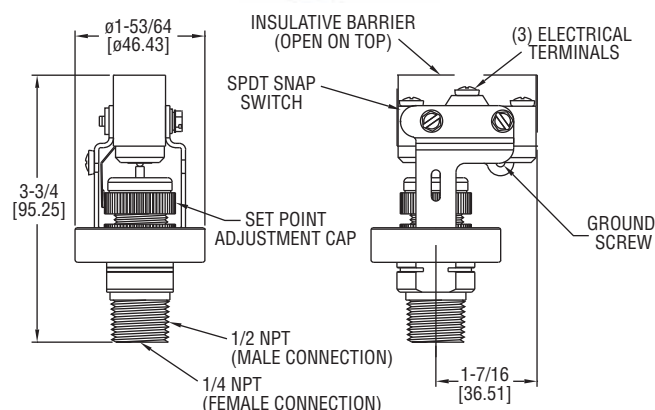
Series A1F Compact OEM Pressure Switch

Specifications - Installation and Operating Instructions

A1F



A1F with A-447



The **Series A1F Compact OEM Pressure Switch** is ideal for panel mounting wherever a high-quality, economical open-case or weatherproof control is required.

INSTALLATION

1. Location: Select a location where the temperature limits of -40 to 180°F (-40 to 82°C) will not be exceeded. Locate the switch as close as possible to the pressure source. Long lengths of piping will not affect accuracy of the actuation point but will slightly add to response time.

2. Mounting and Processing Connection: Avoid mounting surfaces with excess vibration which could cause false actuation when pressure is near setpoint. The switch should be mounted within 20° of vertical for proper operation. Mount the switch by connecting it to the process piping using either 1/4" NPT female or 1/2" male connection. Pipe joint compound or TFE thread tape should be used to prevent leakage.

3. Electrical Connections: The SPDT snap switch includes normally open, normally closed and common connections. The common and normally open contacts will close and the common and normally closed contacts will open when pressure increases to the setpoint. The actions will reverse when pressure decreases below the setpoint minus the deadband. A green grounding screw is provided on the switch bracket. All wiring should be in accordance with local codes.

SETPOINT ADJUSTMENT

1. Determine the setpoint pressure. The approximate actuation point can be set by turning the adjustment cap up or down, aligning the top of the O-ring, located above the cap, with the appropriate scale graduation.

2. Connect tubing or piping from the pressure port on bottom of switch to one leg of a tee. Connect the second leg to a pressure

SPECIFICATIONS

Service: Compatible liquids and gases.

Wetted Materials:

Pressure Chamber: 316 SS.

Diaphragm: Fluorocarbon.

Temperature Limit: -40 to 175°F (-40 to 80°C).

Pressure Limits: 750 psig (51 bar).

Enclosure Rating: No rating for open construction. Installed properly within an optional A-447 enclosure meets NEMA 4X standards.

Switch Type: SPDT snap switch.

Electrical Rating: 15A @ 120/240/480 VAC, 1/8 HP @ 125 VAC, 1/4 HP @ 250 VAC.

Electrical Connection: Screw terminals.

Process Connection: 1/4" female NPT and 1/2" male NPT.

Mounting Orientation: Within 20° of vertical.

Set Point Adjustment: Knurled screw cap with indicating scale.

Deadband: Fixed, See deadband chart.

Weight: 10.5 oz (297 g).

test gage of known accuracy and in an appropriate range. The third leg should be connected to a controllable source of pressure.

3. Connect a volt/ohm meter or other circuit tester to the snap action terminals to indicate when switching occurs.

4. Slowly apply pressure to the system and note the pressure at which switching occurs.

5. Operate the switch through several cycles to confirm proper actuation point.

6. Remove test apparatus and attach switch to pressure source and control circuit wiring. Place switch in service.

Example of how to order:

A1F - Q - SS - 1 - 4
1 2 3 4 5

1. Diaphragm Designation:
F - Fluorocarbon
2. Enclosure Designation:
O - Open Construction No Enclosure
3. Housing Material Designation:
SS - 316SS
4. Switch Designation:
1 - SPDT Snap Action Switch
5. Operating Pressure Range Designation:
1 - 2 to 15 psig
2 - 4 to 75 psig
3 - 8 to 225 psig
4 - 16 to 450 psig

Series A1F Deadband Chart-psig (bar)

Range	Deadband at Minimum Range	Deadband at Maximum Range
2 to 15 (0.14 to 1.03)	2 (0.14)	3 (0.21)
4 to 75 (0.28 to 5.17)	4 (0.27)	15 (1.0)
8 to 225 (0.55 to 15.5)	8 (0.55)	25 (1.7)
16 to 450 (1.1 to 31.0)	15 (1.0)	50 (3.5)

MAINTENANCE

Upon final installation of the Series A1F Compact OEM Pressure Switch, no routine maintenance is required. A periodic check of the system calibration is recommended. The Series A1F is not field serviceable and should be returned if repair is needed (field repair should not be attempted and may void warranty). Be sure to include a brief description of the problem plus any relevant application notes. Contact customer service to receive a return goods authorization number before shipping.

