

## Electronic Dual Differential Pressure Switch

**BDS3000**

### Features

- ▶ Measuring range: differential: 0 - 500 psid
- ▶ Enclosure Rating: Type 4X (IP65) / Type 6 (IP67)
- ▶ Two switch points
- ▶ 0.50% accuracy
- ▶ Analog output 4 - 20 mA or 0 - 10 V
- ▶ Superior EMI protection
- ▶ Display & electronic connection: rotatable by 320°
- ▶ Simple navigation menu
- ▶ Suitable for rapid cycling applications
- ▶ Hydraulic and pneumatic compatible

### Applications

- ▶ Filtration
- ▶ Machine tool industry
- ▶ Factory Automation
- ▶ Lubrication monitoring
- ▶ Pumps and compressors



### General Specifications

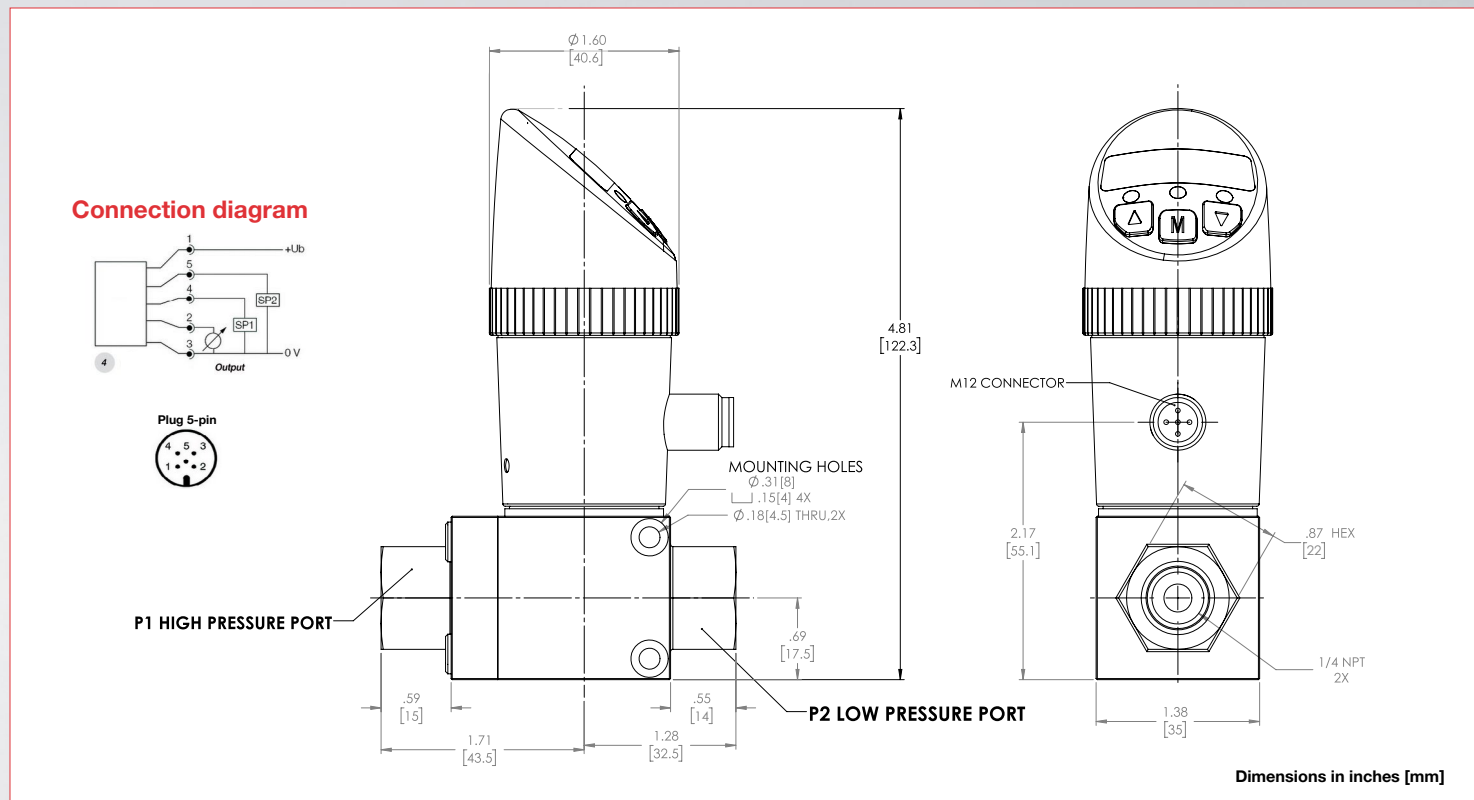
<b>Sensor element:</b>	Piezoresistive sensor	<b>Power consumption:</b>	Approx. 50 mA (without load)			
<b>Materials:</b> Wetted parts:  Enclosure:  Seals:	Stainless steel fittings 316L Stainless steel sensors	<b>Digital display:</b>	4-digit 14-segment LED red display, digit height .35 inches (9 mm)			
		Display rate:	20/s			
		<b>Error display:</b>	LED RED and alphanumeric display			
		<b>Analog output:</b> Current output: Scanning rate: Voltage output: Rating: Adjustment range:	4-20 mA 2 ms 0 to 10 V DC max. 10 mA 25% to 100% f. s.			
<b>Operating elements:</b>	3 easy-response push-buttons	<b>Transistor switching outputs:</b>				
<b>Enclosure rating:</b>	Type 4X (IP65) / Type 6 (IP67)	<b>Switching function:</b>	Normally open / normally closed, standard / window mode and diagnosis function adjustable			
<b>Protection class:</b>	III		Switching output:	PNP		
<b>Electrical connection:</b>	Plug M12 x 1, 5-pin	Adjustment range for switching point and hysteresis:		0% to 125% f. s.		
<b>Process connection:</b>	1/4" NPT female (low and high sides)		Switching frequency:	Max. 100 Hz		
<b>Dimensions:</b>	3.00 x 1.60 x 4.81 inches	Load:		Max. 500 mA, short-circuit-proof		
<b>Weight:</b>	Approx. 1.5 lb		Delay:	0.0 s to 50.0 s adjustable		
<b>A/D-Converter:</b> Resolution: Scanning rate:	12 bit (4,096 steps per measure span) 1000/s	Status display(s):		LED(s) red		
<b>Linearity error:</b>	< ±0.5 % f. s. at +25 °C					
<b>Temperature influence:</b>	TC zero < ±0.2 % FSO / 10K TC span < ±0.3 % FSO / 10K					
<b>Compensation range:</b>	32°F to 122°F (0°C to +50°C)					
<b>Repeatability:</b>	±0.1% f. s.					
<b>Temperature range:</b> Media: Electronics: Storage:	-13°F to 212°F (-25°C to +100°C) 14°F to 158°F (-10°C to +70°C) -22°F to 176°F (-30°C to +80°C)					
<b>Power supply<sup>1</sup>:</b>	15 to 32 V DC, reversed polarity protected (SELV, PELV), Class 2					

