Differential Pressure Switches

Series 1950G-XX-B-24-NA
Series 1950G-XX-B-240-NA, 240 VAC
Series 1950G-XX-B-120-NA, 120 VAC

Dwyer® Series 1950 Pressure Switch with the benefit of natural gas compatibility. Units are Easy access to the SPDT relay and power supply terminals is provided by removing the top of equivalent conventional explosion-proof switches.

+ H2 T6 (-40°C < Ta < +60°C). The 1950G is very compact, about half the weight and bulk of other explosion-proof or weather-proof switches with separate enclosures.

Adjustment to the set point of the switch can be made without disassembly of the housing. A captive screw allows the cover to swing aside while remaining attached to the unit.

A supply voltage of 24 VDC, 120 or 240 VAC is required. Model 1950 Explosion-Proof Differential Pressure Switch


Model 1950G Explosion-Proof Differential Pressure Switch combines the best features of the popular Dwyer® Series 1900 Pressure Switch with an integral explosion-proof and weatherproof housing, making it an exceptional value for either application. It is CE, UL and CSA listed, FM approved for use in Class I, Div I; Groups C and D; Class II Groups E, F, and G and Class III hazardous atmospheres (NEMA 7 & 9), Rainight NEMA 3 (IP54). Weatherproof features include a drain plug and O-ring seal in cover. Electrical connections are easily made by removing front cover. For convenience the set point adjustment screw is located on the outside of the housing. Twelve models offer set points from .03 to 20 in w.c. (7.5 to 5.0 kPa) and from .5 to 50 psi (3.5 to 3.45 bar). The unit is very light and compact — about half the weight and bulk of other explosion-proof or weatherproof switches with separate enclosures.

Series 1950 Switches - Operating Ranges and Dead Bands

<table>
<thead>
<tr>
<th>Model</th>
<th>Range, in w.c.</th>
<th>Approximate Dead Band at</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950-02-2</td>
<td>0.03 to 0.10</td>
<td>.025</td>
<td>.05</td>
</tr>
<tr>
<td>1950-00-2</td>
<td>0.07 to 0.15</td>
<td>.04</td>
<td>.05</td>
</tr>
<tr>
<td>1950-05-2</td>
<td>0.15 to 0.50</td>
<td>.10</td>
<td>.15</td>
</tr>
<tr>
<td>1950-12-2</td>
<td>0.5 to 1.6</td>
<td>.15</td>
<td>.20</td>
</tr>
<tr>
<td>1950-25-2</td>
<td>1.6 to 5.5</td>
<td>.30</td>
<td>.40</td>
</tr>
<tr>
<td>1950-50-2</td>
<td>5.5 to 11</td>
<td>.40</td>
<td>.50</td>
</tr>
<tr>
<td>1950-100-2</td>
<td>11 to 20</td>
<td>.60</td>
<td>.80</td>
</tr>
</tbody>
</table>

Series 1950 Switches - Specifications

- **Service:** Air and non-combustible, compatible gases.
- **Wetted Materials:** Contact factory.
- **Temperature Limits:** -40°F to 140°F (-40°C to 60°C), 0 to 140°F (17.8 to 60°C) for 1950P-8, 15, 25, and 50 psi (0.69 bar) surge. 1950P-50 only -70 psi (4.83 bar), Surge: 1950P's -10 psi (0.69 bar), 1950P-50 -50 psi (3.45 bar), 1950P-50 only -90 psi (6.21 bar).
- **Rating:** NEMA 3 (IP54), NEMA 7 & 9.
- **Switch Type:** Single-pole double-throw (SPDT).
- **Electrical Rating:** 1 A @ 125, 250, 480 VAC, 60 Hz. Resistive 1/8 HP @ 125 VAC, 1/4 HP @ 250 VAC, 60 Hz.
- **Electrical Connections:** 3 screw type, common, normally open and normally closed.
- **Process Connections:** 1/8” female NPT. Diaphragm in vertical position. Consult factory for other position orientations.
- **Set Point Adjustment:** Screw type on top of housing.

