

# Pressure

## Electronic Dual Differential Pressure Switch

**BDS3000**

### Features

- ▶ Measuring range: differential: 0 - 500 psid
- ▶ Enclosure Rating: Type 4X (IP65) / Type 6 (IP67)
- ▶ One or 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

- ▶ Hydraulic 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:	Stainless steel	<b>Digital display:</b>	4-digit 14-segment LED red display, digit height .35 inches (9 mm)			
Enclosure:	Stainless steel, PBT	Display rate:	20/s			
Seals:	FKM fluoroelastomer	<b>Error display:</b>	LED RED and alphanumeric display			
<b>Operating elements:</b>	3 easy-response push-buttons	<b>Analog output:</b> Current output:	4-20 mA			
<b>Enclosure rating:</b>	Type 4X (IP65) / Type 6 (IP67)	Scanning rate:	2 ms			
<b>Protection class:</b>	III	Voltage output:	0 to 10 V DC			
<b>Electrical connection:</b>	Plug M12 x 1, 5-pin	Rating:	max. 10 mA			
<b>Process connection:</b>	1/4" NPT female (low and high sides)	Adjustment range:	25% to 100% f. s.			
<b>Dimensions:</b>	3.00 x 1.60 x 4.81 inches	<b>Transistor switching outputs:</b>				
<b>Weight:</b>	Approx. 1.5 lb	Switching function	Normally open / normally closed, standard / window mode and diagnosis function adjustable			
<b>A/D-Converter:</b> Resolution:	12 bit (4,096 steps per measure span)	Switching output:	PNP			
Scanning rate:	1000/s	Adjustment range for switching point and hysteresis:	0% to 125% f. s.			
<b>Linearity error:</b>	< ±0.5 % f. s. at +25 °C	Switching frequency:	Max. 100 Hz			
<b>Temperature influence:</b> TC zero < ±0.2 % FSO / 10K TC span < ±0.3 % FSO / 10K		Load:	Max. 500 mA, short-circuit-proof			
<b>Compensation range:</b>	32°F to 122°F (0°C to +50°C)	Delay:	0.0 s to 9.9 s adjustable			
<b>Repeatability:</b>	±0.1% f. s.	Status display(s):	LED(s) red			
<b>Temperature range:</b> Media:	-13°F to 212°F (-25°C to +100°C)	<b>Pressure Ranges</b>				
Electronics:	14°F to 158°F (-10°C to +70°C)	Pressure Range Code	Differential Pressure	Proof Pressure	Proof Pressure	Common Pressure
Storage:	-22°F to 176°F (-30°C to +80°C)		P1>P2 (PSID)	P1>P2 (PSID)	P2>P1 (PSID)	P1=P2 (PSI)
<b>Power supply<sup>1</sup>:</b>	15 to 32 V DC, reversed polarity protected (SELV, PELV), Class 2	0500P	0-500	1000	150	2500

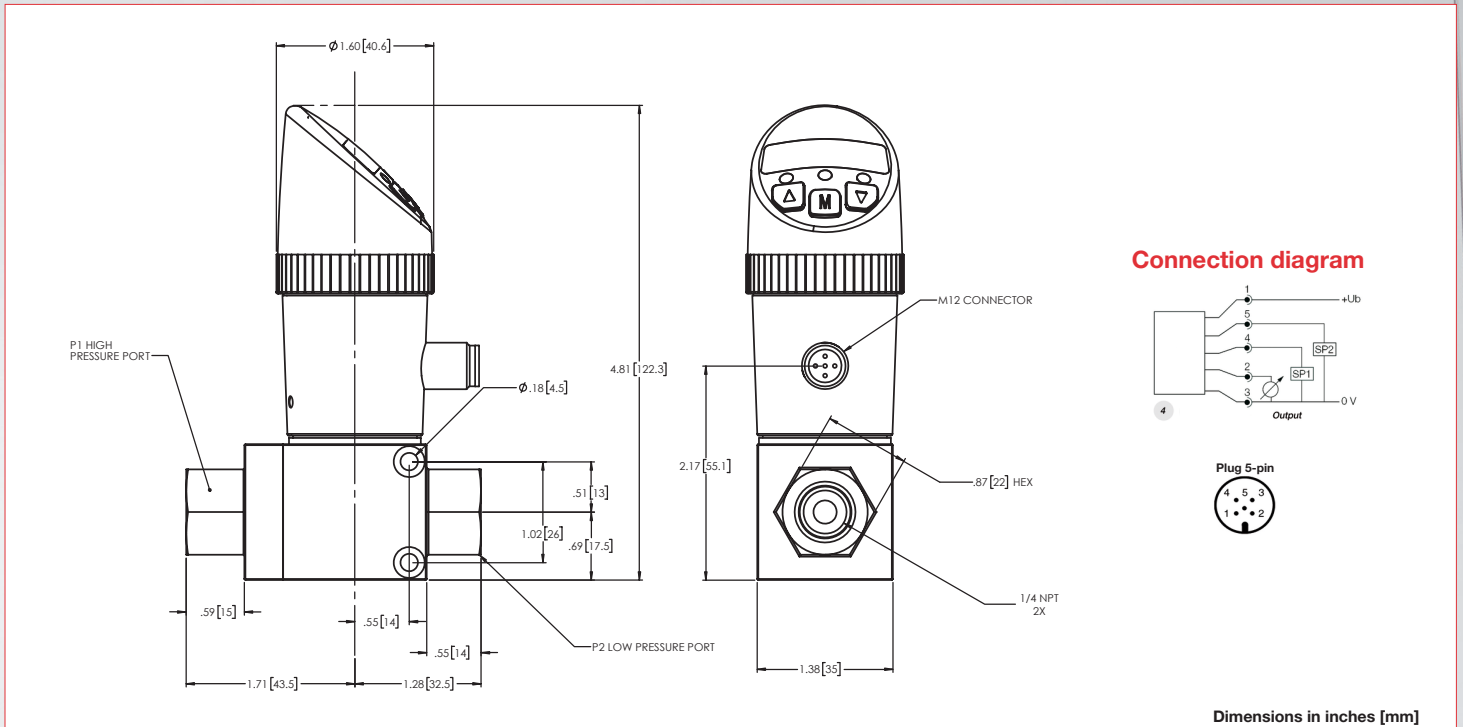
### Pressure Ranges

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

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## Technical Drawings



## Product Configurator

**Example**    **BDS3**    **4**    **F**    **V**    **M**    **0500P**

**Series:**

**BDS3**    Series BDS3000, electronic dual differential pressure switch

**Output:**

**4**    Dual switch point plus 4-20mA

**Electrical Connection:**

**M<sup>1</sup>**    M12

**Pressure Ranges<sup>2</sup>**

**0500P**    0 - 500 psid (differential)

**Process Connections:**

**F**    1/4" NPT female

**Sealing:**

**V**    FKM fluoroelastomer

## 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:

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