

# Pressure

## Diaphragm Switch

## CD1H, CD2H Series

### Features

- ▶ High reliability
- ▶ Extremely versatile
- ▶ Calibrated dial for easy setpoint adjustment
- ▶ Ideal for pressure or vacuum

### Applications

- ▶ Medical
- ▶ Water equipment
- ▶ Food & beverage
- ▶ Air proving in HVAC systems
- ▶ Engine monitoring
- ▶ Factory automation



### General Specifications\*

<b>Accuracy:</b>	+/- 0.5% of the adjustable range
<b>Switch:</b> Type:	Single pole double throw (SPDT) single or dual circuit
Rating:	10 amps @ 125/250 VAC, 3 amps @ 480 VAC (Class A or H limit switch); Consult sales drawing for ratings of optional limit switches.
<b>Wetted Parts:</b> Process Fitting:	304 stainless steel
Diaphragm:	17-7 PH stainless steel
Enclosure:	Anodized aluminum
<b>Electrical Connection:</b>	Free leads approximately 18" long, 16 AWG through 3/4" NPT conduit connector.
<b>Enclosure Ratings:</b>	NEMA 4
<b>Pressure Connection:</b>	1/4" NPT female
<b>Approvals:</b> UL:	All models are Underwriters' Laboratories listed in the Electrical Construction Materials Directory under Industrial Control Equipment, float and pressure-operated; File E42816, and Canadian Standards Association listed under Guide 380-W-1.16, Class 3231, File 22355.

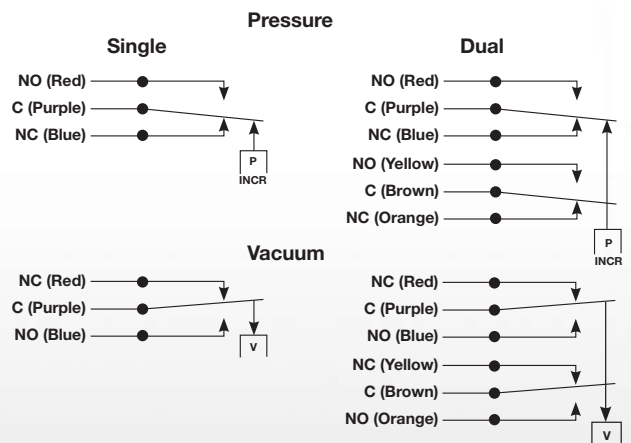
\* See product configurator for additional options.

<b>Approvals (Cont.):</b> CSA:	Listed under Guide 380-W-1.16, Class 3231, File 22355
<b>Temperature Range:</b> Operating:	-65° to +165°F (-54° to +74°C)
Storage:	-65° to +200°F (-54° to +93°C)
<b>Adjustment Instructions:</b> Pressure:	Turn self-locking adjustment screw counter clockwise to increase pressure setting
Vacuum:	Turn self-locking adjustment screw clockwise to increase vacuum setting
<b>Options:</b>	-Cleaned for Oxygen Service -1/2" NPT Pressure Port -NEMA 4X enclosure
<b>Shipping Weight:</b>	Approximate 1.75 lbs.

