

# PRESSURE, VACUUM, AND DIFFERENTIAL SWITCHES

## PRINTED CIRCUIT BOARD MOUNTABLE

**PSW23 Series**  
**PSW24 Series**  
**PSW25 Series**



- ✓ UL Recognized, CSA Certified
- ✓ Printed Circuit Board Mountable
- ✓ Leads Available as an Option
- ✓ Several Fitting Styles Available
- ✓ Pressure, Vacuum, and Differential Models Available
- ✓ Fixed Setpoint

These miniature single-pole switches are used in pressure and vacuum applications in which moderate accuracy is sufficient. The fixed setpoint is factory set.

### SPECIFICATIONS

#### Temperature Range:

-10 to 75°C (14 to 167°F)

#### Setpoint Accuracy:

±10% of setting at 21°C (70°F)

**Note:** Pressure settings may change over the temperature range.

#### Materials of Construction

**Lower Body:** Rynite plastic (with pin terminals molded in)

**Upper Body:** Acetal plastic

**Diaphragm:** EPDM (ethylene-propylene diene monomer)

**Internal Parts:** Acetal plastic

**Screws:** Stainless steel or zinc-plated steel, flash

**Contacts:** SPST (normally open); gold flash over silver-plated copper alloy

**Pins:** Gold flash over silver-plated copper alloy

**Leads [Optional (-L)]:** 8", 20 AWG stranded PVC-insulated wire fastened to the switch terminals



**Electrical:** SPST (NO), 1 A resistive 250 Vac; ratings are dependent on actuation pressure and must be derated at lower pressures (under 1 psi).

#### Pressure Connection

**PSW23:** 1/8 MNPT

**PSW24:** Center spout for 1/8 ID tubing; provided with 3/16-18 mounting nut.

**PSW25:** Radial spout for 1/8 ID tubing

**Proof Pressure:** See table

**Hysteresis (Deadband):** Negligible

**Media Compatibility:** Air, water and many other fluids and gases that are compatible with EPDM acetal plastic

**Note:** Mineral oil and similar fluids are not compatible with EPDM. Request nitrile diaphragms (see "Custom Switches" on next page). Contacts are exposed to media on base spout.

#### Overall Dimensions:

38 x 25 mm (1.5 x 1")

**Pin Spacing:** 12.7 mm (0.5") centers

**Weight:** 6 g (0.2 oz)

**Approvals:** UL-recognized, CSA-certified switches

To Order		
PRESSURE MODELS PSW23 1/8 MNPT with 3/16 Threaded Mounting Nut Included		
MODEL NO.	FIXED SETPOINT	PROOF PRESSURE
PSW23-10W	10 inH <sub>2</sub> O	250 inH <sub>2</sub> O
PSW23-20W	20 inH <sub>2</sub> O	250 inH <sub>2</sub> O
PSW23-1P	1 psig	40 psig
PSW23-2P	2 psig	40 psig
PSW23-10P	10 psig	40 psig
PSW23-20P	20 psig	40 psig
PSW23-30P	30 psig	60 psig

**Ordering Example:** PSW23-10P, fixed setpoint of 10 psig.

# PRESSURE, VACUUM, AND DIFFERENTIAL SWITCHES



Note:  
On vacuum  
models,  
black side  
spout is the  
vacuum port

VACUUM MODELS PSW23V 1/8 MNPT with 1/16 Threaded Mounting Nut Included		
MODEL NO.	FIXED SETPOINT	PROOF PRESSURE
PSW23V-10W	10 inWC Vac	300 inWC Vac
PSW23V-20W	20 inWC Vac	300 inWC Vac
PSW23V-50W	50 inWC Vac	300 inWC Vac
PSW23V-100W	100 inWC Vac	300 inWC Vac
PSW23V-200W	200 inWC Vac	400 inWC Vac



