

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

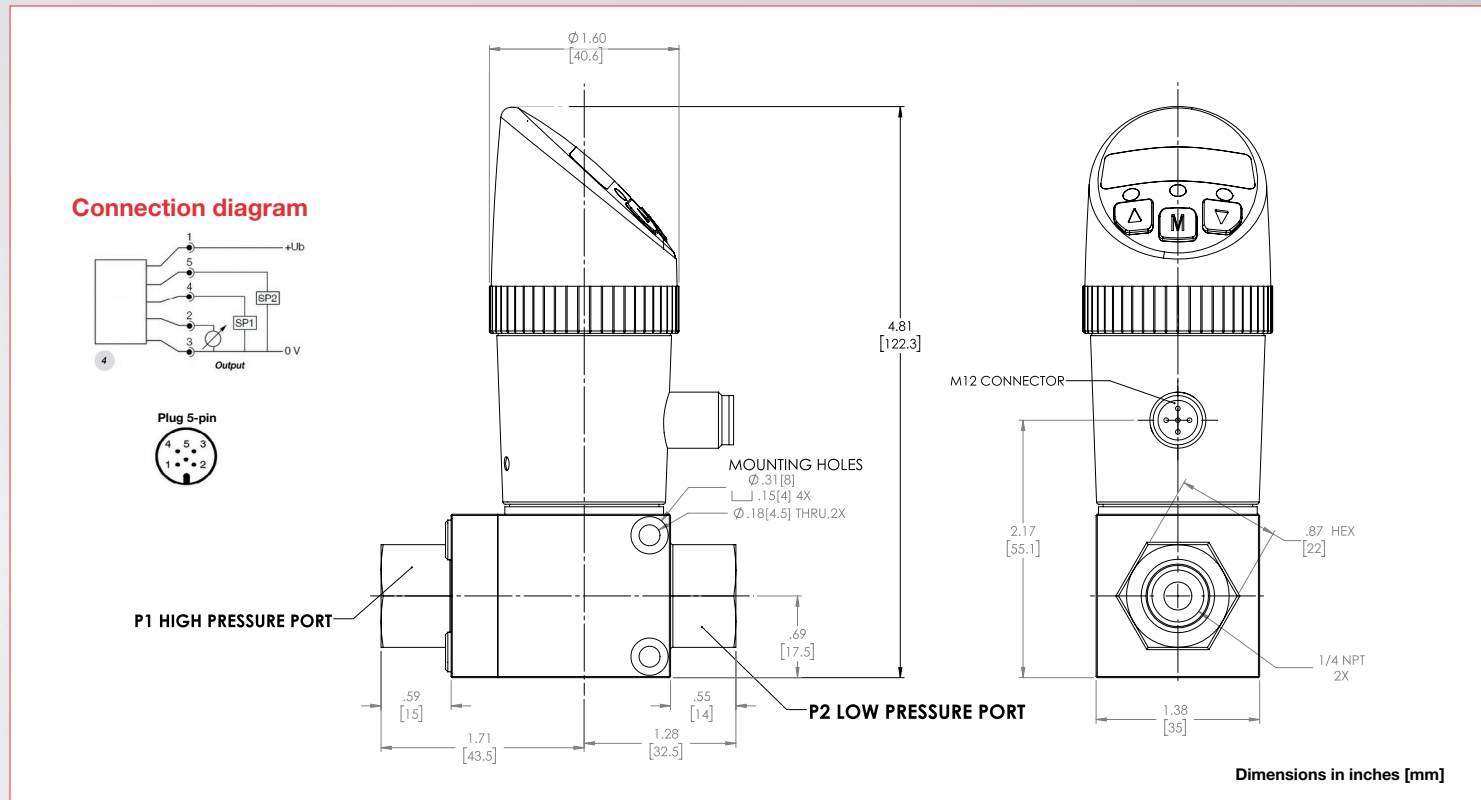
Sensor element:	Piezoresistive sensor	Power consumption:	Approx. 50 mA (without load)			
Materials: Wetted parts: Enclosure: Seals:	Stainless steel fittings 316L Stainless steel sensors	Digital display:	4-digit 14-segment LED red display, digit height .35 inches (9 mm)			
		Display rate:	20/s			
		Error display:	LED RED and alphanumeric display			
		Analog output: 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.			
Operating elements:	3 easy-response push-buttons	Transistor switching outputs:				
Enclosure rating:	Type 4X (IP65) / Type 6 (IP67)	Switching function:	Normally open / normally closed, standard / window mode and diagnosis function adjustable			
Protection class:	III	Switching output:	PNP			
Electrical connection:	Plug M12 x 1, 5-pin		Adjustment range for switching point and hysteresis:	0% to 125% f. s.		
Process connection:	1/4" NPT female (low and high sides)	Switching frequency:		Max. 100 Hz		
Dimensions:	3.00 x 1.60 x 4.81 inches	Load:	Max. 500 mA, short-circuit-proof			
Weight:	Approx. 1.5 lb	Delay:	0.0 s to 50.0 s adjustable			
A/D-Converter: Resolution: Scanning rate:	12 bit (4,096 steps per measure span) 1000/s	Status display(s):	LED(s) red			
Linearity error:	< ±0.5 % f. s. at +25 °C					
Temperature influence:	TC zero < ±0.2 % FSO / 10K TC span < ±0.3 % FSO / 10K					
Compensation range:	32°F to 122°F (0°C to +50°C)					
Repeatability:	±0.1% f. s.					
Temperature range: 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)					
Power supply¹:	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 ¹	M12
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Pressure Ranges²

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 ³	5 Pin M12 Female Right Angle Plug Molded Cable, 3.28 Feet (1 Meter), Shielded
239546-1M-S ³	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.



BDS3000 PRODUCT CONFIGURATION

		Base Model		BDS3000	
BDS3		Output			
	4			4...20mA 2 switch points	
		Process Connection			
	F			1/4" NPT Female	
		Sealing			
	V			FKM	
		Electrical Connection			
	M			M12 output - 5 Pin	
		Range			
		0500P	0 ... 500 psi differential		
BDS3	4	F	V	M	0500P

DRAWN	DATE			NEXT ASSEMBLY					
SKETCHED	08-08-2018								
CHECKED	DATE								
APPROVED		DATE		REFERENCE QPN		QPN			
UNLESS OTHERWISE SPECIFIED						☐ QPN ☐ QPN		00011058 A 08-27-2018	
DIMENSIONAL TOLERANCES						PCD M REV. DATE			
FRACTIONAL DECIMALS ±0.005 DECIMALS ±0.01				www.barksdale.com 1:1 C BDS3000		SHEET 3 OF 3		REV. DATE	
Barksdale CONTROL PRODUCTS 15000 S. BARKSDALE AVE. CHINA, CA 91709-1000 TEL: 909-441-1111 FAX: 909-441-1112				Los Angeles, CA 90058-0843 P.O. BOX 50000 CA 90050-0000					