



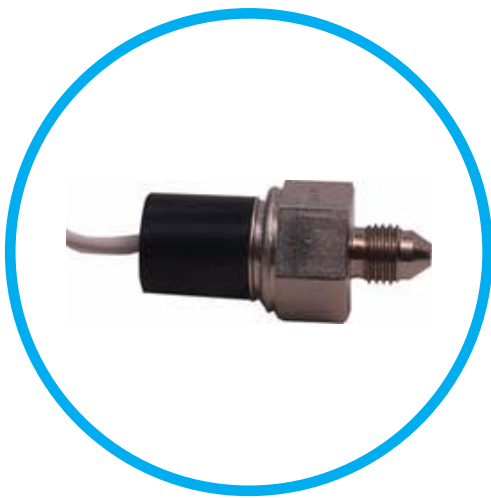
## 6PS SERIES

### HERMETIC STAINLESS STEEL PRESSURE SWITCH

#### Introduction

KLIXON® 6PS series stainless steel pressure switch is a snap-acting, all welded device with hermetically sealed switch contacts. All switch components that are exposed to the fluid stream or external environment are made from 300 series stainless steel or brass to ensure maximum corrosion protection. The design utilizes the snap-action disc in tandem with the snap-action switch contacts to provide full contact force even during high shock and vibration regardless of applied pressure. These properties, when combined with the small size and light weight, provide incredible flexibility of design. Sensata currently offers over 1,000 existing 6PS package designs.

KLIXON® 6PS pressure switches provide low oil pressure indication on multiple commercial aircraft, including Boeing 777 and 787, Airbus A350, Bombardier C-Series, and others. Other applications include pressure indication for gas and oil industry and nuclear power plants.



#### Features

- Hermetically sealed per MIL-E-5400 paragraph 6.3.10
- Covers actuation range of 45 to 700 PSIA
- Maximum corrosion resistance under hostile conditions
  - 300 series stainless steel construction for all environment exposed parts
  - Stainless steel and brass construction for media exposed parts
- High vibration resistance
- 8000 psi minimum burst pressure
- SPDT switch configuration
- Available in a wide range of standard and custom configurations

#### SPECIFICATIONS

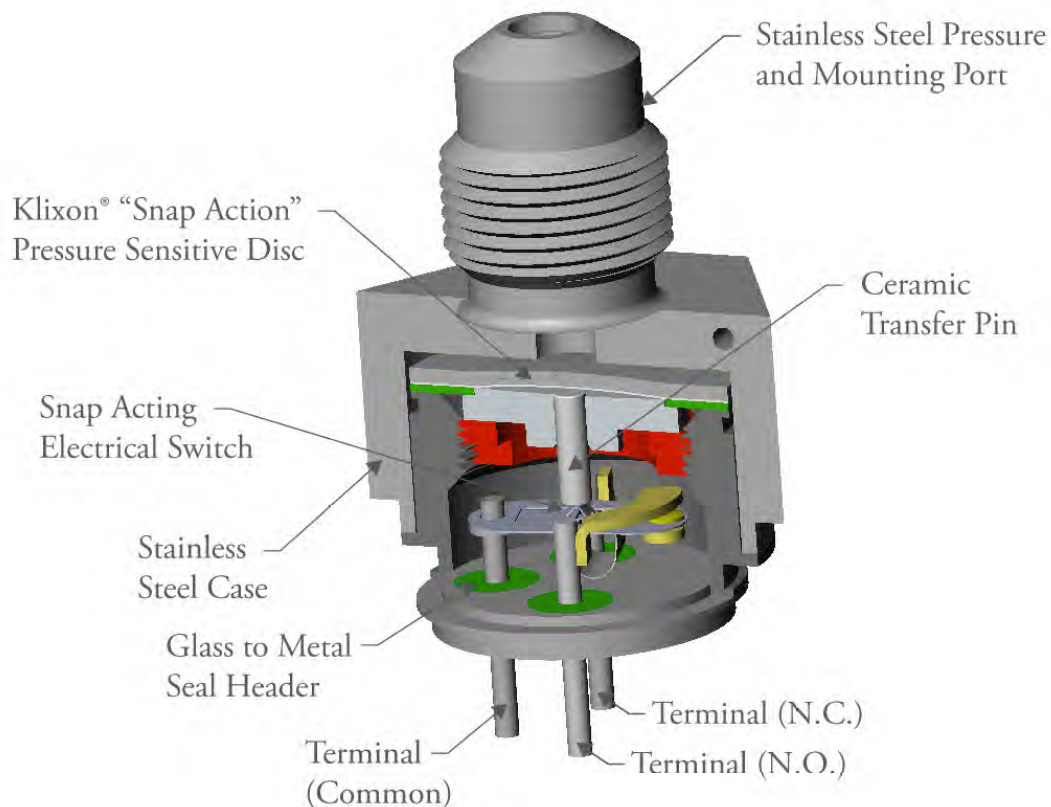
<b>Temperature Rating</b>	-65°F to 275°F (-53.8°C to +135°C)
<b>Vibration Resistance</b>	25 G, 20–2000 cps (no contact chatter in excess of 10 microseconds)
<b>Burst Pressure</b>	8,000 PSI minimum
<b>Proof Pressure</b>	8 times actuating pressure
<b>Life @ Rated Current</b>	50,000 cycles
<b>Current Capacity</b>	Resistive : 5amp @ 28 VDC Inductive : 2amp @ 28 VDC Lamp : 1amp @ 28 VDC
<b>Dielectric Strength</b>	Terminal to terminal : 1000 vrms Terminal to case : 1000 vrms
<b>Weight</b>	Without Leads : 30 grams maximum With Connector : 60 grams maximum
<b>Metal Parts Exposed to Pressure and Environment</b>	300 series stainless steel CA-360-2 (1/2 hard leaded brass)
<b>Potting Material</b>	Epoxy resin

## Pressure Specifications

<b>Range of Actuation Pressure Settings</b>	at STP from 45 PSIA to 700 PSIA
<b>Range of Deactuation Pressure Settings</b>	Standard : 60% to 85% of actuation pressure Special : 85% to 90% of actuation pressure
<b>Range of Tolerances on Actuation &amp; Deactuation Pressure</b>	8,000 Standard : up to $\pm 6\%$ of actuation pressure ( $\pm 10$ PSI minimum) Special : up to $\pm 4\%$ of actuation pressure ( $\pm 5$ PSI minimum)  <i>Choice of deactuation pressure setting and tolerances affects price minimum</i>

Actuation Pressure (PSIA)			Deactuation Pressure (PSIA)			
Pressure	Standard Tolerance	Special Tolerance	Standard 60% to 85%	Special 85% to 90%	Standard Tolerance	Special Tolerance
45 to 134	$\pm 10$	$\pm 5$	28 to 112	40 to 117	$\pm 10$	$\pm 5$
135 to 164	$\pm 10$	$\pm 7$	83 to 137	117 to 144	$\pm 10$	$\pm 7$
165 to 249	$\pm 15$	$\pm 10$	101 to 208	142 to 216	$\pm 15$	$\pm 10$
250 to 369	$\pm 20$	$\pm 10$	153 to 310	217 to 324	$\pm 20$	$\pm 15$
370 to 429	$\pm 25$	$\pm 15$	225 to 361	319 to 378	$\pm 25$	$\pm 20$
430 to 489	$\pm 30$	$\pm 20$	261 to 412	370 to 432	$\pm 30$	$\pm 20$
490 to 549	$\pm 35$	$\pm 25$	297 to 463	421 to 486	$\pm 35$	$\pm 25$
550 to 599	$\pm 40$	$\pm 25$	333 to 510	472 to 540	$\pm 40$	$\pm 25$
600 to 700	Consult Factory					

