

Pressure Ranges From Vacuum to 10,000 PSI



Advantages / Benefits

- ▶ Easy LINK for direct connection to Burkert control valves
- ▶ High shock and vibration resistance
- ▶ Wetted parts out of stainless steel no internal seal
- ▶ No moving parts
- ▶ Enhanced EMI
- ▶ 2 switching points closing or opening
- ▶ Accuracy <1%
- ▶ Repeatability <0.25%
- ▶ CE Approval

Design

The principle features of these pressure switches are their high long-term stability as well as their sturdy and compact construction.

Wetted parts are made of stainless steel. There are no internal sealing materials which could limit the choice of the pressure mediums. The compact case is made of stainless steel and provides NEMA 4 (IP 67) rating as standard.

Power supply of the pressure switch is by means of nonstabilized DC 10-30 V. Two switching points are available. The configuration of the switching outputs is factory adjusted according to their switching mode (NO or NC).

The switching outputs and switching hysteresis (mode of connection PNP) are in accordance with the requirements of the customer.

Adjustment of the switching points by unauthorized persons is not possible. Any misadjustment is excluded even under the most extreme shock and vibration strains. This is achieved by completely eliminating adjustable components like potentiometers, hand-actuated auxiliary switches etc.

Electric connection of the pressure switch is made by means of an M12 5 pin plug or optional 5 foot flying leads.

Application

Monitoring of pumps, filters, compressors, engines, hydraulic and pneumatic control system

Controlling and monitoring Steam

Filtration systems for food and pharmaceuticals

Purification systems

Water preparation systems

Automation control

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burkert
Fluid Control Systems

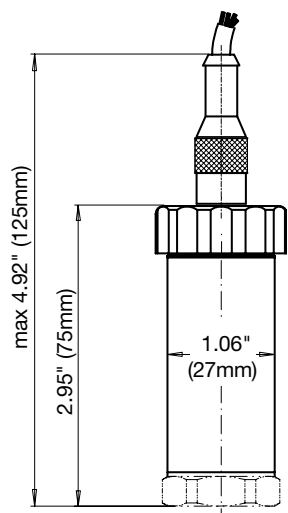
Specifications

Specifications	Units	Type PS20
Sensing principle Pressure ranges Pressure reference	PSI	piezoresistive up to 300 PSI, thin film > 400 PSI standard ranges as listed {custom ranges available} relative pressure {absolute reference to 500 PSIA}
Pressure connection		1/2" NPT male; (1/4" NPT male, G 1/2 BSP available upon request)
Material: wetted parts		1.4571 and 1.4542 stainless steel (316 ss and PH17-4 ss)
-case -internal transmitting liquid		1.4571 stainless steel (316 ss) silicone oil for piezoresistive sensors to 300 PSI, {halocarbon oil for oxygen service}, no liquid fill used for thin film sensors > 400 PSI
Supply voltage U_B	DC Volts	10 to 30 (12 to 30 when the programming module is in use)
Switch type		
Number of switch points		
Switch current rating (max 30 VDC)	DC amps	
Connection type		
Switch function		
Adjustment of switch points	% of span	0 to 100
Switch hysteresis	% of span	1 to 99
Switch window	% of span	0 to 100
Default values	low / high	effective < 20ms after switch is powered up ¹
Damping	ms	0 to 500
Factory settings		default settings, see page 4
Switch response time	ms	< 6 for switch type A and C
	ms	< 10 for switch type B, D, and F
Accuracy		
Switch setpoints	% of span	< 0.5% (B.F.S.L.)
Repeatability	% of span	< 0.25
1 year stability	% of span	< 0.2 (under reference conditions)
Temperature		
Media		-22°F to 212°F (-30°C to +100°C) {-40°F to +257°F (-40°C to +125°C)}
Ambient		-4°F to 176°F (-20°C to +80°C)
Storage		-40°F to 212°F (-40°C to +100°C)
Compensated range		32°F to 176°F (0°C to +80°C)
Maximum additional temperature error within compensated range (ref 70°F)		
on zero	% of span	+/- 1.0%
on span	% of span	+/- 1.0%
CE conformity		Interference emission and interference immunity per EN 61326
Electrical connection		5 pin locking plug M12 x 1 (NEMA 4/ IP 67) <i>standard</i> 5 foot vented flying lead (NEMA 4 / IP 67) <i>optional</i>
Weight	lb	approximately 0.4 (0.2 Kg)
Dimensions		see drawings
Electrical protection		protected against reverse polarity and overvoltage short circuit protection for switch type A and C

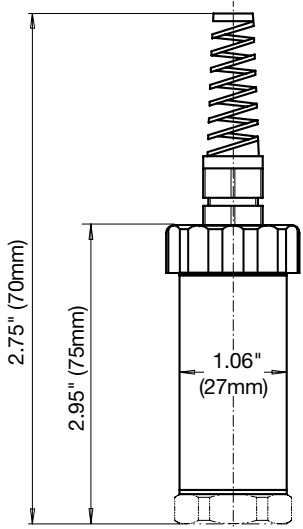
Notes: ¹Defines the switch state when powered up with pressure applied within the programmed hysteresis range

