Diaphragm Differential Switch

Series DPD1T, DPD2T

Features

- High reliability
- Dual switching capability
- High accuracy
- Tamper-proof external adjustment
- NEMA 4

Applications

- Pump & compressor monitoring
- HVAC systems
- Engine monitoring
- Machine tools
- Hydraulic power units
- Filtration systems
- Metal working
- Utility & power generation

General Specifications*

Electrical Characteristics:	All models incorporate Underwriters Laboratories, Inc. and CSA Listed single pole double throw snap-action switching elements.
Accuracy:	± 0.5% of the adjustable range
Switch: Type: Rating:	 SPDT snap action; single or dual circuit 10 amps @ 125/250 VAC; 3 amps @ 480 VAC (Class A or H limit switch). Consult product configurator for ratings of optional limit switches.
Wetted Parts: Diaphragm: Seals: Enclosure: Other Parts:	 17-7 PH stainless steel Viton® Die-cast aluminum anodized Nickel plated aluminum 300 series stainless steel
Electrical Connection:	Screw terminals on covered terminal strip through 1/2" NPT conduit fitting
Enclosure Ratings:	NEMA 4
Pressure Connection:	1/8" NPT female high + low

* See product configurator for additional options.

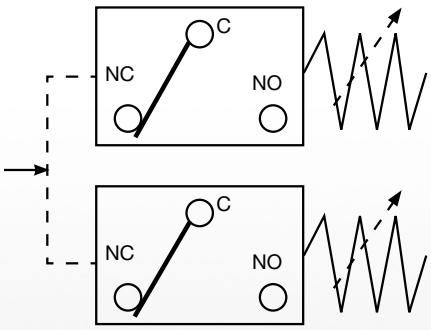
Approvals/Listings: PED (European):	 Compliant to PED 97/23/EC
Temperature Range: Operating:	 -65°F to +165°F (-54°C to +74°C)
Adjustment Instructions: Pressure: Vacuum Differential:	 Turn adjustment screw clockwise to decrease pressure difference; counterclockwise to increase pressure difference Turn adjustment screw counterclockwise to decrease vacuum difference; clockwise to increase vacuum difference
Options:	-Factory pre-set -NEMA 4X enclosure
Shipping Weight:	Single & dual - approximate 3.50 lbs.

Wiring Code

Lead	Circuit #1		Circuit #2	
	Pressure	Vacuum	Pressure	Vacuum
NormallyClosed	Blue	Red	Orange	Yellow
Common	Purple	Purple	Brown	Brown
NormallyOpen	Red	Blue	Yellow	Orange

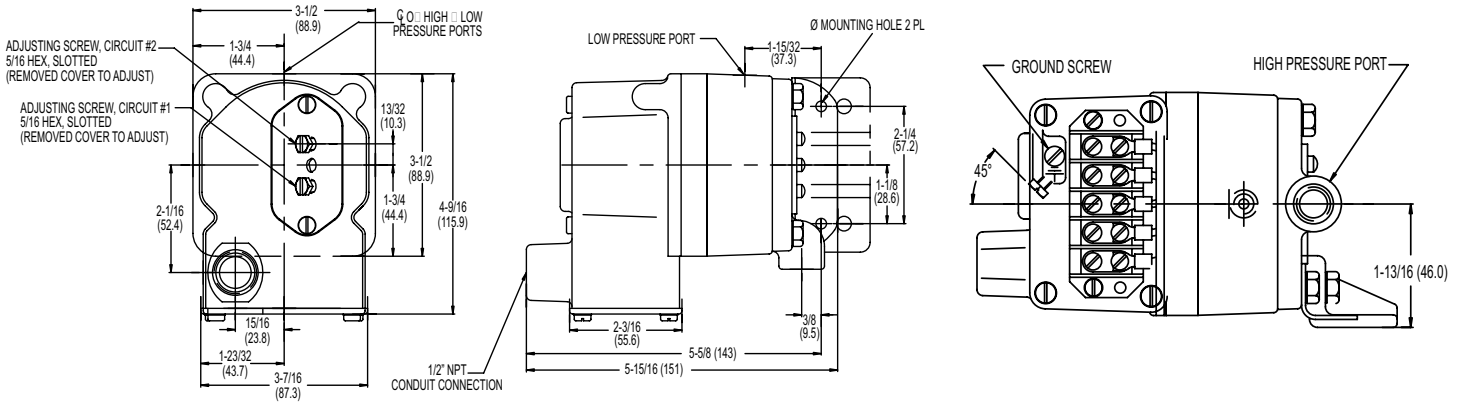
Wiring Diagram

(contact status at atmospheric pressure)



Barksdale
CONTROL PRODUCTS
CRANE Barksdale, Inc./Barksdale GmbH
A Subsidiary of Crane Co.

Technical Drawing



Dimension in inches (mm)

Product Configurator

Example		DPD1T	-A	3SS	

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

Base Configuration

DPD1T	Single setpoint housed
DPD2T	Dual setpoint housed

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)
-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; with gold contacts
-GH	Hermetically sealed; 1 amp @ 125 VAC with gold contacts (not available on vacuum models)
-HH	Hermetically sealed; 5 amps @ 125/250 VAC (not available on vacuum models)

Options

-FX	NEMA 4X enclosure
-L6	6-contact terminal block (DPD2T only)
-CS	CSA approved
-Sxxx	Factory preset (consult factory)

Adjustable Range

	Working Range	Adjustable Range (PRESSURE)[3]				Approx. Deadband[2] (Actuation Value)	Max. Diff. Pressure (Proof)
		Decreasing - psi (bar)		Increasing - psi (bar)			
	psi (bar)	Min	Max	Min	Max	psi (bar)	psi (bar)
3SS	.03-10	.03 (.00)	2.76 (.2)	.27 (.02)	3 (.2)	.09 - .24 (.01 - .02)	10 (.7)
18SS	.4-60	.4 (.03)	17.68 (1.2)	.72 (.05)	18 (1.2)	.18 - .32 (.01 - .02)	60 (4.1)
80SS	.5-160	.5 (.03)	75.3 (5.2)	5.2 (.4)	80 (5.4)	2.2 - 4.7 (.1 - .3)	160 (10.9)
150SS	1.5-300	1.5 (.10)	141.3 (9.7)	10.2 (.7)	150 (10.2)	3.5 - 8.7 (.2 - .6)	300 (20.4)

	Working Range	Adjustable Range (VACUUM)[4]				Approx. Deadband[2] (Actuation Value)	Max. Diff. Pressure (Proof)
		Decreasing (In. Hg)		Increasing (In. Hg)			
	In. Hg	Min	Max	Min	Max	In. Hg	In. Hg
3SS	.06-20	0.06	5.49	0.57	6	.17 - .51	20
18SS	.8-30	0.8	29	1.8	30	.44 - 1.00	30

NOTES:
[1] Consult supplementary guide for specific deadband values
[2] Deadband values indicated when used with the "standard" limit switch
[3] Working range may be extended to 400 psi provided the maximum differential pressure (proof) is not exceeded
[4] Working range may be extended to 30 in.Hg provided the maximum differential pressure (proof) is not exceeded

3211 Fruitland Avenue • Los Angeles, CA 90058 • ☎ 800-835-1060 • Fax: 323-589-3463 • www.barksdale.com

Barksdale CONTROL PRODUCTS