Pressure Ranges				
Pressure Range Code	Differential Pressure	Proof Pressure	Proof Pressure	Common Pressure
	P1>P2 (PSID)	P1>P2 (PSID)	P2>P1 (PSID)	P1=P2 (PSI)
0500P	0-500	1000	150	2500

# Electronic Dual Differential Pressure Switch

BDS3000

## Technical Drawings



## Product Configurator

Example	BDS3	4	F	V	M	0500P
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### Series:

BDS3	Series BDS3000, electronic dual differential pressure switch
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### Output:

4	Dual switch point plus 4-20mA (0-10V field selectable)
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### Electrical Connection:

M <sup>1</sup>	M12
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### Pressure Ranges<sup>2</sup>

0500P	0 - 500 psid (differential)
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### Process Connections:

F	1/4" NPT female
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### Sealing:

V	FKM fluoroelastomer
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## Accessories

Order Number	Description
239546-1M-R-S <sup>3</sup>	5 Pin M12 Female Right Angle Plug Molded Cable, 3.28 Feet (1 Meter), Shielded
239546-1M-S <sup>3</sup>	5 Pin M12, Female Straight Plug Molded Cable, 3.28 Feet (1 Meter), Shielded
239548-S	5 Pin M12 Female Straight Connector
239548-R	5 Pin M12 Female Right Angle Connector

### Note:

1. Mating connector not included with unit; mating connectors are available and can be ordered as an accessory.
2. Contact factory for ranges not listed including BAR.
3. See Cable Connectors & Accessories for more options.



5. OPERATING TEMPERATURE RANGE: -10°C TO 100 °C  
4. COMPENSATED TEMPERATURE RANGE: 0 TO 80 °C  
3. ACCURACY [LHR] < 0.5%  
2. ELECTRICAL CONNECTION AND DISPLAY MAY BE ROTATED 320° INDEPENDENTLY FROM EACH OTHER  
1. DIMENSIONS ARE IN INCHES. DIMENSIONS IN BRACKETS ARE IN MM.

NOTES: UNLESS OTHERWISE SPECIFIED

DRAWN	DATE	DIFFERENTIAL PRESSURE SWITCH		NEXT ASSEMBLY			
SKETCHED	08-08-2018						
CHECKED	DATE						
APPROVED	DATE			REFERENCE DPM		<input type="checkbox"/> DIS <input type="checkbox"/> CHPT	
UNLESS OTHERWISE SPECIFIED						00011 058    A    08-27-2018 PCD    MI    REV    DATE	
DIMENSIONAL TOLERANCES				RESULT		SCALE	
FRACTIONAL	± 0.015			1:1		SNG.	
DECIMAL	± 0.015					C	
		www.barksdale.com Los Angeles, CA 90058-0843 Ph: 323-569-8161 Fax: 323-583-6252		BDS3000 SHEET 3 OF 3		REV. A	