PRESSURE MODELS PSW24 Center Spout for 1/8 ID Tubing, with 1/16 Threaded Mounting Nut and Tube Lock Nut Included		
MODEL NO.	FIXED SETPOINT	PROOF PRESSURE
PSW24-10W	10 inH <sub>2</sub> O	250 inH <sub>2</sub> O
PSW24-20W	20 inH <sub>2</sub> O	250 inH <sub>2</sub> O
PSW24-1P	1 psig	40 psig
PSW24-2P	2 psig	40 psig
PSW24-10P	10 psig	40 psig
PSW24-20P	20 psig	40 psig



VACUUM MODELS PSW24V Center Spout for 1/8 ID Tubing, with 1/16 Threaded Mounting Nut and Tube Lock Nut Included		
MODEL NO.	FIXED SETPOINT	PROOF PRESSURE
PSW24V-10W	10 inWC Vac	300 inWC Vac
PSW24V-20W	20 inWC Vac	300 inWC Vac
PSW24V-50W	50 inWC Vac	300 inWC Vac
PSW24V-100W	100 inWC Vac	300 inWC Vac
PSW24V-200W	200 inWC Vac	400 inWC Vac



PRESSURE MODELS PSW25 Radial Spout for 1/8 ID Tubing		
MODEL NO.	FIXED SETPOINT	PROOF PRESSURE
PSW25-10W	10 inH <sub>2</sub> O	250 inH <sub>2</sub> O
PSW25-20W	20 inH <sub>2</sub> O	250 inH <sub>2</sub> O
PSW25-1P	1 psig	40 psig
PSW25-2P	2 psig	40 psig
PSW25-10P	10 psig	40 psig
PSW25-20P	20 psig	40 psig

To order with 8" 20 AWG leads; add suffix "-L" to model number for additional cost.  
Ordering Example: PSW23V-10W-L, vacuum switch with a fixed setpoint of 10 inH<sub>2</sub>O vacuum, 1/8 NPT pressure port, 8" 20 AWG leads.

## CUSTOM SWITCHES

Custom pressure switches are available—50 piece minimum order; consult Pressure Engineering for price and delivery  
**Custom Options:** Pre-fixed setpoints other than those in the tables

**Leads:** Custom length

**Electrical:** SPST, normally closed

**Vacuum Switches:** Vacuum port at top instead of back side spout (NC only)

All products shown smaller than actual size.

# PRESSURE AND VACUUM SWITCHES

## COMPACT, RUGGED, PRE-FIXED SETPOINT

### PSW27 Series PSW28 Series PSW29 Series



- ✓ UL Recognized, CSA Certified Up to 21 A
- ✓ Fixed Setpoint
- ✓ Pressure and Vacuum Models Available
- ✓ 1/8" NPT or Spout for 1/8" ID Tubing

These reliable, compact, single-pole switches are used in pressure and vacuum applications in which moderate accuracy is sufficient. The fixed setpoint is factory set.

