



CERAMIC CAPACITIVE PRESSURE SENSOR

60CP Series

5 VDC Supply, Ratiometric Output

WORLD CLASS PERFORMANCE

The 60CP Series pressure sensors are ideally suited for environmentally demanding industrial applications. Using a 5.0 V excitation input, the 60 Series sensors provide a .5-4.5 V signal output proportional to pressure. This design requires no end user amplification. Several housing options are available.

Sensata Technologies has been a leading global supplier of pressure sensors & switches for over 50 years.

Features & Benefits

- Enhanced accuracy over wide operating range.
- Housing options are compatible with most media.
- EMC protection to 100 V/m.
- Broad operating temp. range (-40°C to +135°C).
- Exceptional shake and vibration tolerance.
- Overvoltage and reverse polarity protection.
- Small size and simple installation.

Applications

- Compressors & Pumps
- Hydraulics & