Barksdale®
CONTROL PRODUCTS

Explosion Proof Diaphragm Switch

D1X, D2X Series

Features

- Hermetically sealed
- Explosion proof housing for hazardous location
- Tamper proof setpoint adjustment
- Ideal for pressure or vacuum
- UL, CSA, ATEX approved
- NEMA 4, 7, 9 & IP66



Applications

- Pump & compressor monitoring
- Hydraulic power units
- Oil & gas
- Food & beverage
- Utility & power generation
- Mining

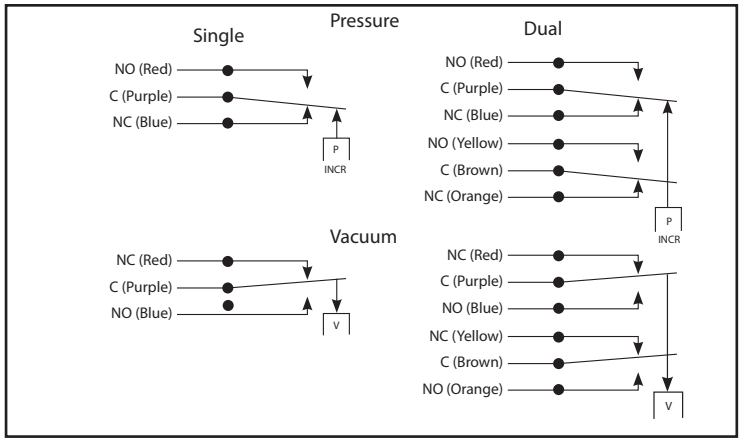
General Specifications*

Accuracy:	± 0.5% of the adjustable range
Switch: Type: Rating:	 Single pole double throw (SPDT) Snap Action; single circuit 10 amps @ 125/250 VAC; 3 amps @ 480 VAC (Class A or H limit switch). Consult sales drawing for ratings of optional limit switches.
Wetted Parts: Process Fitting: Diaphragm: Enclosure:	 303 stainless steel 17-7 PH stainless steel Die-cast aluminum, anodized and painted
Electrical Connection:	Screw terminals on covered terminal strip via 1/2" NPT (D1X) and 3/4" NPT (D2X) conduit connection.
Enclosure Ratings:	NEMA 4, 7, 9
Pressure Connection:	1/4" NPT Female
Approvals: UL (standard):	 All models are UL approved for use in hazardous locations Class I, Groups B, C, & D; Class II, Groups E, F, & G. UL File No. E37043

Approvals (cont.): CSA (standard): ATEX (optional):	 All models are CSA approved for use in hazardous locations Class I, Groups B, C & D; Class II, Groups E, F, & G. CSA File No. LR22354 EX models are ATEX marked as follows: CE 0081, ISSeP 08 ATEX024X Ⓔx II 2G D, Ex d IIC T6 Ex tD A21 IP66 T80°C -40°C ≤ Tamb ≤ +75°C
Temperature Range: Operating: Storage:	 -40° to +165°F (-40° to +74°C) -65° to +200°F (-54° to 93°C)
Adjustment Instructions: Pressure: Vacuum:	 Turn adjustment screw counterclockwise to raise actuation point. Turn adjustment screw clockwise to increase setpoint (higher vacuum).
Options:	Factory pre-set
Shipping Weight:	Single - approximate 5.0 lbs. Double - approximate 5.5

* See product configurator for additional options.

Wiring Diagram



Wiring Code

Lead	Circuit #1		Circuit #2	
	Pressure	Vacuum	Pressure	Vacuum
Normally Closed	Blue	Red	Orange	Yellow
Common	Purple	Purple	Brown	Brown
Normally Open	Red	Blue	Yellow	Orange

