

## Electronic Pressure Switch

UDS1V2

### Features

- ▶ Ease of setting: teach & go
- ▶ Ultra compact construction
- ▶ Rotatable 320° housing
- ▶ 1 or 2 switchpoints
- ▶ Programmable Adjustable hysteresis<sup>1</sup>
- ▶ Excellent for high cycling DC applications

### Applications

- ▶ OEM applications in hydraulic and pneumatic systems
- ▶ Press machines
- ▶ Lubricant monitoring systems
- ▶ Machine tool industry
- ▶ Automotive test equipment
- ▶ Injection molding machines



### General Specifications\*

<b>Sensor Element:</b>	Piezoresistive silicon (only for 9000 psi range) or ceramic measuring cell
<b>Materials:</b> Wetted Parts: Electronics Housing: Seals:	Stainless steel, pass., Al2O3 PA 6.6 Viton® (FKM)
<b>Operating Elements:</b>	2 easy response push buttons
<b>Enclosure Rating:</b>	IP65 (indoor only)
<b>Process Connection (male):</b>	1/4" NPT, G1/4, 7/16-20 (37° JIC), 7/16-20 UNF (SAE)
<b>Dimensions:</b>	Approx. Ø 1.0" x 3.9" (without mating connector)
<b>Measuring Ranges:</b>	0 to 9000 PSI (0 to 600 bar)
<b>Proof Pressure:</b>	1.5 times rated pressure
<b>Electrical Connection:</b>	M12x1, 4-pin

<b>Thermal Effect:</b>	± 0.2 % f.s./10K
<b>Compensated Range:</b>	14°F to 158°F (-10 °C to +70 °C)
<b>Repeatability:</b>	+/- 1 % f.s.
<b>Temperature Range:</b> Media: Ambient: Storage:	-13°F to 212°F (-25 °C to +100 °C) -13°F to 176°F (-25 °C to +80 °C) -22°F to 176°F (-30 °C to +80 °C)
<b>Power Supply:</b>	15 to 32 V DC, reversed polarity protected (SELV, PELV)
<b>Transistor Switching Outputs PNP:</b> Adjustment Range for Switching Point & Hysteresis <sup>1</sup> : Frequency Response: Current Rating:	0 % to 100 % f.s. Max. 100 Hz Max. 200 mA
<b>Vibration:</b>	10 g/20 to 2000 Hz
<b>Shock:</b>	100 g/11 ms

\* See Product Configurator for additional options.

Note 1: For 1SP version, adjustable hysteresis (2SP version has built-in 15% hysteresis)

## Technical Drawing

Technical drawing of the UDS1V2 Electronic Pressure Switch. Dimensions are provided in inches and millimeters. Key features include: M12 X 1 thread at the top; a Barksdale logo; a diameter of  $\phi .94$  [24] with a 6-degree chamfer; a process fitting thread block with two ports labeled 3 and 4; a sealing ring DIN 3869 (only for G 1/4); and a G connection shown at the bottom with a diameter of  $\phi .75$  [19].

Two wiring diagrams are shown. The top diagram shows a 4-pin connector with pins 1, 2, 3, and 4. Pin 1 is connected to +Ub, pin 2 to SP2, pin 3 to 0 V, and pin 4 to SP1. The bottom diagram shows a similar 4-pin connector with pin 1 to +Ub, pin 2 to SP1, pin 3 to 0 V, and pin 4 to SP1.

A 4-pin plug diagram is also shown with pins 1, 2, 3, and 4.

Process Connections		
	"A"	"B"
G	G 1/4"	0.55 [14 MM]
N	1/4" NPT	0.67 [17MM]
P	7/16" 37° JIC	0.55 [14 MM]
E	7/16-20 UNF (SAE 4)	0.55 [14 MM]

Dimensions in Inches [MM]

## Product Configurator

Example **U** **05** **N** **2**

### Series

**U** UDS1V2 series

### Pressure Ranges

05	0-150 psi (0-10.34 BAR) (recommend N or G process connection)
11	0-1500 psi (0-103.45 BAR) (recommend N or G process connection)
16	0-6000 psi (0-413.79 BAR) (recommend P or E process connection)
32	0-9000 psi (0-620 BAR) (recommend P or E process connection)

### Process Connection

N	1/4" NPT male
G	G1/4 male (gasket seal)
P	7/16-20 37° JIC male with o-ring seal
E	7/16-20 UNF SAE 4 male with o-ring seal

### Accessories

/A	4 pin M12 female right angle plug molded cable, 3.28 feet (1 meter)
/B	4 pin M12 female right angle plug molded cable, 6.56 feet (2 meter)
/E	4 pin M12 female right angle plug molded cable, 16.40 feet (5 meters)
/G	4 pin M12 female straight plug molded cable, 3.28 feet (1 meter)
/H	4 pin M12 female straight plug molded cable, 6.56 feet (2 meter)
/K	4 pin M12 female straight plug molded cable, 16.40 feet (5 meters)
/M	4 pin M12 female straight connector
/P	4 pin M12 female right angle connector

### Output

1	Single switch w/ adjustable hysteresis
2	Dual switch w/ ~15% hysteresis
1xxxxRyyyyF	Single switch w/ field adjustable hysteresis and factory preset
2xxxxRyyyyR	Dual switch w/-15% hysteresis and factory preset

\* Example: **13000R2000F** is one (1) switch point with 3000 psi rising (increase) and 2000 psi falling (decrease)  
**23000R1000R** is two (2) switch points with first switch set at 3000 psi rising and second switch set at 1000 psi rising.

Single and dual switch can be set at 1xxxxR(or F)yyyyF(or R) and 2xxxxR(or F)yyyyR(or F), where F denotes falling and R denotes rising.