



ELECTRONIC PRESSURE MEASUREMENT PRODUCTS

Model IPS Semiconductor Gas Indicating Pressure Switch

DESCRIPTION

The IPS Indicating Pressure Switch is designed to provide economical pressure monitoring with setpoint indication of the high purity, toxic and corrosive gases used in the semiconductor manufacturing industry.

In addition to providing accurate ($\pm 2\%$ of span) indication of gas pressure, this 2 inch diameter instrument incorporates a magnetically actuated, hermetically sealed reed switch capable of operating low voltage annunciators, lights or relays. When used with the appropriate pull-up or pull-down resistors, the monitor can be connected to the input port of a microprocessor or to a logic network. It may also be used as an input to a programmable controller.

Moving the index on the front dial to the desired set point sets the switch. A small magnet fastened to the indicating pointer actuates the switch. A magnetic latch on the switch permits the switch to remain "on" or "off" after the pointer passes the operating point, without restraint on the indicating pointer.

The switch action is configurable to close on increasing pressure (HA) or close on decreasing pressure (LA). In both models, the user can change the switch action by removing the front bezel, loosening the pointer screw, and flipping the pointer over. The switch action will be noted on the tail of the pointer.

The IPS Pressure Switch offers the ease of adjustment and economy that permits field use of several units covering a variety of pressure range set-points. It is also a low cost alternative to analog transducers with A/D conversion for digital input to PLCs and microprocessors.

The IPS Pressure Switch provides many advantages over other instruments, including: fast, easy, accurate setting of set points; pressure and setpoint indication on the same dial face; quick, at a glance monitoring of the pressure and setpoint, and substantial cost savings to the end user.

FEATURES

- Operates low voltage audible/visual alarms and relays
- No switch input power required
- Provides input to logic networks, microprocessors and PLCs
- Intrinsically safe apparatus when connected to approved barrier
- Available in low mount and center-back mount configuration
- Available with face seal fittings, tube stub or NPT connections
- Switch setpoint adjustments accessible from front of monitor
- Switch setting may be adjusted on or off-line
- User selectable switch action
- Type 316L stainless steel internal surfaces
- 10 Ra surface finish on face seal connections
- Polished stainless steel outer case and window ring
- Helium leak tested to 10^{-9} scc/sec
- Cleaned and packaged for high purity gas applications, exceeds ANSI B40.1
- Immune to EMI fields

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SPECIFICATIONS

Mechanical

Size: 2 inch diameter

Ranges (PSI or BAR):

Compound: VAC-0-30 psi,

VAC-0-60 psi, VAC-0-100 psi,

VAC-0-200 psi, VAC-0-300 psi

Note: VAC = 30 inches Hg vacuum

Gauge Pressure: 0 to 60, 100, 200, 300, 600, 1000, 2000, 3000, and 4000 psi; dual scales are available (consult factory); proof pressure is 110%

Internal Surface: Type 316L stainless steel

Case: 300 series polished stainless steel

Ring and Window: Polycarbonate window permanently retained in stainless steel ring fastened to case with 2 screws

Set Point Index: Adjustable from 5% to 80% of span

Operating Temperature: 221°F (105°C) maximum

Movement: 300 series stainless steel

Dial: Electrically insulated laminate, white background, black markings; 270° arc of graduations

Bourdon Tube: Type 316L seamless stainless steel, TIG welded

Connection: Type 316L stainless steel face seal connection or 1/4 inch NPT; low mount or center-back mount

Surface Finish: Face seal connections 10 Ra, 1/4 inch NPT connections 32 Ra, connectors shipped with protective plastic caps

Electrical

Connection: 26 AWG, Teflon® insulated, 10 foot leads; IPS-200 (2 black wires)

Maximum Power: 10 watts DC, 12 VA AC

Maximum Switching Current: 0.5 amps AC/DC noninductive (consult factory when using for inductive loads such as relays)

Maximum Switch Voltage: 28 V AC/DC

Indication Accuracy: ±2% of span

Switch Point Accuracy: Switch will operate when pressure is within ±2% span of setpoint

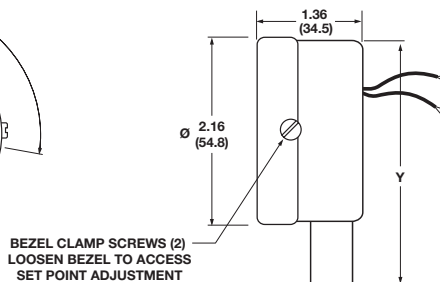
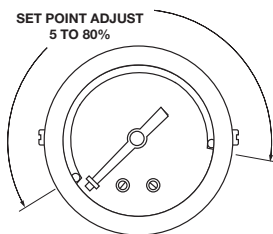
Switch Operation:

End user configurable or factory set choices of:

Closes on decreasing pressure/open on increasing pressure (LA option);

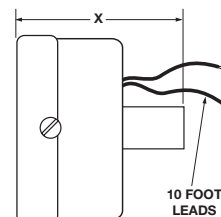
Closes on increasing pressure/opens on decreasing pressure (HA option)

Dimensions	1/4 NPT	Swivel Male Face Seal	Female Face Seal
X	2.45 (62.2)	2.94 (74.7)	2.65 (67.3)
Y	3.29 (83.6)	3.39 (86.1)	3.10 (78.7)



