

Electronic Pressure Switch

SW2000

Features

- ▶ Pressure control with internal stainless steel diaphragm
- ▶ High accuracy with fully adjustable deadband
- ▶ 2 solid state contacts or 1 solid state contact plus 1 4-20 mA analog output
- ▶ Built-in digital display readout
- ▶ Fully configurable via keypad
- ▶ Suitable for rapid cycling (100 times per second)
- ▶ UL/CSA approved

Applications

- ▶ OEM-applications in hydraulics and pneumatics
- ▶ Lubrication monitoring
- ▶ Machine tool industry
- ▶ Injection molding machines
- ▶ Compressor
- ▶ Apparatus engineering equipment



General Specifications*

Accuracy:	0.5% FS					
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:	FKM (fluorelastomer)					
Measuring Ranges (psi):	150	750	1500	3000	6000	9000
Proof Pressure (psi):	220	1100	2175	4400	9000	11,600
Process Connection:	1/4-18 NPT, 7/16-20 SAE, G1/4 M					
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:	100/s (for peak value memory)					
Time Constant:	approx. 40s					
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-protection					
Adjustment Range	25% to 100% f. s.					
Switching Output(s):	Normally open / normally closed, standard-/window-mode					
Switching Function (adjustable):	Normally open / normally closed, standard-/window-mode					

* See product configurator for additional options.

Switching Output(s) Cont.:	Adjustment Range: 0% to 125% f. s. Hysteresis: 0% to 125% f. s. Switching Frequency: max. 100 Hz Contact Rating: max. 500 mA, short circuit-protection Delay: 0.0 to 9.9 s adjustable Status Display(s): Green LED(s)
Digital Display:	3-digit 7-segment LED display, height 10 mm, (0.39 inches), red Display Range: -1 to 999 Display Rate: 20/s
Error Display:	Orange LED display (AL).
Operating Elements:	3 easy response push buttons
Temperature Range:	Media: -13°F to 212°F (-25°C to +100°C) Electronics: 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)
Protection Class:	IP65
Dimensions (Housing):	1-7/16" X 5-1/8" (36 mm x 130 mm) (without electrical plug)
Additional Features:	7-segment LED display, microprocessor, self monitoring with error display, all parameters are configured by keypad. Tamper proof, keypad lock, rugged construction, vibration- and shockproof, long term stability, controlled
Weight:	approx. 0.4 lb (200 g)
Approvals:	c/ULus: file No. E42816

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Technical Drawings

1-7/16 (Ø 36)

Switch 2000

*SP2+Diagnosis output

SWITCH 2000

4 - 20 mA

Plug 4-pin

Plug M 12 X 1 4 pin	Model with 1 switching output	Model with 2 switching outputs	Model with 1 switching output and 1 analog output
Pin 1 brown	+Ub (15 - 28 V DC)	+Ub (15 - 28 V DC)	+Ub (15 - 28 V DC)
Pin 2 white	-	SP2 (0.5 A max.) (0.4 A)*	Analog
Pin 3 blue	0 V	0 V	0 V
Pin 4 black	SP1 (0.5 A max.)	SP1 (0.5 A max.)	SP1 (0.5 A max.)

Shown with G 1/4 Connection

Connection Chart

Plug M 12 X 1 4 pin	Version with switching output	Version with 1 switching output and 1 analog output
Pin 1	(15 to 28 VDC)	(15 to 28 VDC)
Pin 2	SP2 (0.4 A max.)	analog (4-20 mA)
Pin 3	0 V	0 V
Pin 4	SP1 (0.4 A max.)	SP1 (0.4 A max.)

Dimensions (in inches)

Process Connections "A"	"B"
1/4-18 NPT	2"
G 1/4	1-1/8"
7/16-20-SAE	2"

Product Configurator

Example SW2000 -11 -N -1

Base Model

SW2000 Solid State Pressure switch

Pressure Ranges

-01-A	0 - 15 PSIA (absolute)
-30-A	0 - 75 PSIA (absolute)
-05-A	0 - 150 PSIA (absolute)
-05	0 - 150 PSIG (gauge)
-31	0 - 750 PSIG (gauge)
-11	0 - 1500 PSIG (gauge)
-13	0 - 3000 PSIG (gauge)
-16	0 - 6000 PSIG (gauge)
-32	0 - 9000 PSIG (gauge)

Connection

-N	1/4" NPT
-P3	7/16-20 SAE
-G	G 1/4

Options

-1	Single switch plus 4-20 mA output
-2	Dual switch capability (No analog output)
-6	Single switch plus 0-10 volt output

Accessory

Order #	Description
239236	- 4 Pin, M12 Electrical mating connector