**Dialmatic Diaphragm Pressure Difference** 

CDPD1H, CDPD2H, VCDPD1H, VCDPD2H Series

- Extremely Versatile
- ⇒ Factory Pre-set or Field
  - Adjustable
- Easy Setpoint
  - Adjustment
- Pressure Differential



Barksdale's CDPD1H and CDPD2H Housed Diaphragm Differential

Pressure Switches are the answer for pressure control applications requiring

tamper proof external adjustment and environments which require water-tight NEMA 4

housings. These pressure switches are available in single or dual control settings for both positive pressure and vacuum models, to 150 psi. The switches may be wired normally open or normally closed through a 3/4"-14 NPT conduit connection to free leads. All models feature calibrated dials for adjusting setpoints in units can be factory set upon request. For applications requiring a highly reliable, accurate switch in a durable package, Barksdale's CDPD1H and CDPD2H Housed Diaphragm Differential Pressure Switches are the ideal choice.



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### With Barksdale - Pressure's No Problem

As recognized leader in the manufacture of pressure product solutions, Barksdale pressure switches meet the demanding needs of our customers. From 29" Hg to 18,000 psi, Barksdale has pressure switches for a variety of applications – from transformers to natural gas compressors to be everage dispensers – and more!

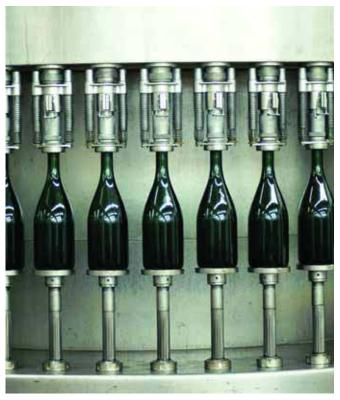
#### Barksdale's Diaphragm Pressure Switches

provide an econom ical solution for your pressure sensing needs. Diaphragm switches accurately control pressures from 30 inches of mercury vacuum to 150 psipositive pressure, and can be factory pre-setupon request. Setpoint adjustment is easily accomplished by turning the adjustment screws, which are protected by a tamper-resistant cover on housed models. A variety of available factory options allows the diaphragm switches to be configured to the exact needs of your application.

### Diaphragm Pressure Switch Applications

With its economical design and high repeatability, Barksdale's Diaphragm Pressure Switches provide an accurate and reliable solution for pressures up to 150 psi, making them ideal for use in:

- Pump & CompressorMonitoring
- •AirProving in HVAC Systems
- Engine Monitoring
- M achine Tools
- Hydraulic PowerUnits



#### **Need Something Special?**

If you have special product requirements, we can help. Barksdale specializes in custom design solutions to meet your needs. Our reputation is built on creating custom products for customers committed to getting exactly what they need. We have design engineers and technical specialists who are experts in solving your unique pressure problems. Our technology and resources are at your disposal.

#### **General Description**

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".

#### **Performance Characteristics**

Switch SPDT single or dual circuit

Electrical Rating 10 Amps @ 125/250 VAC; 3 Amps @ 480 VAC; 0.5 Amp @ 24 VDC (Class A or H

limit switch)

**Physical** 

Weight Single & Dual - Approximate 3.50 lbs., Enclosure/Housing Housed Water Tight Housing (NEMA 4)

Housing Housed Water Tight Housing (NEMA 4)
Tamper-proof External Adjustment.

Electrical Connection Free leads approximately 18" long No. 16

AWG standard AWN 105/c wire (U.L. Approved) through 1/2" conduit connection

Pressure Connection 1/4" NPT internal thread.

Wetted Materials

**Diaphragm** 17-7 PH stainless steel

#### Approvals/Listings

UL UL listed; File # E42816

CSA CSA listed under guide 380-W-1.16, Class

3231, File # 22355

#### **Environmental**

Temperature Range -65° to +165°F

| WIRE CODE     |          |        |            |         |  |  |  |  |  |  |
|---------------|----------|--------|------------|---------|--|--|--|--|--|--|
| Lead          | Circui   | t #1   | Circuit #2 |         |  |  |  |  |  |  |
|               | Pressure | Vacuum | Pressure   | Vacuum  |  |  |  |  |  |  |
| NormallyCbsed | Blue     | Red    | 0 range    | Yelbw   |  |  |  |  |  |  |
| Common        | Pumple   | Pumple | Brown      | Brown   |  |  |  |  |  |  |
| NomallyOpen   | Red      | Blue   | Yelbw      | 0 range |  |  |  |  |  |  |

#### **Adjustment Instructions**

Pressure Turn adjustment screw clockwise to lower

actuation point (switch setting).

