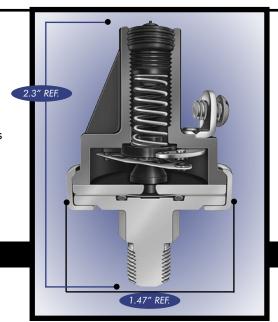
# Set Points from 10-400 psi

# 5000 Series Ultra Duty Pressure Switch

Honeywell Sensing and Control has designed a high pressure/low set point pressure switch for applications that see sudden pressure spikes and high system pressures that can result in early switch failures. This series has been strengthened to prevent cracking of the base with plated steel and screw machined components in a 3-piece design. Modifications to the effective area of the pressure cavity and size of the diaphragm button and diaphragm o-ring are what makes the switch capable of handling sudden pressure transients and high system pressures that are common in applications such as braking, transmission and hydraulic systems.

The switch's physical appearance is similar to our 5000 Series switches with a height of only 2.3" (approx) and a diameter of 1.47". In comparison to our 5000 Series Switch the burst rating has significantly increased from 1250 psi to over 4000 psi on the new design.



### **Specifications**

Type: Direct action blade contact Contacts: Silver alloy, gold plated Set Point Range: 10-400 PSI Operating Pressure: 500 PSI Proof Pressure: 2000 PSI Burst Pressure: 4000 PSI

Base: Plated Steel — Screw Machined

3-piece construction

Diaphragm: Polymide Film

Connector: 1/8-27 NPT Male Thread Temperature Range: -40°F to +250°F Terminals: #8-32 screws, 1/4" blade,

280 Series Metripack

Circuitry: SPST-N.O., N.C., SPDT Cover: Glass Reinforced Polyester Options: Base connector sizes, wire leads, N.O./N.O. dual circuit and

N.C./N.C. dual circuit.

150-250 PSI

250-400 PSI

#### Ratings:

Resistive:	15	AMP-	6	VDC
	8	AMP-	12	VDC
	1	AAAD	24	VDC

Inductive: 1 AMP- 120 VAC

0.5 AMP- 240 VAC

5000 Series Ultra Duty Pressure Switches		2 Terr	ninals	Metri-Pack Integral Connector (See Note 1)			or	
Contact Setting	Factory Set At	Circuitry	Screw Part #	Blade Part #	Contact Setting	Factory Set At	Circuitry	Part #
		N.O.	83298	83313			N.O.	83328
10 05 DCI	00 001	N.C.	83299	83314	10 20 001	00 001	N.C.	83329
10-35 PSI ±4 psi	20 PSI	DC*	83300	83315	10-30 PSI ± 4 psi	20 PSI	DC*	83330
		N.O.	83301	83316			N.O.	83331
		N.C.	83302	83317			N.C.	83332
35-75 PSI ± 6 psi	60 PSI	DC*	83303	83318	30-65 PSI ± 5 psi	45 PSI	DC*	83333
		N.O.	83304	83319		85 PSI	N.O.	83334
75 150 201		N.C.	83305	83320	45.105.00		N.C.	83335
75-150 PSI ±10 psi	100 PSI	DC*	83306	83321	65-125 PSI ± 7 psi		DC*	83336
		N.O.	83307	83322			N.O.	83337
		N.C.	83308	83323			N.C.	83338
150-250 PSI ± 15 psi	200 PSI	DC*	83309	83324	125-200 PSI ± 10 psi	165 PSI	DC*	83339
		N.O.	83310	83325			N.O.	83340
050 400 801	000 801	N.C.	83311	83326	000 400 801	000 001	N.C.	83341
250-400 PSI ± 20 psi	300 PSI	DC*	83312	83327	200-400 PSI ± 15 psi	300 PSI	DC*	83342

Standard Switches					
Contact Setting	Dead Band				
10-35 PSI	15-25 PSI				
35-75 PSI	25-35 PSI				
75-150 PSI	40-60 PSI				

50-70 PSI

80-100 PSI

Approximate Dead Band

— Metri-Pacl	c Switches
10-30 PSI	20-35 PSI
30-65 PSI	35-55 PSI
65-125 PSI	60-85 PSI
125-200 PSI	85-115 PSI
200-400 PSI	150-200 PSI

**Note 1:** Mating connector for N.O. and N.C. is Packard Part# 15300027; Mating connector for DC is Packard Part# 12034147.

**DC\***- The N.C. is the reference circuit for the DC Switch; the N.O. circuit is not adjusted. The approximate dead band between the N.C. and N.O. circuit is shown in the charts. For applications requiring the N.O. circuit as the reference circuit, the N.C. circuit is not adjusted.

# Set Points from 0.5 to 150 psi

## 5000 Series Extended Duty Pressure Switch With Direct Action Blade Contacts

The 5000 Series switch is specifically designed to stand up to extended duty applications. This switch is factory set but capable of field adjustment. It features a Kapton diaphragm for compatibility with a wide variety of fluids, and various terminations including a Metri-Pack connector that forms a tight seal when connected. Among the outstanding design benefits are its durable construction, compact size, and enhanced set point integrity.

