

Pressure

Calibrated Differential Switch *Series CDPD1H, CDPD2H, VCDPD1H, VCDPD2H*

Features

- ▶ Pressure and vacuum differential switch
- ▶ High accuracy diaphragm switch
- ▶ Calibrated dial for easy setpoint adjustment
- ▶ Factory preset or field adjustable

Applications

- ▶ Pump & compressor monitoring
- ▶ Air proving in HVAC systems
- ▶ Engine monitoring
- ▶ Machine tools
- ▶ Hydraulic power units
- ▶ Metal working
- ▶ Utility and power generation



General Specifications*

Electrical Characteristics:	All models incorporate Underwriters' Laboratories, Inc. listed single pole double throw snap-action switching elements. Switches may be wired "normally open" or "normally closed".
Accuracy:	± 0.5% of the adjustable range
Switch: Type:	SPDT single or dual circuit 10 amps @ 125/250 VAC; 3 amps @ 480
Rating:	VAC (Class A or H limit switch)
Wetted Parts: Diaphragm:	17-7 PH stainless steel
Seals:	Viton®
Enclosure:	Die-cast aluminum anodized
Other Parts:	Nickel painted aluminum 300 series stainless steel
Electrical Connection:	Free leads approximately 18" long No. 16 AWG standard AWN 105/c wire through 3/4" conduit connection.
Enclosure Ratings:	Housed watertight housing (NEMA 4) Tamper-proof external adjustment.
Pressure Connection:	1/8" NPT female.

Approvals/Listings: UL:	UL listed; File # E42816
CSA:	CSA listed under guide 380-W-1.16, Class 3231, File # 22355
Temperature Range: Operating:	-65°F to +165°F (-54°C to 74°C)
Adjustment Instructions: Pressure:	Turn adjustment screw clockwise to decrease pressure difference; counterclockwise to increase pressure difference
Vacuum Differential:	Turn adjustment screw counterclockwise to decrease vacuum difference; clockwise to increase vacuum difference
Options:	-NEMA 4X -Cleaned for oxygen service
Shipping Weight:	Single & dual - approximate 3.50 lbs.

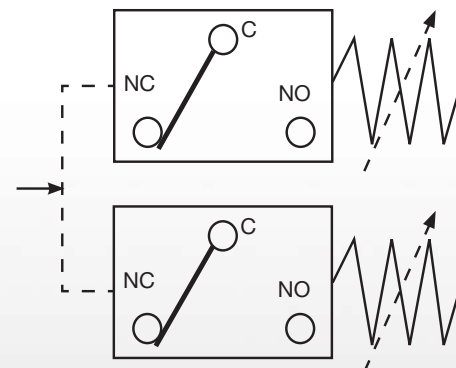
* See product configurator for additional options.