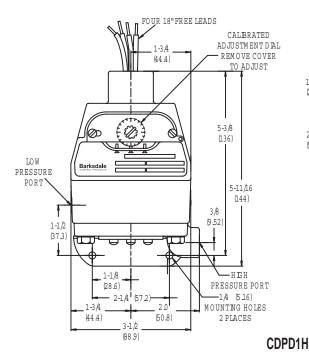
Vacuum Turn adjustment screw counterclockwise to

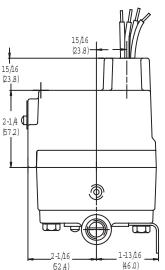
approach atmospheric pressure.

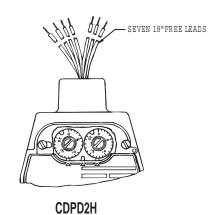
#### **Consult Factory for these Options**

NEMA 4X

Cleaned for Oxygen Service







#### **Dialmatic Diaphragm Pressure Difference**

### CDPD1H, CDPD2H, VCDPD1H, VCDPD2H Series

| the second secon |  |   |  | al); Class 1 Div                              | vision 2. Rec                 | quires class AA | , CC, or HH limit switch |                   |  |  |  |
|--|--|---|--|---|-------------------------------|-----------------|--------------------------|-------------------|--|--|--|
| Basic  |  |   | le setpoint housed   |   |                               |                 |                          |                   |  |  |  |
| Configuration  | tion   CDPD2H   Dual setpoint housed   VCDPD1H   Single setpoint housed - Vacuum |   |  |   |                               |                 |                          |                   |  |  |  |
|  |  |   |  |   |                               |                 |                          |                   |  |  |  |
|  | VCDPD2H Dual setpoint housed - Vacuum  |   |  |   |                               |                 |                          |                   |  |  |  |
| Limit  |  | Territoria (1996) (1997) (1997) (1997)  | 0 Amps @ 125/250 VAC; 3 Amps @ 480 VAC; .5 Amp @ 24 VDC  |   |                               |                 |                          |                   |  |  |  |
| Switch   |  |   | (standard for 3SS, 80SS, and 150SS ranges)   |   |                               |                 |                          |                   |  |  |  |
|  |  |   | 10 Amps @ 125/250/480 VAC; 2 Amps @ 600 VAC; 15 Amps @ 12 VDC                                    |   |                               |                 |                          |                   |  |  |  |
|  |  |   | (consult dales drawing for deadband values)  |   |                               |                 |                          |                   |  |  |  |
|  |  |   | 1 10 Amps @ 125/250 VAC; 3 Amps @ 480 VAC; .5 Amp @ 24 VDC<br>(standard for 2SS and 18SS ranges) |   |                               |                 |                          |                   |  |  |  |
|  |  | -M 10 Amps @ 125/250 VAC; 3 Amps @ 480 VAC; 15 Amps @ 12 VDC; 2 Amps @ 24 VDC |  |   |                               |                 |                          |                   |  |  |  |
|  |  | (consult sales drawing for deadband values)                                   |  |   |                               |                 |                          |                   |  |  |  |
|  |  | -GH 1 Amp @ 125 VAC; 1 Amp @ 24 VDC Gold Contact                              |  |   |                               |                 |                          |                   |  |  |  |
|  |  | (consult sales drawing for deadband values)                                   |  |   |                               |                 |                          |                   |  |  |  |
|  |  | -AA Hermetica   | A Hermetically sealed; 4 Amps @ 125/250 VAC  |   |                               |                 |                          |                   |  |  |  |
|  |  | (consult s  | (consult sales drawing for deadband values)  |   |                               |                 |                          |                   |  |  |  |
|  |  | -CC Hermetica   | Hermetically sealed; 10 Amps @ 125/250 VAC   |   |                               |                 |                          |                   |  |  |  |
|  |  |   | (consult sales drawing for deadband values)  |   |                               |                 |                          |                   |  |  |  |
|  |  |   | Hermetically sealed; 5 Amps @ 125/250 VAC  |   |                               |                 |                          |                   |  |  |  |
