

Direct Mount Pressure Switch

PSB-9104B
Revised 02-01
Catalog Section 05
(00-02-0031)



Model PSB

- Limit Switch for Critical Pressure
- Operate Alarms or Shutdown Equipment
- SPDT Snap-Acting Switch
- Fits Most Engine Applications

Description

The PSB switch is a direct mount switch for critical pressure points. It has one limit contact that can be used to activate an alarm, actuate indicator lights or shutdown equipment.

The construction of this instrument is the same as our time-proven SWICHGAGE®. A precision machined brass mounting plate and port captures a high quality stamped beryllium copper diaphragm. The single-pole, double-throw (SPDT) snap-switch is operated directly from the diaphragm for quick acting and positive switching. Trip point is factory preset according to your specifications.

Housing is weather sealed to prevent entry of moisture, dust, etc. A glass-filled nylon terminal block with quick screw terminal connections gives the PSB switch a real advantage in industrial engine applications. The PSB is ideal when reading is not desired, but pressure is critical to operational efficiency.

Intended for use in general purpose non-classified areas.

Applications

- Engine Lubrication
- Water pumps
- Compressors
- Oil field systems
- Irrigation systems
- Construction Equipment
- Mobile Equipment
- Marine engines
- Generators

Features

- Fits all engine applications
- SPDT snap-switch
- Activates indicator lights, alarms, or shutdown equipment
- Time-proven SWICHGAGE® construction
- Easy wiring terminal block
- Steel housing specially coated to resist corrosion
- Factory preset to your specifications

Specifications

Housing: Plated steel.

Pressure Connection: 1/8-27 NPT, Brass.

Diaphragm: Formed beryllium copper (heat treated).

Pulsation Dampener: Brass (it is removable for cleaning).

Terminal Block: Three #4-40 screws.

Accuracy: Trip point: $\pm 3\%$ of full scale.

Switch reset differential: $\pm 7\%$ of full scale.

Repeatability: $\pm 1\%$ of full scale.

Contact Rating: SPDT 3 A @ 30 VDC inductive.

Maximum Pressure: See Trip Point Chart on reverse side.

Temperature Range:

Ambient= -40°F (-40°C) thru 150°F (66°C).

Process= -40°F (-40°C) thru 250°F (121°C).

Factory Trip Point Setting: See Trip Point Chart (on back).

Pressure Range: Specify from 0-400 psi (0-2.76 MPa) [0- 27.58 bar]. See Trip Point Chart on reverse side.

Contact: Operates on rising or falling pressure (specify).

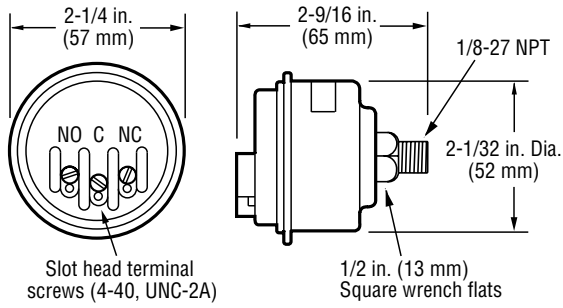
Shipping Weight: 8 oz. (0.25 kgs).

Shipping Dimensions: 3 x 2-3/4 x 2-3/4 in. (76 x 70 x 70 mm).

NOTE: No customer replacement parts.

**Products covered by this bulletin comply with EMC Council directive 89/336/EEC regarding electromagnetic compatibility except as noted.

Dimensions



Trip Point Chart

Ranges available psi (kPa/MPa) [bar]	Factory setting* psi (kPa) [bar] Falling	Maximum pressure psi (kPa) [bar]
0-15 (0-103) [0-1.03]	3 (21) [.21]	30 (207) [2.07]
0-30 (0-207) [0-2.07]	7 (48) [.48]	60 (414) [4.14]
0-50 (0-345) [0-3.45]	10 (69) [.69]	100 (0-689) [0-6.89]
0-75 (0-517) [0-5.17]	15 (103) [1.03]	150 (0-1.03) [0-10.34]
0-100 (0-689) [0-6.89]	20 (138) [1.38]	200 (0-1.38) [0-13.79]
0-150 (0-1.03) [0-10.34]	30 (207) [2.07]	300 (0-2.07) [0-20.70]
0-200 (0-1.38) [0-13.79]	50 (345) [3.45]	400 (0-2.76) [0-27.60]
0-300 (0-2.07) [0-20.70]	75 (517) [5.17]	500 (3.45) [34.50]
0-400 (0-2.76) [0-27.60]	150 (1.03) [10.34]	500 (3.45) [34.50]

*These points will be used if switch trip point is not specified.