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
Ground	Green			

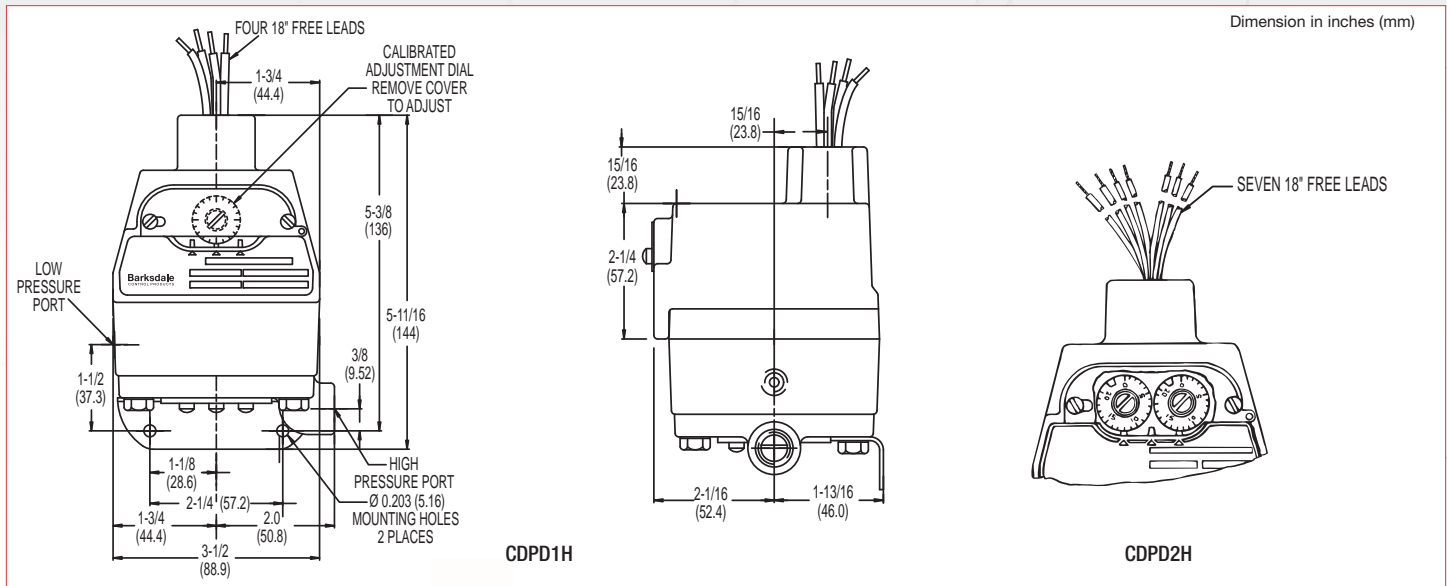
Wiring Diagram

(contact status at atmospheric pressure)



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Technical Drawing



Product Configurator

Example	CDPD1H	-A	18SS
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H Hermetically sealed limit switch option - Class I, Division II (requires AA, CC or HH limit switch)

Base Configuration

CDPD1H	Single setpoint housed
CDPD2H	Dual setpoint housed
VCDPD1H	Single setpoint housed - vacuum
VCDPD2H	Dual setpoint housed - vacuum

Options

-FX	NEMA 4X enclosure (not UL/CSA approved)
-Wxxx	Extra wire length (XXX = inches)
-Sxxx	Factory pre-set (consult factory)

Limit Switch¹

-A	10 amps @ 125/250 VAC; 3 amps @ 480 VAC; (standard for pressure range 3SS, 80SS or 150SS)
-B	10 amps @ 125/250/480 VAC; 2 amps @ 600 VAC; 0.05 amps @ 125 VDC; 0.03 amps @ 250 VDC
-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; 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)
-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)

Adjustable Range

	Working Range ³	Adjustable Range (PRESSURE)				Approx. Deadband ² (Actuation Value)	Max. Diff. (Proof)
		Decreasing - PSI (Bar)		Increasing - PSI (Bar)			
		Max	Min	Max	Min		
3SS	.03 to 10	.03 (0)	2.76 (.2)	.27 (.02)	3 (.2)	.09 - .24 (.01 - .02)	10 (.7)
18SS	.40 to 60	.4 (.03)	17.68 (1.2)	.72 (.05)	18 (1.2)	.18 - .32 (.01 - .02)	60 (4.1)
80SS	.50 to 160	.5 (.03)	75.3 (5.1)	5.2 (.4)	80 (5.4)	2.2 - 4.7 (.1 - .3)	160 (10.9)
150SS	1.50 to 300	1.5 (.1)	141.3 (9.6)	10.2 (.7)	150 (10.2)	3.5 - 8.7 (.2 - .6)	300 (20.4)

	Working Range ⁴	Adjustable Range (VACUUM)				Approx. Deadband ² (Actuation Value)	Max. Diff. (Proof)
		Decreasing - In. Hg		Increasing - In. Hg			
		Max	Min	Max	Min		
3SS	.06 to 20	0.06	5.49	0.57	6	.17 - .51	20
18SS	.80 to 30	0.8	29.0	1.8	30	.44 - 1.00	30

NOTES:

¹ Consult Supplemental 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