### SPECIFICATIONS

**Approvals:** UL recognized, CSA certified; microswitches bear the ENEC and CE mark

**Temperature Range:**  
-10 to 75°C (14 to 167°F)

**Setpoint Accuracy:**  
±10% of setting at 21°C (70°F)

**Note:** Pressure settings may change over the temperature range.

**Electrical:** SPDT; see To Order chart on next page for amp rating, 250 Vac

#### Electrical Connection

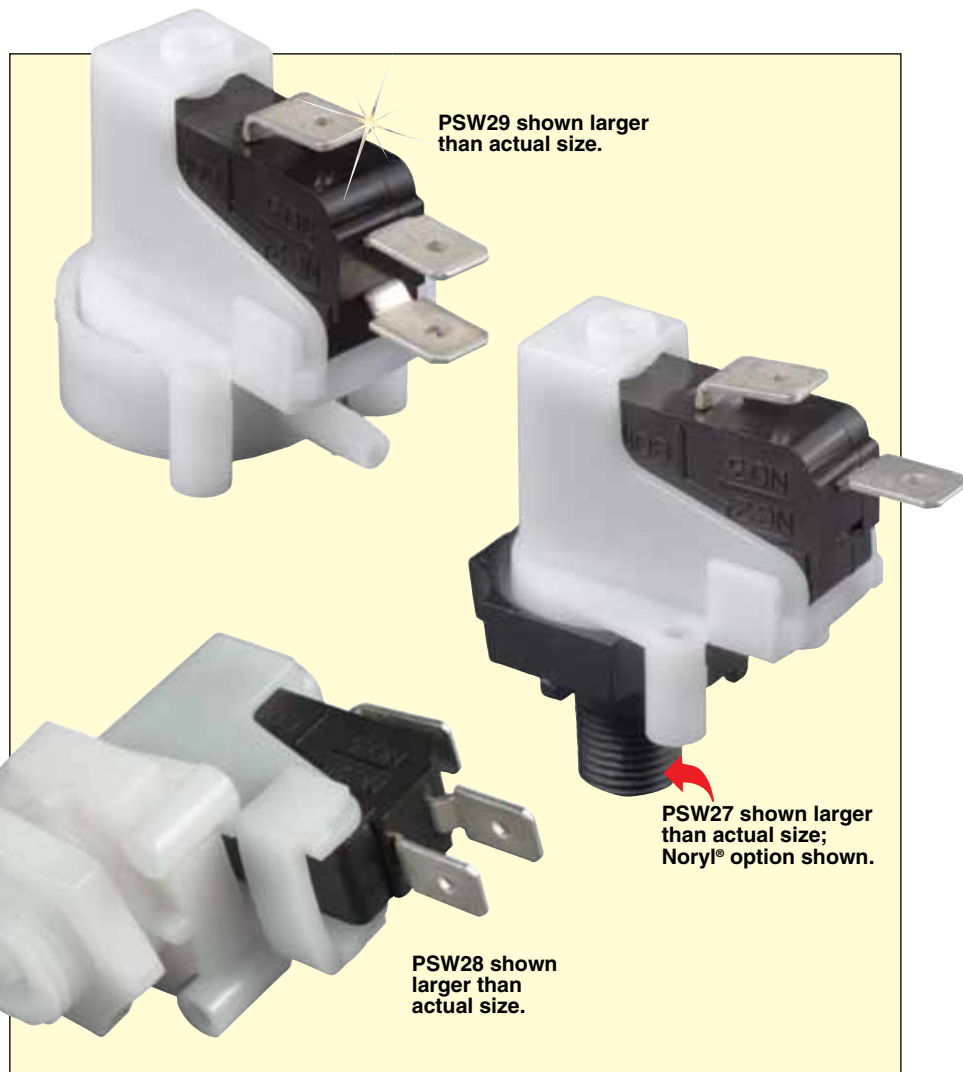
**Terminals:** 6.35 mm (0.25") standard "slide-on" male

**Proof Pressure:** Maximum system pressure, see To Order chart on next page

#### Materials of Construction

**Body:** Acetal

**Diaphragm:** EPDM (ethylene-propylene diene monomer)



#### Pressure Connection

**PSW27:** 1/8" MNPT

**PSW28:** Center spout for 1/8" ID tubing; provided with 1/16"-18 threaded mounting and tube lock nut

**PSW29:** Radial spout for 1/8" ID tubing; through-hole legs for mounting bolt

**Proof Pressure:** See To Order chart on next page

#### Hysteresis (Deadband)

##### Pressure Switches:

Approximately 25% of the setpoint

##### Vacuum Switches:

Approximately 30% of the setpoint

**Media Compatibility:** Air, water and many other fluids and gases that are compatible with EPDM and acetal

**Note:** Mineral oil and similar fluids are not compatible with EPDM. Request nitrilediaphragm (see "Custom Switches").

**Weight:** 0.6 oz (17 g)

#### Overall Dimensions:

45 x 51 x 25 mm (1.75 x 2 x 1")

#### CUSTOM SWITCHES

Custom pressure switches are available; 50 piece minimum order; consult Pressure Engineering for price and delivery