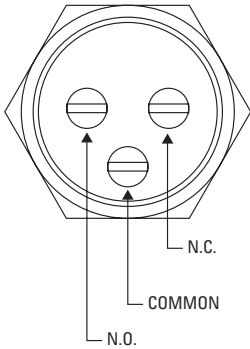
## DIAGRAM



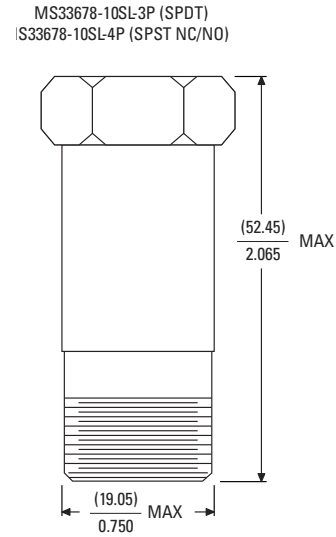
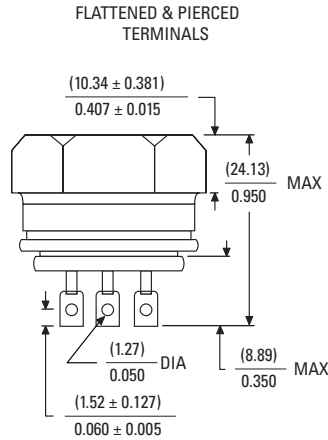


# COMMON CONFIGURATIONS

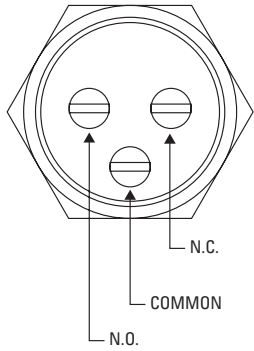
All dimensions are in inches [millimeter].



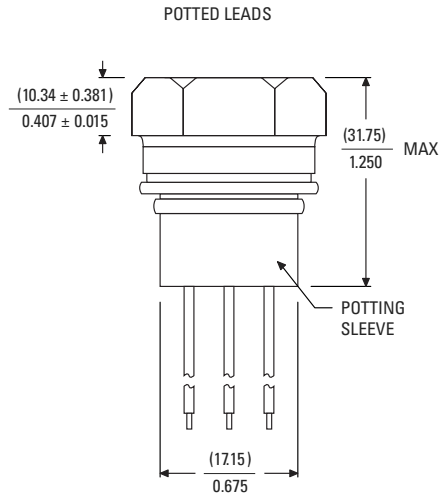
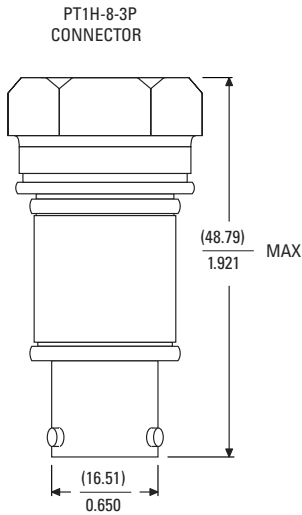
Lockwire holes are  $.047 \pm .006$  [ $1.19 \pm .15$ ] diameter. Located  $.050 \pm .008$  [ $1.27 \pm .20$ ] from port face of hex



		SPDT	SPDT	SPDT	SPDT	SPST	SPST
1/8" OD Tubing MS 33656 -E2		<b>6PS100</b> without lock-wire holes	<b>6PS150</b> with lock-wire holes	<b>6PS102</b> without lock-wire holes	<b>6PS152</b> with lock-wire holes	<b>6PS103</b> without lock-wire holes	<b>6PS153</b> with lock-wire holes
3/16" OD Tubing MS 33656 -E3		<b>6PS200</b> without lock-wire holes	<b>6PS250</b> with lock-wire holes	<b>6PS202</b> without lock-wire holes	<b>6PS252</b> with lock-wire holes	<b>6PS203</b> without lock-wire holes	<b>6PS253</b> with lock-wire holes
1/4" OD Tubing MS 33656 -E4		<b>6PS300</b> without lock-wire holes	<b>6PS350</b> with lock-wire holes	<b>6PS302</b> without lock-wire holes	<b>6PS352</b> with lock-wire holes	<b>6PS303</b> without lock-wire holes	<b>6PS353</b> with lock-wire holes
5/16" OD Tubing MS 33656 -E5		<b>6PS400</b> without lock-wire holes	<b>6PS450</b> with lock-wire holes	<b>6PS402</b> without lock-wire holes	<b>6PS452</b> with lock-wire holes	<b>6PS403</b> without lock-wire holes	<b>6PS453</b> with lock-wire holes
3/8" OD Tubing MS 33656 -E6		<b>6PS500</b> without lock-wire holes	<b>6PS550</b> with lock-wire holes	<b>6PS502</b> without lock-wire holes	<b>6PS552</b> with lock-wire holes	<b>6PS503</b> without lock-wire holes	<b>6PS553</b> with lock-wire holes
1/8" Pipe Fitting MS 33677		<b>6PS600</b> without lock-wire holes	<b>6PS650</b> with lock-wire holes	<b>6PS602</b> without lock-wire holes	<b>6PS652</b> with lock-wire holes	<b>6PS603</b> without lock-wire holes	<b>6PS653</b> with lock-wire holes
1/4" Pipe Fitting MS 33677		<b>6PS700</b> without lock-wire holes	<b>6PS750</b> with lock-wire holes	<b>6PS702</b> without lock-wire holes	<b>6PS752</b> with lock-wire holes	<b>6PS703</b> without lock-wire holes	<b>6PS753</b> with lock-wire holes