### **Standard Specifications**

Type: Direct action

blade contact

Contacts: Silver alloy,

gold plated

Set Point: Factory set

from 0.5 to 150 PSI

Operating Pressure:

150 PSI for 0.5-24 PSI set point range, 250 PSI for 25-150 PSI set point range

Proof Pressure: 500 PSI

Burst Pressure: 750 PSI for 0.5-24 PSI

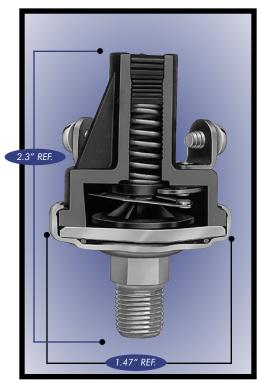
set point range

1250 PSI for 25-150 PSI

set point range.



Switch Boot P/N 79380 for Vacuum and Pressure



5000 Series Switch with Screw Terminals

#### Ratings:

Resistive: 15 AMP- 6 VDC

8 AMP- 12 VDC 4 AMP- 24 VDC

Inductive: 1 AMP- 120 VAC

0.5 AMP- 240 VAC

Diaphragm: Polyimide film

**Temperature** 

Range:  $-40^{\circ}$  F to  $+250^{\circ}$  F

Connector: 1/8 -27 NPT male thread

Terminals: #8-32 screws,

1/4" blade,

280 Series Metri-Pack

Circuitry: SPST-N.O., N.C.,

1 circuit adjustable dual

circuit, or 2 circuits adjustable dual circuit.

Also available are

N.O./N.O. dual circuit

and N.C./N.C. dual circuit.

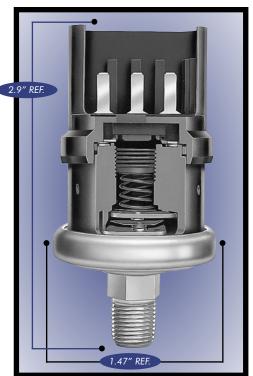
Base: Plated Steel

Cover: Glass reinforced polyester

Options: Brass, plastic or stainless

steel base; various base connector thread sizes;

wire leads (potted & sealed).



5000 Series Switch with Metri-Pack Terminal

**NOTE:** OPERATING MEDIA (PRESSURE SWITCH)
The pressure switch is designed to operate with air, motor oils, transmission oils, jet fuels and other similar hydrocarbon media.

5000 Series Pressure Switch With Standard Terminal											
		Single Circuit 1 Terminal		Single Circuit 2 Terminals		Dual Circuit One circuit adjustable 1		Dual Circuit Both circuits adjustable <sup>2</sup>		<sub>ile</sub> 2	
Contact	Factory	Circuitry	Part N	lumber	Part N	umber	Part N	lumber	Contact	Part N	lumber
Setting	Set At	Circuity	Screw	Blade	Screw	Blade	Screw	Blade	Setting <sup>3</sup>	Screw	Blade
0.5-1 PSI	1 PSI	N.O.	78630	78631	78628	78629	70711	70710	3-4 PSI	76081	76086
±0.3	1 1 31	N.C.	78634	78635	78632	78633	78711	78712	±0.5	70001	70000
1.1-3 PSI	2 PSI	N.O.	78142	78399	76051	76056	7/071	7,07,	5-8 PSI	76582	76590
±0.5	2 1 01	N.C.	78149	78406	76061	76066	76071	76076	±1	70302	70370
3.1-7 PSI	4 PSI	N.O.	78143	78400	76575	76583	7,570	T_,,	9-24 PSI	76082	76087
±1	4131	N.C.	78150	78407	76577	76585	76579	76587	±2	70002	70007
8-13 PSI	10 PSI	N.O.	78144	78401	76576	76584		7,500	25-50 PSI	76083	76088
±2	10 1 31	N.C.	78151	78408	76578	76586	76580	76588	±3	70003 7	70000
14-24 PSI	15 PSI	N.O.	78145	78402	76052	76057	7,070	76072 76077	51-90 PSI	76084	76089
±3	15 1 31	N.C.	78152	78409	76062	76067	76072		+5/-2	70004	70007
25-50 PSI	35 PSI	N.O.	78146	78403	76053	76058	7/070	073 76078	91-150 PSI	76085	76090
±5	33 1 31	N.C.	78153	78410	76063	76068	76073		+8/-2	70003	70070
51-90 PSI	60 PSI	N.O.	78147	78404	76054	76059		7/070			
±7	00 (3)	N.C.	78154	78411	76064	76069	76074	76079			
91-150PSI	100 PSI	N.O.	78148	78405	76055	76060	7/075	7/000			
±10	100 F31	N.C.	78155	78412	76065	76070	76075	76080			