|  |  |   |  | for deadband                                  | values)                       |                 |                          |                   |  |  |  |
| Cather William   |  | PRESSU  | RE SWITCH  |   |                               |                 |                          |                   |  |  |  |
| Adjustable   |  |   |  |   | ble Range                     |                 | Approx. Deadband         | Proof             |  |  |  |
| Range  |  |   |  | Decreasing - psi (bar) Increasing - psi (bar) |                               |                 | (Actuation Value)        | Pressure          |  |  |  |
|  |  |   | Min  | Max   | Min                           | Max             | psi-(bar)                | psi (bar)         |  |  |  |
|  |  | 3SS   | .03 (0)  | 2.76 (.2)                                     | .27 (.02)                     | 3 (.2)          | .0924 (002)              | 10 (.7)           |  |  |  |
|  |  | 18SS  | .4 (.03)   | 17.68 (1.2)                                   | .72 (.05)                     | 18 (1.2)        | .1832 (.0102)            | 60 (4.1)          |  |  |  |
|  |  | 80SS  | .5 (.03)   | 75.3 (5.2)                                    | 5.2 (.4)                      | 80 (5.4)        | 2.2 - 4.7 (.23)          | 160 (10.9)        |  |  |  |
|  |  | 150SS   | 1.5 (.1)   | 141.3 (9.7)                                   | 10.2 (.7)                     | 150 (10.2)      | 3.5 - 8.7 (.26)          | 300 (20.4)        |  |  |  |
|  |  | VACUUM  | SWITCHES Adjustable Range  |   |                               |                 | A De-dbd                 | D                 |  |  |  |
| - 1  |  |   |  |   | Increasing - In. Hg           |                 | Approx. Deadband         | Proof<br>Pressure |  |  |  |
|  |  |   | Decreasing - In. Hg  |   |                               |                 |                          | riessure          |  |  |  |
|  |  |   |  |   | -                             |                 | (Actuation Value)        | In Ha             |  |  |  |
|  |  | 388   | Min  | Max   | Min                           | Max             | In. Hg                   | In. Hg            |  |  |  |
|  |  | 3SS<br>18SS   | Min<br>0.06  | Max<br>5.72                                   | Min<br>0.34                   | Max<br>6        | In. Hg<br>.1428          | 6                 |  |  |  |
| Options  |  | 3SS<br>18SS   | Min<br>0.06<br>0.8   | Max<br>5.72<br>29.2                           | Min<br>0.34<br>1.6            | Max             | In. Hg                   |                   |  |  |  |
| Options  |  |   | Min<br>0.06<br>0.8<br>-FX  | 5.72<br>29.2<br>NEMA 4X En                    | Min<br>0.34<br>1.6<br>closure | Max<br>6<br>30  | In. Hg<br>.1428          | 6                 |  |  |  |
| Options  |  |   | Min<br>0.06<br>0.8<br>-FX  | Max<br>5.72<br>29.2                           | Min<br>0.34<br>1.6<br>closure | Max<br>6<br>30  | In. Hg<br>.1428          | 6                 |  |  |  |
| Options  | CDPD1H   | 18SS  | Min<br>0.06<br>0.8<br>-FX  | 5.72<br>29.2<br>NEMA 4X En                    | Min<br>0.34<br>1.6<br>closure | Max<br>6<br>30  | In. Hg<br>.1428          | 6                 |  |  |  |
| Options  Example: CDP  |  | 18SS  | Min<br>0.06<br>0.8<br>-FX  | 5.72<br>29.2<br>NEMA 4X En                    | Min<br>0.34<br>1.6<br>closure | Max<br>6<br>30  | In. Hg<br>.1428          | 6                 |  |  |  |
| ļ  |  | 18SS  | Min<br>0.06<br>0.8<br>-FX  | 5.72<br>29.2<br>NEMA 4X En                    | Min<br>0.34<br>1.6<br>closure | Max<br>6<br>30  | In. Hg<br>.1428          | 6                 |  |  |  |
| ļ  | D1H-A18SS  | 18SS  | Min<br>0.06<br>0.8<br>-FX  | 5.72<br>29.2<br>NEMA 4X En                    | Min<br>0.34<br>1.6<br>closure | Max<br>6<br>30  | In. Hg<br>.1428          | 6                 |  |  |  |
| Example: CDP   | D1H-A18SS  | 18SS  | Min<br>0.06<br>0.8<br>-FX  | 5.72<br>29.2<br>NEMA 4X En                    | Min<br>0.34<br>1.6<br>closure | Max<br>6<br>30  | In. Hg<br>.1428          | 6                 |  |  |  |



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