Lockwire holes are .047 – .006 [1.19 – .15] diameter. Located .050 – .008 [1.27 – .20] from port face of hex



		SPST	SPST	SPDT	SPDT	SPST (NC)	SPST (NC)	SPST (NO)	SPST (NO)
<b>1/8 OD Tubing MS 33656 -E2</b>		<b>6PS104</b> without lock-wire holes	<b>6PS154</b> with lock-wire holes	<b>6PS101</b> without lock-wire holes	<b>6PS151</b> with lock-wire holes	<b>6PS105</b> without lock-wire holes	<b>6PS155</b> with lock-wire holes	<b>6PS106</b> without lock-wire holes	<b>6PS156</b> with lock-wire holes
<b>3/16 OD Tubing MS 33656 -E3</b>		<b>6PS204</b> without lock-wire holes	<b>6PS254</b> with lock-wire holes	<b>6PS201</b> without lock-wire holes	<b>6PS251</b> with lock-wire holes	<b>6PS205</b> without lock-wire holes	<b>6PS255</b> with lock-wire holes	<b>6PS206</b> without lock-wire holes	<b>6PS256</b> with lock-wire holes
<b>1/4 OD Tubing MS 33656 -E4</b>		<b>6PS304</b> without lock-wire holes	<b>6PS354</b> with lock-wire holes	<b>6PS301</b> without lock-wire holes	<b>6PS351</b> with lock-wire holes	<b>6PS305</b> without lock-wire holes	<b>6PS355</b> with lock-wire holes	<b>6PS306</b> without lock-wire holes	<b>6PS356</b> with lock-wire holes
<b>5/16 OD Tubing MS 33656 -E5</b>		<b>6PS404</b> without lock-wire holes	<b>6PS454</b> with lock-wire holes	<b>6PS401</b> without lock-wire holes	<b>6PS451</b> with lock-wire holes	<b>6PS405</b> without lock-wire holes	<b>6PS455</b> with lock-wire holes	<b>6PS406</b> without lock-wire holes	<b>6PS456</b> with lock-wire holes
<b>3/8 OD Tubing MS 33656 -E6</b>		<b>6PS504</b> without lock-wire holes	<b>6PS554</b> with lock-wire holes	<b>6PS501</b> without lock-wire holes	<b>6PS551</b> with lock-wire holes	<b>6PS505</b> without lock-wire holes	<b>6PS555</b> with lock-wire holes	<b>6PS506</b> without lock-wire holes	<b>6PS556</b> with lock-wire holes
<b>1/8 Pipe Fitting MS 33677</b>		<b>6PS604</b> without lock-wire holes	<b>6PS654</b> with lock-wire holes	<b>6PS601</b> without lock-wire holes	<b>6PS651</b> with lock-wire holes	<b>6PS605</b> without lock-wire holes	<b>6PS655</b> with lock-wire holes	<b>6PS606</b> without lock-wire holes	<b>6PS656</b> with lock-wire holes
<b>1/4 Pipe Fitting MS 33677</b>		<b>6PS704</b> without lock-wire holes	<b>6PS754</b> with lock-wire holes	<b>6PS701</b> without lock-wire holes	<b>6PS751</b> with lock-wire holes	<b>6PS705</b> without lock-wire holes	<b>6PS755</b> with lock-wire holes	<b>6PS706</b> without lock-wire holes	<b>6PS756</b> with lock-wire holes