How to Order

To order the PSB model use the diagram below.

PSB - - -

Pressure Range
Specify maximum value
from chart above.

Switch Trip Point[†]

F = Factory set to trip on falling. Specify "F" and the set point value.
Example: PSB-100-F20.

R = Factory set to trip on rising. Specify "R" and the set point value.

For units of measure other than psi, specify the set point value followed by unit of measure as follows:

B = Bar

K = kPa/MPa

M = kg/cm²

Example: PSB-7B-2B

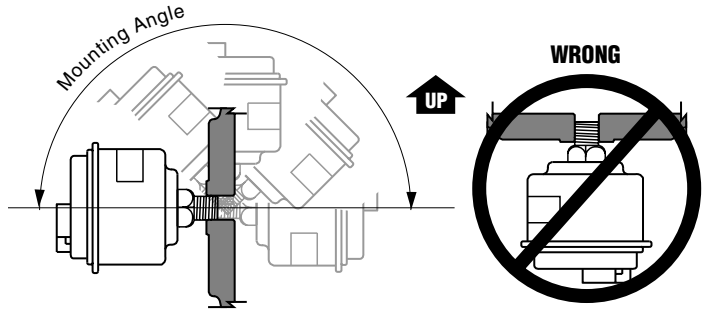
[†]Switch set point value will be stated on label.

Installation Instructions

Mounting

CAUTION: Use wrench on shank to tighten or loosen pressure connection. **DO NOT TWIST CASE**, which will damage the unit and void the warranty.

1. Before installing the PSB switch, apply sealant, such as Teflon tape, to the threads (**be sure sealant does not block the inlet orifice**).
2. The PSB can be mounted in horizontal or vertical angles (**do not mount switch facing down**).

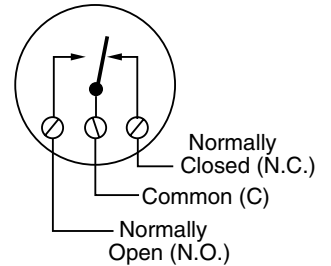


3. Locate the unit in place and secure it by tightening the 1/8-27 NPT fitting into the desired location (**do not overtighten**). **DO NOT TWIST CASE**.

Wiring

CAUTION: **DISCONNECT** Electrical power before wiring.

1. Switch contacts (below) are shown with no pressure applied to the PSB switch.
2. A spade (forked) terminal is recommended for all PSB switch connections.
3. Complete the wiring operation making sure the voltage and current requirements are within the PSB switch electrical rating (see the typical wiring diagram at right).



Warranty

A limited warranty on materials and workmanship is given with this FW Murphy product. A copy of the warranty may be viewed or printed by going to www.fwmurphy.com/support/warranty.htm



FW Murphy
P.O. Box 470248
Tulsa, Oklahoma 74147 USA
+1 918 317 4100
fax +1 918 317 4266
e-mail sales@fwmurphy.com
www.fwmurphy.com

CONTROL SYSTEMS & SERVICES DIVISION

P.O. Box 1819; Rosenberg, Texas 77471; USA
+1 281 633 4500 fax +1 281 633 4588
e-mail sales@fwmurphy.com

MURPHY DE MEXICO, S.A. DE C.V.

Blvd. Antonio Rocha Cordero 300, Fracción del Aguaje
San Luis Potosí, S.L.P.; México 78384
+52 444 8206264 fax +52 444 8206336
Villahermosa Office +52 993 3162117
e-mail ventas@murphymex.com.mx
www.murphymex.com.mx

FRANK W. MURPHY, LTD.

Church Rd.; Laverstock, Salisbury SP1 1QZ; U.K.
+44 1722 410055 fax +44 1722 410088
e-mail sales@fwmurphy.co.uk
www.fwmurphy.co.uk

Murphy摩菲仪表授权经销商
信德迈科技(北京)有限公司 CNMEC Technology
地址: 北京市朝阳区胜古中路2号金基业大厦201室
电话: 010-8428 2935 13910962635
Http: //www.cnmec.com Email: sales@cnmec.biz
传真: 010-8428 8762

MACQUARRIE CORPORATION

1620 Hume Highway
Campbellfield, Vic 3061; Australia
+61 3 9358 5555 fax +61 3 9358 5558
e-mail murphy@macquarrie.com.au



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