# 5000 Series Pressure Switch With Metri-Pack Terminal

(Ma			Single Circuit ates with Packard /N 15300027)	Dual Circuit One circuit adjustab (Mates with Packat P/N 12034147)	le <sup>1</sup> Both circuits rd (Mates wi	Dual Circuit Both circuits adjustable <sup>2</sup> (Mates with Packard P/N 12034147)	
Contact Setting	Factory Set At	Circuitry	Part Number	Part Number	Contact Setting <sup>3</sup>	Part Number	
1-3 PSI ±0.5	2 PSI	N.O. N.C.	77029 77020	77038	3-4 PSI ±0.5	77047	
4-6 PSI ±1	5 PSI	N.O. N.C.	77030 77021	77039	5-10 PSI ±1	77048	
7-12 PSI ±2	10 PSI	N.O. N.C.	77031 77022	77040	11-24 PSI ±2	77049	
13-24 PSI ±3	20 PSI	N.O. N.C.	77032 77023	77041	25-46 PSI ±3	77050	
25-46 PSI ±5	35 PSI	N.O. N.C.	77033 77024	77042	47-76 PSI +5/-2	77051	
47-76 PSI ±6	60 PSI	N.O. N.C.	77034 77025	77043	77-100 PSI +7/-2	77052	
77-100 PSI ±7	85 PSI	N.O. N.C.	77035 77026	77044	101-126 PSI +9/-2	77053	
101-126 ±9	115 PSI	N.O. N.C.	77036 77027	77045	127-150 PSI +10/-2	77054	
127-150 PSI ±10	135 PSI	N.O. N.C.	77037 77028	77046			

#### Notes:

- 1. The N.C. circuit is the reference circuit for the dual circuit switch; the normally open circuit is not adjusted. The expected dead band between the N.C. & N.O. circuit is shown in the chart below. For applications requiring the normally open circuit as the reference circuit the N.C. circuit is not adjusted.
- 2. Switch may be adjusted so that: A. N.C. circuit opens before N.O. circuit closes.
- B. N.C. and N.O. circuit have same set point.
- C. N.O. circuit closes before the N.C. circuit opens. (There is no dead band and both circuits are on for a brief period of time.)
- 3. The tolerances given in the table are applicable to a switch adjusted so that the N.O. circuit closes before the N.C. circuit opens and applies to the N.C. circuit. The N.O. set point and tolerances are such that a minimum overlap of 1 PSI exists during which both circuits are on.

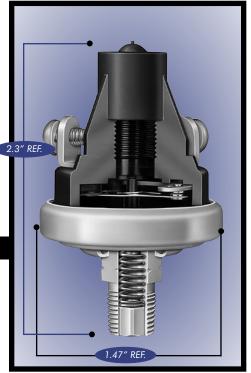
Note 1: Expected Dead Band (Higher than N.C. circuit)

Contact Setting	Dead Band
0.5-3 PSI	1.5 PSI
4-7 PSI	2.5 PSI
8-13 PSI	3.5 PSI
14-24 PSI	8 PSI
25-50 PSI	15 PSI
51-90 PSI	23 PSI
91-150 PSI	40 PSI

# Set Points from 1.1" to 22" Hg

# 5000 Series Extended Duty Vacuum Switches With Direct Action Blade Contacts

The 5000 Series switch is specifically designed to stand up to extended duty applications. This switch is factory set. It features a fluorosilicone rubber diaphragm for compatibility with a wide variety of fluids, and various terminations including a Metri-Pack connector that forms a tight seal when connected. Among the outstanding design benefits are its durable construction, compact size, and enhanced set point integrity.





Switch Boot P/N 79380 for Vacuum and Pressure

## **Standard Specifications**

Type: Direct action blade

contact

Contacts: Silver alloy, gold plated

Set Point: Factory set Vacuum: 1.1 to 22" Hg

Operating

Pressure: 30" Hg vacuum max.

Burst Pressure: 150 PSI

5000 Series Switch with Screw Terminals

## Ratings:

Resistive: 15 AMP- 6 VDC

8 AMP- 12 VDC 4 AMP- 24 VDC

Inductive: 1 AMP- 120 VAC

0.5 AMP- 240 VAC

Diaphragm: Fluorosilicone elastomer

**Temperature** 

Range:  $-40^{\circ}$  F to  $+250^{\circ}$  F

Connector: 1/8-27 NPT male thread

Terminals: #8-32 screws,

1/4" blade,

280 Series Metri-Pack

Circuitry: SPST-N.O., N.C.

Base: Brass

Cover: Glass reinforced

polyester

Options: Various base connector

thread sizes; wire leads

(potted & sealed).

5000 Series Vacuum Switch							
		Internally C	Grounded	Two Terminals			
		Part Nu	mber	Part Number			
Contact Setting	Circuitry	Screw	Blade	Screw	Blade		
1.1-22" Hg	N.O.	78813	78814	77342	77344		
J	N.C.	78815	78816	77343	77345		

Standard set points are 2"Hg(27" H<sub>2</sub>O), 4"Hg, 9"Hg, and 17"Hg

Contact Setting	Tolerance
1.1-3"Hg (15-41"H2O)	±.22"Hg(3"H2O)
4-8"Hg	±1"Hg
9-17"Hg	±2"Hg
18-22″Hg	±3"Hg