



CustomControlSensors

# Hazardous Areas Adjustable Pressure Switch

## 6900PE\* - Piston Sensor

### DESCRIPTION



- Highly reliable devices utilizing the CCS Dual-Snap® Belleville disc spring principle pioneered by CCS' engineers.
- Engineering based on aerospace technology.
- Rigid, compact and internally adjustable for convenient field set point adjustment.
- Repeatable and stable set points.
- Vibration and shock resistant.
- High cycle life.
- High over-pressure capability. (System and Proof)
- Certified explosion proof hermetically sealed electrical assembly for environmental protection.
- Various options for wetted materials and electrical ratings to meet a wide range of application requirements and media compatibility.

SHIPPING WEIGHT: APPROXIMATELY 16 OUNCES (467 GRAMS)

### SERIES:

6900PE\*

### ADJUSTABLE SET POINT RANGE:

5 to 16,000 PSIG  
0.34 to 1,103 bar  
34.47 to 110,316 kPa

### OPERATING TEMPERATURE:

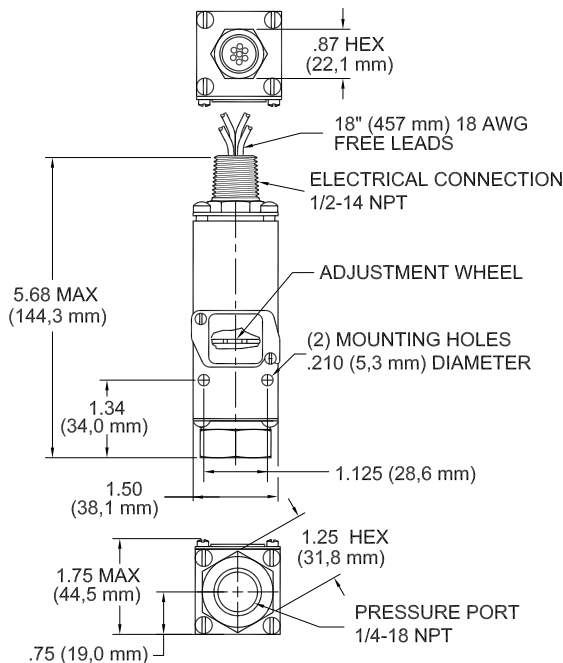
Temperature limits change with O-ring selection.

-40° to 186°F  
-40° to 86°C

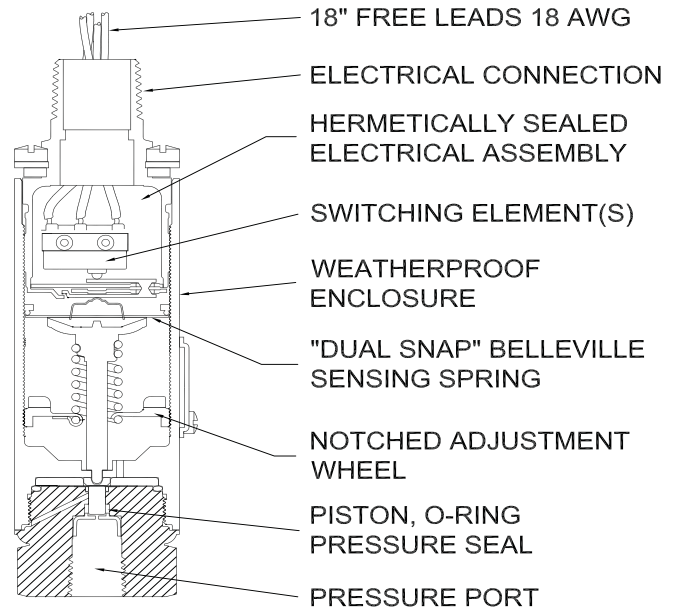
### STANDARD FEATURES:

- Hermetically Sealed Electrical Assembly
- 316 SST Electrical Assembly
- CE Mark
- Dual Seal: ANSI/ISA-12.27.01
- NACE MR0175 / ISO 15156
- NEMA: 4, 7, 9,13 / IP66
- U.L. / CSA Listed

### INSTALLATION DRAWING



### DESIGN PRINCIPLES



### SERIES 6900PE

**FIELD SETTING:** Loosen access cover. Adjust adjustment screw using screwdriver slot as illustrated, then attach to a variable pressure source with a suitable gage, and check that the circuit continuity operates at the pressures desired. Clockwise to increase settings. Counterclockwise to decrease setting.

