

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
- ▶ SIL2/3 (IEC 61508)
- ▶ NEMA 4X, 7 & 9
- ▶ NACE compliant
- ▶ SPDT and DPDT switch
- ▶ Safe to adjust during operation
- ▶ Dia-seal/piston sensor
- ▶ Hazardous location dual seal approved for 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
- ▶ Chemical and petrochemical plants
- ▶ Pulp and paper mills
- ▶ Pump and gas compressors
- ▶ Turbines



Technical Data

Repeatability:	±2 % f. s.
Typical Life:	2.5 million cycles
Switch:	SPDT, simulated DPDT (optional)
Wetted parts:	
Process fitting:	Stainless steel, material no. 1.4401
Seals:	FKM (9671X & 9681X), FKM O-ring and PTFE backup ring (9692X)
Piston:	Stainless steel (on 9692X)
Enclosure:	316 stainless steel or aluminum
Electrical connection:	1/2" NPT AG male conduit connector 18 AWG 18" (450 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 Ratings:	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 optional: CE 0044, ISSeP08 ATEX 016X EX II 1 GD Ex ia IIC T6, EX II 1 GD Ex ia IIIC T 100 °C 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)
UL # E37043 CSA # LR22354	
Temperature range:	-20 °C ...+60 °C operating temp. -20 °C ... +60 °C T _{amp} Atex Ex ia -20 °C ... +60 °C T _{amp} Atex Ex d -20 °C ... +40 °C UL -40 °C ...+65 °C
LT Option : (not UL or CSA)	
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
Shipping Weight:	Approximately 0,84 kg.

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

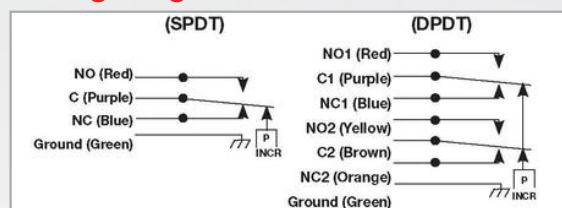
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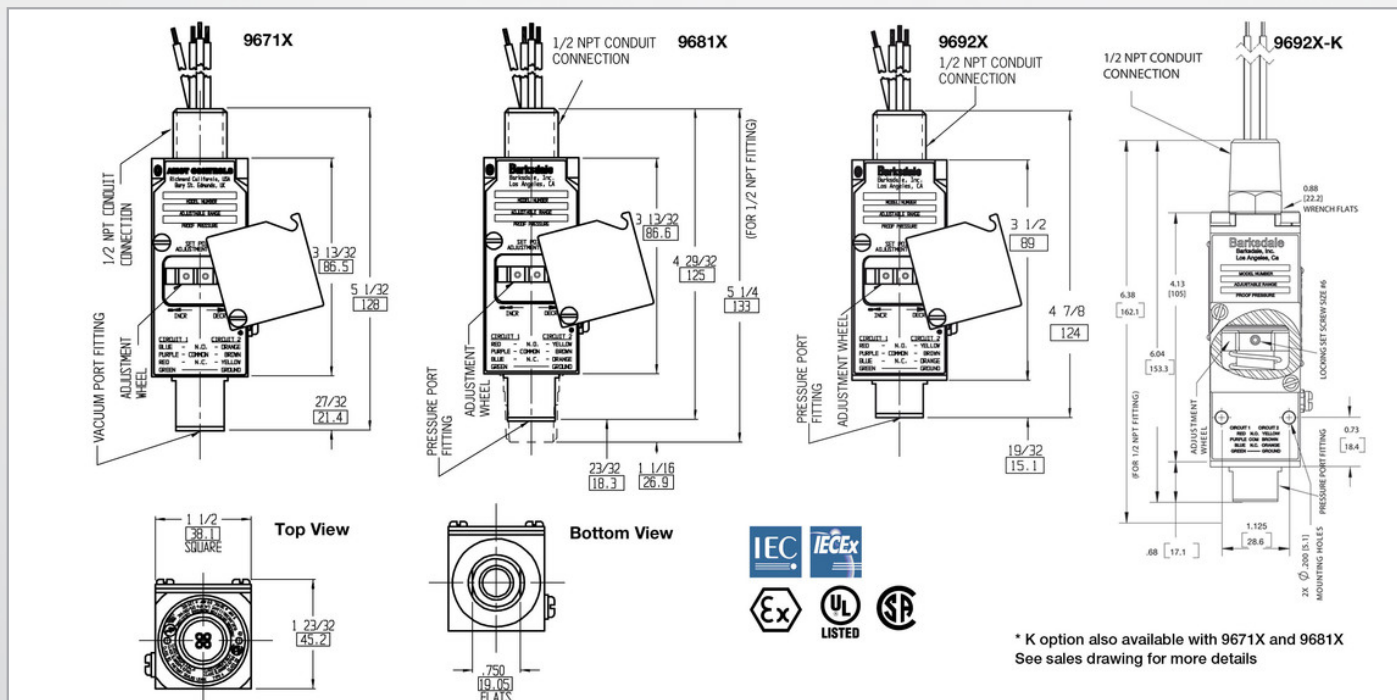
Wiring code

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



Dimensions (mm / inch)



Order Code

Series 96X

Approvals

Blank All approvals (ATEX & IECEx, UL & CSA)

A¹ ATEX & IECEx only

Base Model

9671X

Vacuum switch, -0.17 to -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 amp @ 125 VAC

-2GH

DPDT gold contact switch, 1 amp @ 125 VAC

	Pressure Range	Adjustable Range				Approx. Deadband ² (Actuation Value)	Proof Pressure
		Decreasing - inch Hg (bar rel.)		Increasing - inch Hg (bar rel.)			
		Min	Max	Min	Max		
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)

Blank1

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 Connection³

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 connection

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

-LT¹

Low temp: -40 °C to 65 °C (must select option "A") Consult factory

-EXI

Ex ia (see Approvals on page 1)

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)