

Compact Pressure Switches

Series 9671X/9681X/9692X

Piston pressure switch with explosion proof housing, for hazardous areas, repeatability 2% f. s.

Features

- IECEx & ATEX approved
- Suitable for SIL2/3 (IEC 61508) acceptance
- NEMA 4X, 7 & 9
- NACE compliant
- SPDT and DPDT switch
- Safe to adjust during operation
- Dia-seal/piston switch
- Hazardous location dual seal approved ATEX, UL CSA für Canada
- Lower ambient temperature option (-40° C to +65° C)

Adjustment ranges

- Type 9671X: -0.17...-1 bar, vacuum range
- Type 9681X: 0.2...34.4 bar, relative pressure
- Type 9692X: 10.3...689.7 bar, relative pressure

Applications

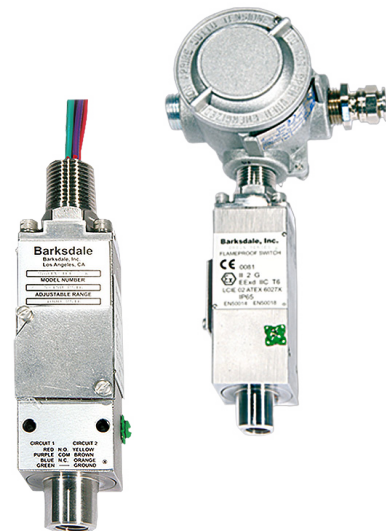
- BOP closing units
- Safety panels
- Pipelines
- Pulp and paper mills
- Pumps and gas compressores
- Turbines
- Chemical and petrochemical plants

Technical Data

Wetted parts Process fitting Seals	Stainless steel, mat. no. 1.4401 FKM (9671X & 9681X) FKM O-ring and PTFE backup ring (9692X)
Piston Enclosure	Stainless steel (on 9692X) 316 stainless steel or aluminium
Repeatability	±2 % f. s.
Typical Life	2.5 million cycles
Switch	SPDT, simulated DPDT (optional)
Electrical connection	1/2" NPT AG male conduit connector 18 AWG 18" (300 mm) lead wire, PVC jacket
Electrical Rating	11 amps, 125/250 V AC 5 amps, 30 V DC (CC Class) 1 amp, 125 V DC
Enclosure Rating	IP65 NEMA 4X, 7 & 9 (SS) NEMA 4, 7, & 9 (AL)
Process connection	1/4" NPT female (standard) See configurator for more options

Approvals ATEX/ IECEx	CE 0081, LCIE 08 ATEX 6074X EX II 2 G, Ex d IIC T6 Gb IECEx LCIE 17.0001X
UL # E37043 CSA # LR22354	UL&CSA Approved for use in hazardous locations Class I, Groups A, B, C & D; Class II, Groups E, F & G (Group A, UL only)
Temperature range	-20 °C ... +60 °C operating temperature -20 °C ... +40 °C T _{amb} Atex Ex d or -20 °C ... +60 °C T _{amb} Atex Ex d -20 °C ... +40 °C UL
LT option: (not UL or CSA)	-40 °C ... +65 °C
EMI/RFI:	EN55011
Vibration	10g 10-500 Hz, MIL-STD-202F
Shock	50g, 11 ms, MIL-S-901C
Adjustment	Internal adjustment wheel with built in locking set-screws ¹⁾
Weight	approx. 0.84 kg.

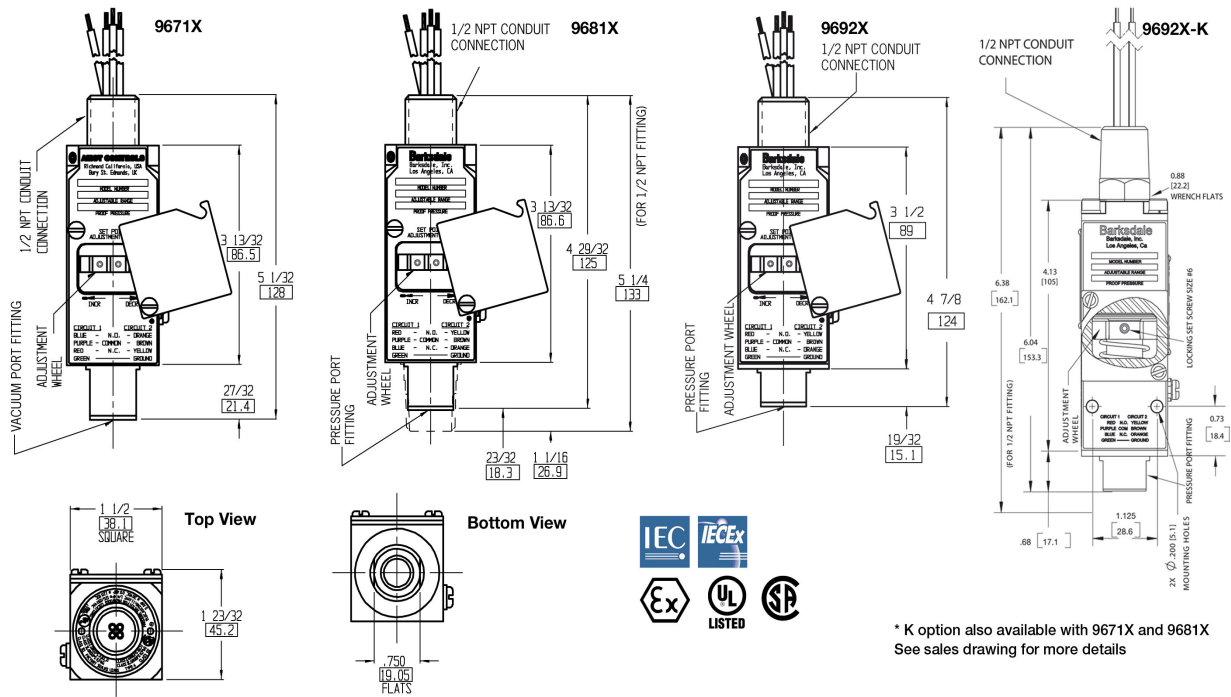
¹⁾ Need to loosen set screw at all times when resetting adjustment