LOW MOUNT

INCHES
(MM)

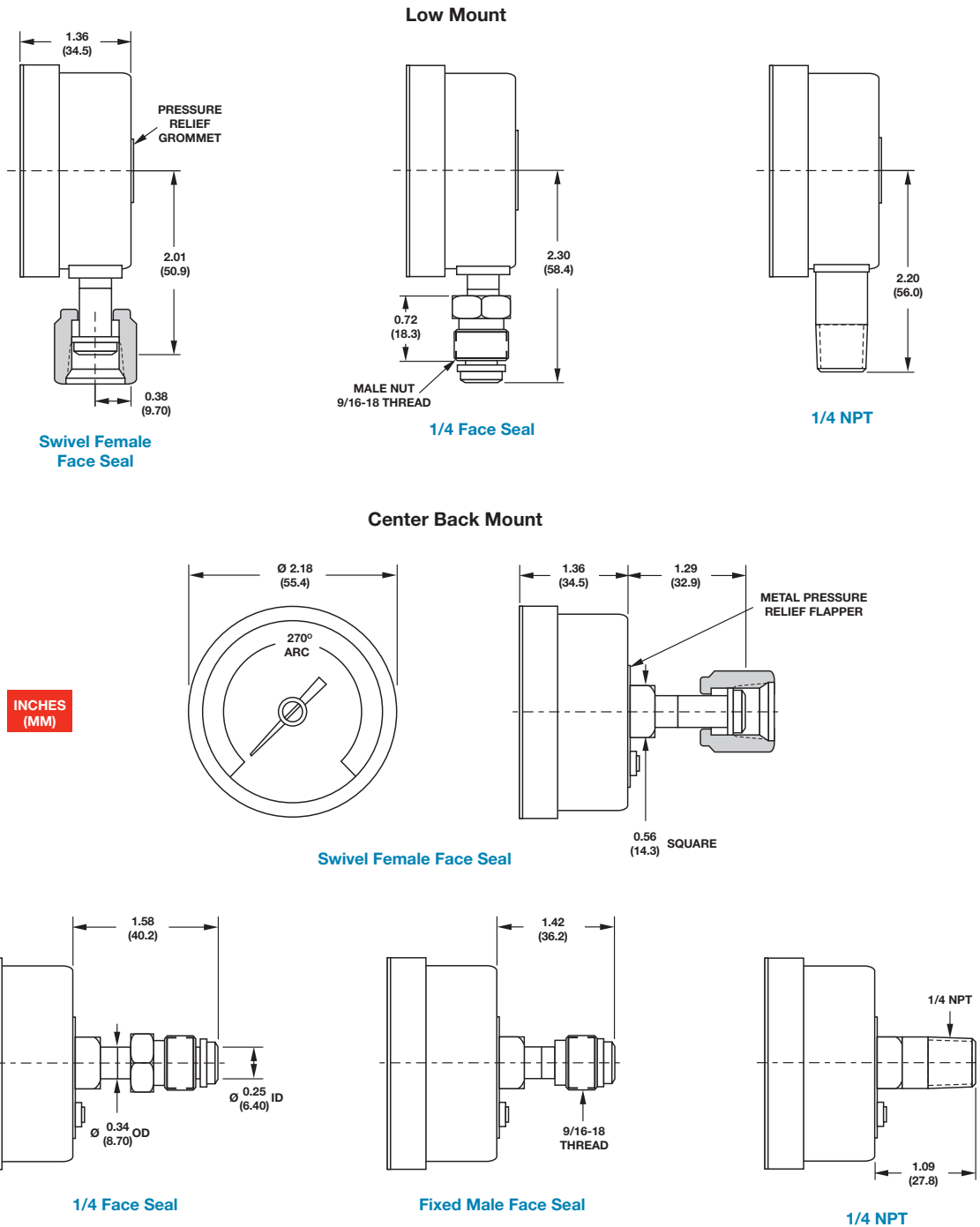


CENTER-BACK
MOUNT



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Model Numbering:	
● IPS Gas indicating pressure switch	
IPS	Indicating pressure switch
● Setpoints	
200	Single
● Switch action	
LA	Closes on decreasing pressure
HA	Closes on increasing pressure
● Pressure ranges	
0060	0 to 60 psi
0100	0 to 100 psi
0200	0 to 200 psi
0300	0 to 300 psi
0600	0 to 600 psi
1000	0 to 1000 psi
2000	0 to 2000 psi
3000	0 to 3000 psi
4000	0 to 4000 psi
V to 0 to 30	Compound (Vac to 30 psig)
V to 0 to 60	Compound (Vac to 60 psig)
V to 0 to 100	Compound (Vac to 100 psig)
V to 0 to 200	Compound (Vac to 200 psig)
V to 0 to 300	Compound (Vac to 300 psig)
● Process connection	
LM-NPT	Low mount, 1/4 NPT male
CBM-NPT	Center-back mount, 1/4 NPT male
LM-FVCR	Low mount, female face seal
LM-MVCR	Low mount, male face seal
CBM-FVCR	Center-back mount, female face seal
CBM-MVCR	Center-back mount, male face seal
IPS	
200	
LA	
0200	
LM-NPT	