**NOTE:** DO NOT USE ELECTRICAL HEX FOR TORQUING.



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### OPERATING AND ORDERING DATA

| SERIES<br>6900PE* | PISTON PRESSURE SWITCH FOR HIGH CYCLING-LONG LIFE-HYDRAULIC APPLICATION<br>WETTED PARTS: 1/4"-18 NPT ALUMINUM PRESSURE PORT,<br>400 STAINLESS STEEL PISTON, BUNA N O-RING / TEFLON |   |                                      |                                     |                                    |
|-------------------|--|---|--------------------------------------|-------------------------------------|------------------------------------|
|                   | ADJUSTABLE SET POINT RANGE   |   | APPROX.<br>DEAD BAND<br>PSI<br>(BAR) | SYSTEM<br>PRESSURE<br>PSIG<br>(BAR) | PROOF<br>PRESSURE<br>PSIG<br>(BAR) |
|                   | INCREASING<br>PRESSURE<br>PSIG<br>(BAR)  | DECREASING<br>PRESSURE<br>PSIG<br>(BAR) |                                      |                                     |                                    |
| 6900PE*32         | 15-200<br>(1.03-13.8)  | 5-190<br>(0.35-13.1)                    | 10<br>(0.7)                          | 2000<br>(138)                       | 3000<br>(207)                      |
| 6900PE*34         | 150-1600<br>(10.3-110)   | 40-1490<br>(2.8-103)                    | 110<br>(7.6)                         | 3000<br>(207)                       | 5000<br>(345)                      |
| 6900PE*36         | 500-3200<br>(34.5-221)   | 330-3030<br>(22.8-209)                  | 170<br>(11.7)                        | 5000<br>(345)                       | 7500<br>(517)                      |
| 6900PE*38         | 2000-6500<br>(138-448)   | 1500-6000<br>(103-414)                  | 500<br>(34.5)                        | 10000<br>(689)                      | 13000<br>(896)                     |
|                   | WETTED PARTS: 7/16"-20 UNF 316 STAINLESS STEEL PRESSURE PORT & PISTON,<br>BUNA N O-RING / TEFLON   |   |                                      |                                     |                                    |
| 6900PE*40         | 5000-11000<br>(345-758)  | 4850-9500<br>(334-655)                  | 1500<br>(103)                        | 14000<br>(965)                      | 20000<br>(1379)                    |
| 6900PE*42         | 10000-16000<br>(690-1103)  | 7500-13500<br>(517-931)                 | 2500<br>(172)                        | 17000<br>(1172)                     | 25000<br>(1724)                    |

### HOW TO ORDER

- Follow these steps to build your part number:
1. Specify the series based on your required set point, range, dead band, system pressure and proof pressure.
  2. Add desired options model code letter.
  3. Add the applicable standard suffix number.  
(Ex: 6900PEMY36-7038)

### PRESSURE CONVERSION

1 BAR = 14.5 PSI  
1 kPa = 0.145 PSI

### OPTIONS MODEL CODES

- A:** Viton® O-Ring
- F:** Ethylene Propylene O-Ring
- M:** DPDT Electrical
- Y:** ATEX / GOST Certified Electrical Assembly (Consult CCS Sales Department for GOST options and requirements.)

### OPTIONAL STANDARD MODIFIED SUFFIXES

- 7008:** Gold Contacts
- 7038:** Stainless Steel Port and Piston (STD on range 40 & 42)
- 7042:** Stainless Steel Body
- 7054:** 2 Meter Free Leads
- 7076:** 18 inch Teflon Free Leads (Low Temp Wire)
- 7081:** M20 Explosion Proof Electrical Conduit Connection
- 7082:** 316 SST Port, Piston & Body, E.N.P. Front cover & Locks. 1/4-18 NPT Female Pressure port.
- 7085:** 316 SST Port, Piston & Body, E.N.P. Front cover & Locks. 1/4-18 NPT Female Pressure port. 2 Meter Free Leads.
- 7088:** 1/4" -18 NPT Female 316 Stainless Steel Pressure Port
- 7089:** 1/2" -14 NPT Male 316 Stainless Steel Pressure Port

Note: Additional modified standard suffixes are available, consult CCS sales department or CCS Representative.

### ELECTRICAL ENCLOSURE CERTIFICATIONS

- \* c-UL, U.L./CSA Explosion Proof: Div. 1, 2 hermetically sealed electrical assembly P/N 46-1058 (46-1061 for M model option), listed by both Underwriter's Laboratories, Inc. (File No. E32961) and Canadian Standard Association (CSA) Testing Laboratories (File No. LR22921) for hazardous locations, Class 1, Groups A, B, C, and D; Class 2 Groups E, F, and G.
- \* ATEX certified for potentially explosive atmospheres electrical assembly series 46-XXXXXXX, Models 6\*\*\*\*\*, Ex d IIC T6, Directive 94/9/EC Sira #08ATEX1046X. (Option Y)
- \* IECEx - SIRA certified, SIR 10,0193X (Option Y)

### CERTIFICATIONS

Consult CCS website for complete certification and approval listing.

### ELECTRICAL CHARACTERISTICS SCHEMATIC AND WIRING CODE

| VOLTS              | AMPERES |          |
|--------------------|---------|----------|
|                    | SPDT    | DPDT "M" |
|                    | Res.    | Res.     |
| 125 AC - 50/60 Hz  | 11      | 11       |
| 250 AC - 50/60 Hz  | 11      | 11       |
| 30 DC              | 5       | 5        |
| 125 DC             | .5      | .5       |
| *125 AC - 50/60 Hz | 1 max   | 1 max    |
| *30 DC             | 1 max   | 1 max    |

\*Gold Contacts -7008 Suffix