# ORDERING OPTIONS

Example : 6PS204 S 260 L 180 E

<b>Design Type</b>	<b>6PS204</b>	<b>S</b>	<b>260</b>	<b>L</b>	<b>-</b>	<b>180</b>	<b>E</b>
<b>Actuation Pressure Tolerance</b>							
A: ±5	T: ±25						
C: ±7	U: ±30						
F: ±10	V: ±35						
L: ±15	W: ±40						
S: ±20							
<b>Actuation Pressure</b>							
Enter a 3-digit value from 45 PSIA to 700 PSIA. If under 100PSIA, place a "0" in front, for example 45PSIA = 045							
<b>Deactuation Pressure Tolerance</b>							
A: ±5	T: ±25						
C: ±7	U: ±30						
F: ±10	V: ±35						
L: ±15	W: ±40						
S: ±20							
<b>Deactuation Pressure</b>							
Enter a 3-digit value from 45 PSIA to 700 PSIA. If under 100PSIA, place a "0" in front, for example 45PSIA = 045							
<b>Lead Length Code (if applicable)</b>							
D: 6"	J: 36"						
E: 12"	K: 42"						
F: 18"	L: 48"						
G: 24"	M: 60"						
H: 30"	N: 72"						

See pressure table for standard tolerances for the actuation and deactuation pressures.  
Note, after building the part number, consult the factory for pricing and to confirm pressure specifications are valid.



# WARNINGS



- HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH**
- Disconnect all power before installing or working with this equipment
  - Verify all connections and replace all covers before turning on power

**Failure to follow these instructions will result in death or serious injury**

Sensata Technologies, Inc. ("Sensata") data sheets are solely intended to assist designers ("Buyers") who are developing systems that incorporate Sensata products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, evaluation and judgment in designing Buyer's systems and products. Sensata data sheets have been created using standard laboratory conditions and engineering practices. Sensata has not conducted any testing other than that specifically described in the published documentation for a particular data sheet. Sensata may make corrections, enhancements, improvements and other changes to its data sheets or components without notice.

Buyers are authorized to use Sensata data sheets with the Sensata component(s) identified in each particular data sheet. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER SENSATA INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, IS GRANTED HEREIN. SENSATA DATA SHEETS ARE PROVIDED "AS IS". SENSATA MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE DATA SHEETS OR USE OF THE DATA SHEETS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. SENSATA DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO SENSATA DATA SHEETS OR USE THEREOF.

All products are sold subject to Sensata's terms and conditions of sale supplied at [www.sensata.com](http://www.sensata.com) SENSATA ASSUMES NO LIABILITY FOR APPLICATIONS ASSISTANCE OR THE DESIGN OF BUYERS' PRODUCTS. BUYER ACKNOWLEDGES AND AGREES THAT IT IS SOLELY RESPONSIBLE FOR COMPLIANCE WITH ALL LEGAL, REGULATORY AND SAFETY-RELATED REQUIREMENTS CONCERNING ITS PRODUCTS, AND ANY USE OF SENSATA COMPONENTS IN ITS APPLICATIONS, NOTWITHSTANDING ANY APPLICATIONS-RELATED INFORMATION OR SUPPORT THAT MAY BE PROVIDED BY SENSATA.

Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA.

## CONTACT US

- Americas**  
+1 (800) 350 2727  
sensors@sensata.com  
switches@sensata.com
- Europe, Middle East & Africa**  
+359 (2) 809 1826  
pressure-info.eu@sensata.com
- Asia Pacific**  
sales.isasia@list.sensata.com  
China +86 (21) 2306 1500  
Japan +81 (45) 277 7117  
Korea +82 (31) 601 2004  
India +91 (80) 67920890  
Rest of Asia +886 (2) 27602006  
ext 2808