#### Custom Options:

Pre-fixed setpoints other than those in the tables

# PRESSURE AND VACUUM SWITCHES

<b>To Order</b>			
<b>PRESSURE SWITCHES PSW27 1/8 MNPT</b>			
<b>MODEL NO.</b>	<b>FIXED SETPOINT</b>	<b>PROOF PRESSURE</b>	<b>SPDT SWITCH RATING</b>
PSW27-1P	1 psig	30 psig	10 A (resistive)
PSW27-2P	2 psig	50 psig	21 A (resistive)
PSW27-5P	5 psig	50 psig	21 A (resistive)
PSW27-10P	10 psig	50 psig	21 A (resistive)
PSW27-20P	20 psig	50 psig	21 A (resistive)
PSW27-30P	30 psig	80 psig	21 A (resistive)
PSW27-40P	40 psig	80 psig	21 A (resistive)
PSW27-50P	50 psig	80 psig	21 A (resistive)

<b>VACUUM SWITCHES PSW27V 1/8 MNPT</b>			
<b>MODEL NO.</b>	<b>FIXED SETPOINT</b>	<b>PROOF PRESSURE</b>	<b>SPDT SWITCH RATING</b>
PSW27V-25W	25 inWC Vac	300 inWC Vac	10 A (resistive)
PSW27V-30W	30 inWC Vac	300 inWC Vac	10 A (resistive)
PSW27V-40W	40 inWC Vac	300 inWC Vac	21 A (resistive)
PSW27V-50W	50 inWC Vac	300 inWC Vac	21 A (resistive)
PSW27V-75W	75 inWC Vac	350 inWC Vac	21 A (resistive)
PSW27V-100W	100 inWC Vac	350 inWC Vac	21 A (resistive)
PSW27V-150W	150 inWC Vac	350 inWC Vac	21 A (resistive)
PSW27V-200W	200 inWC Vac	350 inWC Vac	21 A (resistive)

**Note:** PSW27V vacuum switches have  $\pm 20\%$  field adjustment. Inside the 1/8 NPT fitting, locate the set screw. Turning the set screw will adjust the setpoint approx.  $\pm 20\%$ . The setting is considered "NO-Tamper", because when installed, there is no access to this adjustment.

<b>PRESSURE SWITCHES PSW28 Center Spout for 1/8 ID Tubing with 1/16-18 Threaded Mounting and Tube Lock Nut Included</b>			
<b>MODEL NO.</b>	<b>FIXED SETPOINT</b>	<b>PROOF PRESSURE</b>	<b>SPDT SWITCH RATING</b>
PSW28-1P	1 psig	30 psig	10 A (resistive)
PSW28-2P	2 psig	50 psig	21 A (resistive)
PSW28-5P	5 psig	50 psig	21 A (resistive)
PSW28-10P	10 psig	50 psig	25 A (resistive)
PSW28-20P	20 psig	50 psig	25 A (resistive)
PSW28-30P	30 psig	80 psig	25 A (resistive)
PSW28-40P	40 psig	80 psig	25 A (resistive)
PSW28-50P	50 psig	80 psig	25 A (resistive)

<b>PRESSURE SWITCHES PSW29 Radial Spout for 1/8 ID Tubing</b>			
<b>MODEL NO.</b>	<b>FIXED SETPOINT</b>	<b>PROOF PRESSURE</b>	<b>SPDT SWITCH RATING</b>
PSW29-1P	1 psig	30 psig	10 A (resistive)
PSW29-2P	2 psig	50 psig	21 A (resistive)
PSW29-5P	5 psig	50 psig	21 A (resistive)
PSW29-10P	10 psig	50 psig	21 A (resistive)
PSW29-20P	20 psig	50 psig	21 A (resistive)
PSW29-30P	30 psig	50 psig	21 A (resistive)

**Ordering Example:** PSW27-10P, pressure switch with fixed setpoint at 10 psig, deadband of approx. 2.5 psig (25% of the fixed setpoint) with a 1/8 MNPT pressure port.