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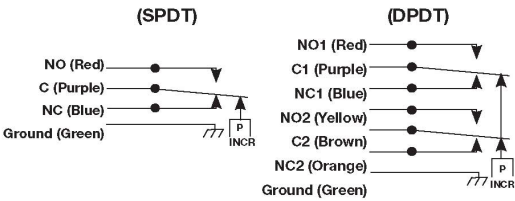
Dimensions (mm / inch)



Wiring code

Function	9692X/9681X (Pressure)		9671X (Vacuum)	
	Circuit 1	Circuit 2	Circuit 1	Circuit 2
Normally Open / NO	red	yellow	blue	orange
Common / C	purple	brown	purple	brown
Normally Closed / NC	blue	orange	red	yellow
Earth	green		green	

Wiring Diagrams



Compact Pressure Switch

Series 9671X/9681X/9692X

Order Code

Series 96X							
Approval							
Blank	All approvals (ATEX & IECEx, UL & CSA)						
A ¹	ATEX & IECEx only						
Base Model							
9671X	Vacuum switch; -0.17 ... -1 bar						
9681X	Pressure switch; 0.2 ... 34.4 bar						
9692X	Pressure switch; 10.3 ... 689.7 bar						
Limit Switch							
-1CC	SPDT Switch, 11 amps @ 125/250 VAC; 5 amps @ 30 VDC						
-2CC	DPDT Switch, 11 amps @ 125/250 VAC; 5 amps @ 30 VDC						
-1GH	SPDT gold contact switch, 1 amps @ 125 VAC						
-2GH	DPDT god contact switch, 1 amps @ 125 VAC						
Pressure Range		Adjustable Rankge				Approx. Deadband ² (Actuation Value)	Proof Pressure
		Decreasing - inch Hg (bar rel.)		Increasing - inch Hg (bar rel.)			
		Min	Max	Min	Max	inch HG (bar rel.)	inch HG (bar rel.)
9671X Blank	1 (-0.034)	21 (-0.711)	5 (-0.169)	30 (-1.000)	4 - 9 (0.136...0.305)	30 (-1.000)	
9681X -1	2 (.1)	12 (.8)	3 (.2)	15 (1)	1 - 3 (.07 - .2)	1000 (69)	
-2	5 (.3)	125 (8.6)	7 (.5)	150 (10.3)	2 - 25 (.1 - 1.7)	1000 (69)	
-3	25 (1.7)	260 (17.9)	32 (2.2)	300 (20.6)	7 - 40 (.5 - 2.8)	1000 (69)	
-4	50 (3.4)	440 (30.3)	65 (4.5)	500 (34.4)	15 - 60 (1 - 4.1)	1000 (69)	
9692X -1	100 (6.9)	600 (41.4)	150 (10.3)	750 (51.7)	50 - 150 (3.4 - 10.3)	15000 (1034)	
-2	150 (10.3)	800 (55.2)	220 (15.2)	1000 (69)	70 - 200 (4.7 - 13.8)	15000 (1034)	
-3	400 (27.6)	2600 (179)	500 (34.5)	3000 (207)	100 - 400 (6.7 - 27.6)	15000 (1034)	
-4	700 (48.2)	4400 (303)	840 (57.9)	5000 (345)	140 - 600 (9.6 - 41.4)	15000 (1034)	
-5	1000 (69)	6700 (462)	1200 (82.8)	7500 (517)	140 - 800 (9.6 - 55.2)	15000 (1034)	
-6	150 (10.3)	800 (55.2)	220 (15.2)	3000 (207)	50 - 1000 (3.4 - 68.9)	15000 (1034)	
-7	5000 (344.8)	8800 (606.9)	5200 (358.6)	10000 (689.7)	200 - 2000 (13.8 - 137.9)	15000 (1034)	
Wetted Material							
Blank	FKM diaphragm / O-rings (standard)						
Blank ¹	For -LT Option (consult factory)						
-B	Buna-N diaphragm/ O-rings (standard)						
-E	EPR diaphragm / O-rings (UL and ATEX not available with this option; CSA only available on the 9692X models)						
Process Connection ³							
Blank	1/4" NPT female (standard)						
-P1	7/16-20 SAE female process connection						
-P3	1/2" NPT female process connection						
-P4	1/2" NPT male process connetion						
Housing Option							
Blank	316 stainless steel housing						
-AL	Aluminum housing (-K only)						
-K	Mounting holes and conduit wrench flats						
Options							
-Wxxx	Extra wire length (XXX = inches)						
-Sxxx	Factory preset (consult factory)						
-T	Wire lock feature for adjustment cover screws						
-LT ¹	Low temp: -40 °C to +65 °C (must select option "A") - consult factory						

Example

A 9681X -01CC -2 - - -AL -K -W036-LT

1) For -LT, Low temperature option, "A" option in approvals must be selected. Not UL or CSA approved. Consult factory for lead-time and availability.

2) Deadband values indicated when used with the "CC" limit switch.

3) Contact factory for other possible connection options.

Accessories

Order-Number	Description
926-0811	Ex d - Terminal box incl. terminal (drawing 923-1533 on request)