

Electronic Pressure Switch

SW2000

Features

- ▶ Pressure control with internal stainless steel diaphragm
- ▶ High accuracy (0.5%) with fully adjustable deadband
- ▶ 2 solid state PNP contacts or 1 solid state PNP contact plus analog output
- ▶ Digital display readout
- ▶ Fully configurable via keypad
- ▶ Suitable for rapid cycling (100 times per second)
- ▶ Rotatable 320° housing (7/16-20 process connection only)
- ▶ cULus approved

Applications

- ▶ OEM-applications in hydraulics and pneumatics
- ▶ Lubrication monitoring
- ▶ Machine tool industry
- ▶ Injection molding machines
- ▶ Compressors and pumps
- ▶ Hydraulic power units



General Specifications*

Linearity Error:	±0.5% f. s. at 77°F(25°C)					
Repeatability:	±0.1% f. s.					
Sensor Element:	Piezoresistive silicone measuring sensor					
Material:	304 stainless steel					
Wetted Parts:	304 stainless steel					
Seals:	Viton® (FKM fluorelastomer)					
Housing:	Aluminum die-cast					
Measuring Ranges (psi):	150	750	1500	3000	6000	9000
Proof Pressure (psi):	220	1100	2175	4400	9000	11,600
Process Connection (male):	1/4-18 NPT, 7/16-20 37° JIC, G1/4, 7/16-20 UNF SAE-4					
Electrical Connection:	Plug M 12 x 1; 4-pin					
Power Supply:	15 to 32 VDC reverse polarity protected					
Power Consumption:	approx. 50 mA (without load)					
A/D-Converter:	10 bit (1,024 steps per measure span)					
Resolution:	10 bit (1,024 steps per measure span)					
Scanning Rate:	200/s (for peak value memory)					
Analog Output:	4-20 mA					
Current Output:	4-20 mA					
Load:	max. RI = (Ub-12 V) / 20 mA RI = 600 ohm at 24 VDC					
Load Influence:	0.3% / 100 ohm					
Scanning Rate:	5 ms					
Voltage Output:	0 to 10 VDC (optional)					
Rating:	max. 10 mA, short circuit-proof					
Adjustment Range	25% to 100% f. s.					
Transistor Switching Output(s) PNP:	Normally open / normally closed, standard-/window-mode					
Switching Function	Normally open / normally closed, standard-/window-mode					

* See product configurator for additional options.

Transistor Switching Output(s) PNP Cont.:	Adjustment Range and Hysteresis:	0% to 125% f. s.
	Switching Frequency:	Max. 100 Hz
	Contact Rating:	Switching current 400 mA, short-circuit-proof
	Delay:	0.0 to 9.9 s adjustable
	Status Display(s):	Green LED(s)
Digital Display:	Display Range:	3-digit 7-segment LED display, height 10 mm, (0.39 inches), red
	Display Rate:	-1 to 999
		20/s
Error Display:		Orange LED (alarm)
Local Operating Interface:		3 push buttons
Temperature Range:	Media:	-13°F to 212°F (-25°C to +100°C)
	Ambient:	14°F to 158°F (-10°C to +70°C)
	Storage:	-22°F to 176°F (-30°C to +80°C)
Temperature Influence:		±0.2% f.s. /10K
Compensation Range:		14°F to 158°F (-10°C to +70°C)
Enclosure Rating:		Type 4, for indoor use only, (NEMA 4 / IP65)
Dimensions (Housing):		1-7/16" X 5-1/8" (36 mm x 130 mm) (without electrical plug)
Additional Features:		Microprocessor, self-monitoring with error code display; all parameters are configured by keypad. Keypad lock, rugged construction, vibration- and shockproof, long term stability
Weight:		Approx. 0.4 lb (200 g)
Approvals:		cULus: file No. E42816

Barksdale

CONTROL PRODUCTS

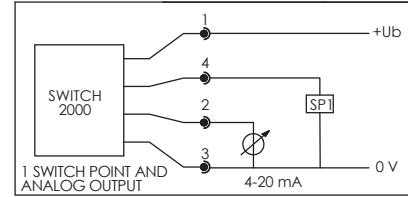
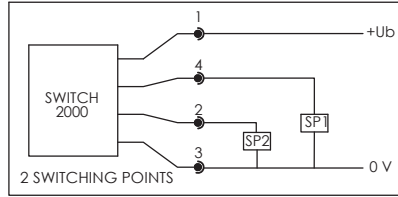
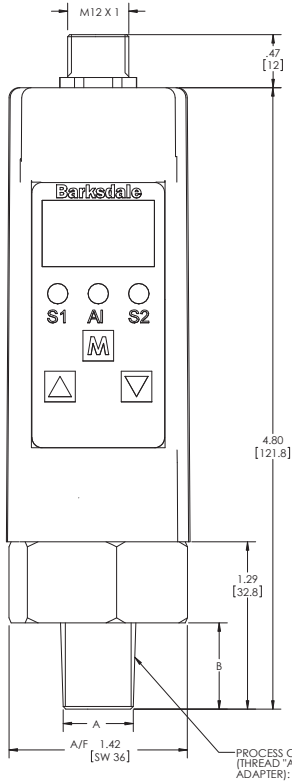
Barksdale, Inc./Barksdale GmbH
A Subsidiary of Crane Co.

CRANE

Electronic Pressure Switch

SW2000

Technical Drawings



WIRE COLOR CODE / PIN ASSIGNMENTS

PLUG M 12 x 1 4PIN	MODEL WITH 2 SWITCHING OUTPUTS	MODEL WITH 1 SWITCHING OUTPUT AND 1 ANALOG OUTPUT
PIN 1	+UB (15-32 V DC)	+UB (15-32 V DC)
PIN 2	SP2 0.4 A	ANALOG
PIN 3	0V	0V
PIN 4	SP1 0.4 A	SP1 0.4 A

DIMENSIONS (IN INCHES)

PROCESS CONNECTIONS "A"	"B"
1/4-18 NPT	.67" [17 MM]
G 1/4	.55" [14 MM]
7/16 37° JIC (STRAIGHT)	.63" [16 MM]
7/16 SAE-4-20 UNF	.365" [9 mm]



Dimensions in inches (mm)

Product Configurator

Example	SW2000	-11	-N	-1	
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Series

SW2000 Series SW2000, electronic pressure switch

Pressure Ranges

-01-A	0 - 15 PSIA (0 - 1.03 BAR) [absolute]
-30-A	0 - 75 PSIA (0 - 5.17 BAR) [absolute]
-05-A	0 - 150 PSIA (0 - 10.34 BAR) [absolute]
-05	0 - 150 PSIG (0 - 10.34 BAR) [gauge]
-31	0 - 750 PSIG (0 - 51.71 BAR) [gauge]
-11	0 - 1500 PSIG (0 - 103.45 BAR) [gauge]
-13	0 - 3000 PSIG (0 - 206.9 BAR) [gauge]
-16	0 - 6000 PSIG (0 - 413.79 BAR) [gauge]
-32	0 - 9000 PSIG (0 - 620.69 BAR) [gauge]

Process Connection

-N	1/4" NPT male
-P3	7/16-20 (37° JIC) male with Viton® o-ring (rotatable)
-G	G 1/4 male with Viton® gasket
-P2	7/16-20 UNF SAE-4 male with Viton® o-ring (rotatable)

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 plus 4-20 mA output
-2	Dual switch capability (No analog output)
-6	Single switch plus 0-10 volt output