²Potential free opto-relay

Dimensions [inch]



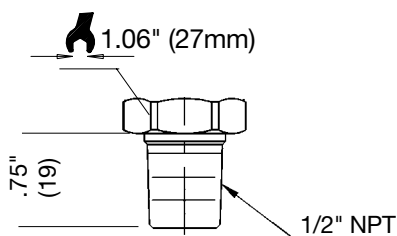
5 pin Locking plug
M12 x 1
NEMA 4 / IP 67
(917116D mating
connector not
included)



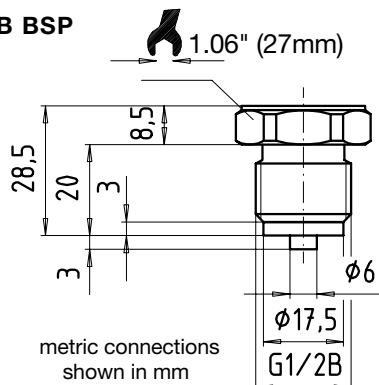
Flying lead
NEMA 4 / IP 67

PS20 Process Connections

1/2 NPT male

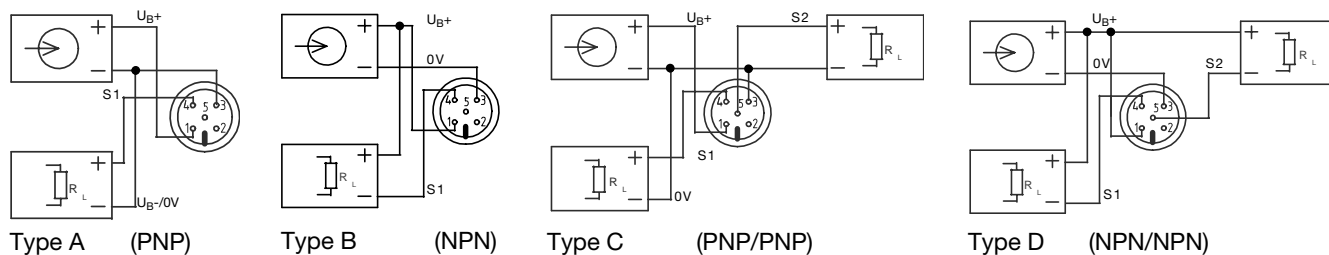


G1/2B BSP

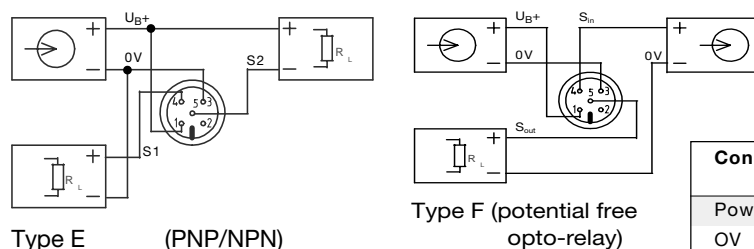


Electrical Connections

5 pin locking plug M12 x 1



Type A (PNP) Type B (NPN) Type C (PNP/PNP) Type D (NPN/NPN)



Type E (PNP/NPN) Type F (potential free opto-relay)

Connection	Flying lead	M12 x1 locking plug
Power supply (UB+)	brown	1
0V	green	3
Switch output 1 (SO1)	white	4
Switch output 2 (SO2)	yellow	5

Ordering Instructions For The Switching Outputs

Type 8310 with 1/2 NPT

Measuring ranges [PSI]	Item - No.
30" - 0 Hg VAC	US06456
0 - 100in WC	US06457
0 - 5	US06458
0 - 10	US06459
0 - 30	US06460
0 - 60	US06461
0 - 160	US06462
0 - 200	US06463
0 - 300	US06464
0 - 1000	US06465
0 - 2000	US06466
0 - 3000	US06467
0 - 5000	US06468
0 - 10000	US06469

Please order per **Item - No.** and add a copy to your order:



Item - No. _____ **Quantity:** _____

Switching point 1 Yes No

Normally open

Normally closed

Pressure value [PSI] _____ (Switch ON)

Pressure value [PSI] _____ (Switch OFF)

Switching point 2 Yes No

Normally open

Normally closed

Pressure value [PSI] _____ (Switch ON)

Pressure value [PSI] _____ (Switch OFF)

Item - No. _____ **Quantity:** _____

Switching point 1 Yes No

Normally open

Normally closed

Pressure value [PSI] _____ (Switch ON)

Pressure value [PSI] _____ (Switch OFF)

Switching point 2 Yes No

Normally open

Normally closed

Pressure value [PSI] _____ (Switch ON)

Pressure value [PSI] _____ (Switch OFF)

Client/Company	Date
Address	
Name	Department
Phone	Fax
Project	
Quantity	Delivery date

In case of special requirements please consult for advice.

We reserve the right to make technical changes without notice.

US_PS20_06/02