### 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

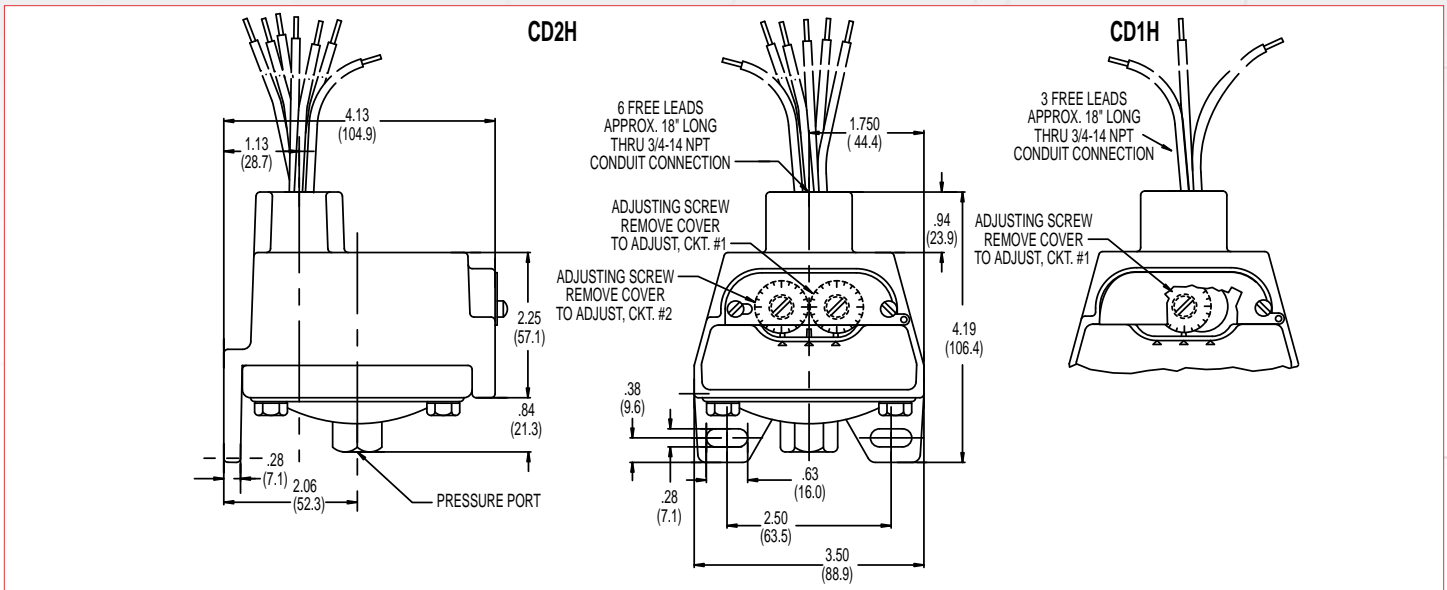
### Wiring Diagram



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## Technical Drawing



## Product Configurator

Example      CD1H    -A    3SS

**H** Hermetically sealed limit switch option - Class I, Division II (requires AA, CC, GH, HH limit switch, not available in vacuum models)

### Base Configuration

CD1H	Single setpoint housed
CD2H	Dual setpoint housed
VCD1H	Single setpoint housed - Vacuum
VCD2H	Dual setpoint housed - Vacuum

### Limit Switch<sup>1</sup>

-A	10 amps @ 125/250 VAC; 3 amps @ 480 VAC; (standard for pressure range 3SS, 80SS or 150SS)
-C	10 amps @ 125/250/480 VAC; 2 amps @ 600 VAC; 0.1 amps @ 125 VDC; 0.05 amps @ 250 VDC
-H	10 amps @ 125/250 VAC; 3 amps @ 480 VAC; (standard for pressure range 2SS or 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; 1 amp @ 24 VDC with gold contacts
-CC	Hermetically sealed; 10 amps @ 125/250 VAC (not available on 2SS or vacuum models)
-GH	Hermetically sealed; 1 amp @ 125 VAC with gold contacts (not available on 2SS or vacuum models)
-HH	Hermetically sealed; 5 amps @ 125/250 VAC (not available on 2SS or vacuum models)

### Options

-Z1	Oxygen cleaned
-FX	NEMA 4X Enclosure
-Wxxx	Extra wire length (XXX = inches)
-Sxxx	Factory pre-set (consult factory)

### Pressure Connection

Blank	Standard 1/4" NPT female
-P2	1/2" NPT female pressure fitting

### Adjustable Range

	Adjustable Range (PRESSURE)				Approx. Deadband <sup>2</sup> (Actuation Value)	Proof Pressure
	Decreasing - psi (bar)		Increasing - psi (bar)			
	Min	Max	Min	Max	psi-(bar)	psi (bar)
2SS <sup>3</sup>	.5 (.03)	34.6 (2.4)	1.9 (.13)	36 (2.4)	.6 - 1.4 (.04 - .1)	83.3" H <sub>2</sub> O
3SS	.3 (.02)	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 (1)	144.0 (9.8)	7.5 (.5)	150 (10.2)	2.3 - 6.0 (.2 - .4)	300 (20.4)

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

### NOTES:

- Consult Supplemental Guide for specific deadband values
- Deadband values indicated when used with the "standard" limit switch
- The '-2SS' range is specified in inches of H<sub>2</sub>O