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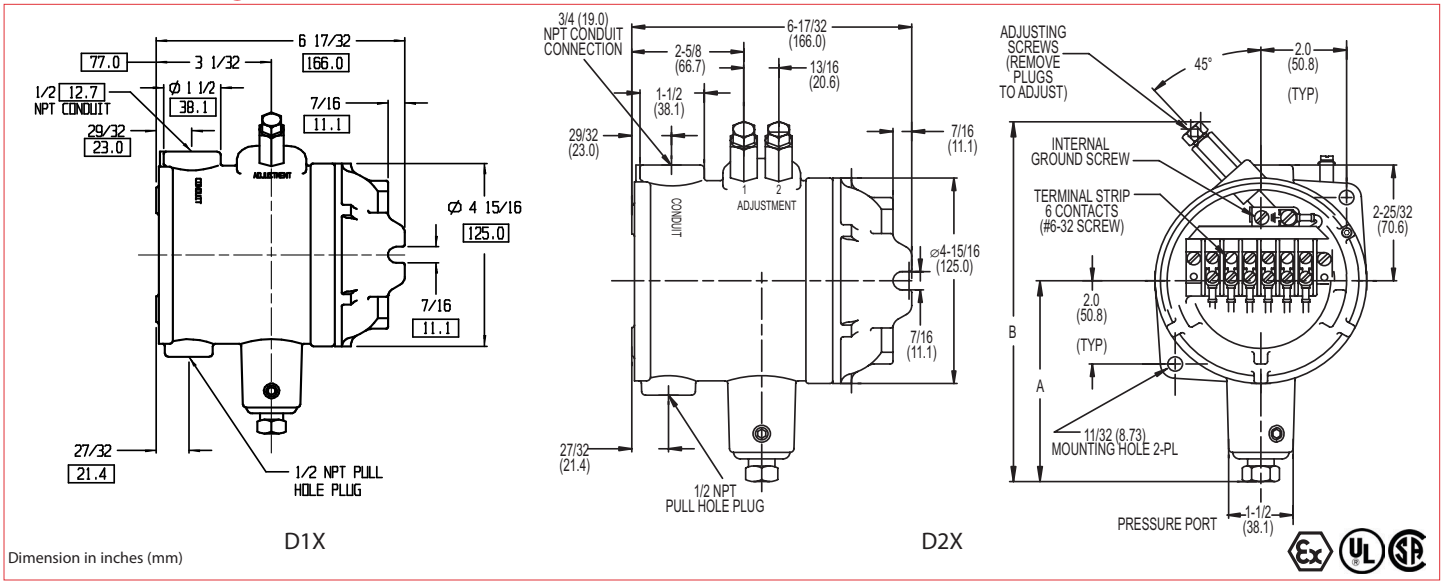
Technical Drawing



Dimension in inches (mm)

Product Configurator

Example		D1X	-A	3SS	-P2	-UL

H	Hermetically sealed limit switch option - Class I, Division II (requires AA, CC or HH limit switch)

Base Configuration

D1X	Single setpoint housed version
D2X	Dual setpoint housed version

Limit Switch[1]

-A	10 amps @ 125/250 VAC; 3 amps @ 480 VAC; (standard for pressure range 3SS, 80SS or 150SS)
-H	10 amps @ 125/250 VAC; 3 amps @ 480 VAC; (standard for pressure range 18SS)
-J	10 amps @ 125/250 VAC; 3 amps @ 480 VAC; (comes with an elastomer boot)
-M	10 amps @ 125/250 VAC; 3 amps @ 480 VAC; 0.5 amps @ 125 VDC; 0.25 amps @ 250 VDC
-GH	1 amp @ 125 VAC; 1 amp @ 24 VDC with Gold Contacts
-AA	Hermetically sealed; 4 amps @ 125/250 VAC (not available on vacuum models)
-CC	Hermetically sealed; 10 amps @ 125/250 VAC (not available on vacuum models)
-HH	Hermetically sealed; 5 amps @ 125/250 VAC (not available on vacuum models)

Options

-UL	UL & CSA Approval
-EX	ATEX Certified, -EX in place of UL for ATEX only
-Sxxx	Factory pre-set (consult factory)

Pressure Connection

Blank	1/4" NPT female pressure connection (standard)
-P2	1/2" NPT female pressure connection

Adjustable Pressure Range

	Adjustable Range (PRESSURE)				Approx. Deadband[2] (Actuation Value) psi-(bar)	Proof Pressure psi (bar)
	Decreasing - psi (bar)		Increasing - psi (bar)			
	Min	Max	Min	Max		
3SS	.03 (.00)	2.85 (.2)	.18 (.01)	3 (.2)	.07 - .15 (0 - .01)	10 (.7)
18SS	.4 (.03)	17.74 (1.2)	.66 (.04)	18 (1.2)	.12 - .26 (.01 - .02)	60 (4.1)
80SS	.5 (.03)	76.6 (5.2)	3.9 (.3)	80 (5.4)	1.6 - 3.4 (.1 - .2)	160 (10.9)
150SS	1.5 (.10)	144 (9.8)	7.5 (.5)	150 (10.2)	2.3 - 6.0 (.2 - .4)	300 (20.4)

	Adjustable Range (VACUUM)				Approx. Deadband[2] (Actuation Value) In. Hg	Proof Pressure In. Hg
	Decreasing - In. Hg		Increasing - In. Hg			
	Min	Max	Min	Max		
3SS	0.06	5.72	0.34	6	.14 - .28	6
18SS	0.8	29.2	1.6	30	.4 - .8	30

NOTES:
[1] Consult Supplemental Guide for specific deadband values
[2] Deadband values indicated when used with the "standard" limit switch

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