**Applications with hazardous atmospheres and a single positive pressure may require special venting.**

<table>
<thead>
<tr>
<th>Model</th>
<th>Range, psid</th>
<th>Approximate Dead Band at</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950P-2-2F</td>
<td>0.5 to 2</td>
<td>.3</td>
<td>.3</td>
</tr>
<tr>
<td>1950P-5-2F</td>
<td>1.5 to 5</td>
<td>.9</td>
<td>.9</td>
</tr>
<tr>
<td>1950P-15-2F</td>
<td>5 to 15</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>1950P-25-2F</td>
<td>15 to 25</td>
<td>1.5</td>
<td>1.5</td>
</tr>
</tbody>
</table>

**Model 1950G Explosion-proof Differential Pressure Switch**

**Explosion-proof, Weatherproof, Compatible with Natural Gases**

The Model 1950G Explosion-Proof Switch combines the best features of the popular Dwyer Series 1950 Pressure Switch with the benefit of natural gas compatibility. Units are rain-tight for outdoor installations, and are UL listed for use in Class I, Groups A, B, C, & D; Class II, Groups E, F, G; and Class III atmospheres, Directive 94/9/EC (ATEX) Compliant for CE II 2G Exd IIB + H2 T6, CSA & FM approved for Class I, Div 1, Groups B, C, D; Class II, Div 1, Groups E, F, G and Class III atmospheres IECEx Exd IIB + H2 T6 (-40°C < Ta < +60°C). The 1950G is very compact, about half the weight and bulk of equivalent conventional explosion-proof switches.

Easy access to the SPDT relay and power supply terminals is provided by removing the top plate of the aluminum housing. A captive screw allows the cover to swing aside while remaining attached to the unit. Adjustment to the set point of the switch can be made without disassembly of the housing.

A captive screw allows the cover to swing aside while remaining attached to the unit. Adjustment to the set point of the switch can be made without disassembly of the housing.


The Model 1950G Explosion-Proof Switch combines the best features of the popular Dwyer® Series 1950 Pressure Switch with the benefit of natural gas compatibility. Units are rain-tight for outdoor installations, and are UL listed for use in Class I, Groups A, B, C, and D, Class II, Groups E, F, and G; and Class III atmospheres. Directive 94/9/EC (ATEX) Compliant for EU II 2G Exd IIB + H2 T6, CSA & FM approved for Class I, Div 1, Groups B, C, D; Class II, Div 1, Groups E, F, G and Class III atmospheres. The 1950G is very compact, about half the weight and bulk of other explosion-proof or weather-proof switches with separate enclosures.

Adjustment to the set point of the switch can be made without disassembly of the housing. A captive screw allows the cover to swing aside while remaining attached to the unit. Adjustments to the set point of the switch can be made without disassembly of the housing.

Series 1950G-XX-B-24-NA
Series 1950G-XX-B-240-NA, 240 VAC
Series 1950G-XX-B-120-NA, 120 VAC

**Specifications**

- **Service:** Air and compatible combustible gases.
- **Wetted Materials:** Contact factory.
- **Temperature Limits:** 0 to 140°F (-17 to 60°C).
- **Set Point Drift:** May occur with ambient temperature changes.
- **Pressure Limits:** 45 in w.c. (11.2 kPa) surge, 10 psi (68.95 kPa) surge.
- **Enclosure Rating:** NEMA 3 (IP54).
- **Switch Type:** 1 Form C relay (SPDT).
- **Electrical Rating:** 10A, 120/240 VAC, 28 VDC. Resistive 50 mA, 125 VDC.

**Power Requirements:** 24 VDC ±10%. 120 or 240 VAC ±10% optional.

- **Electrical Connections:** Internal terminal block.
- **Process Connections:** 1/8” female NPT.
- **Mounting Orientation:** Diaphragm in vertical position. Consult factory for other position orientations.
- **Set Point Adjustment:** Screw type on top of housing.
- **Weight:** 2 lb, 15.7 oz (1.35 kg).

**Agency Approvals:** CE, CSA, FM, IECEx, US.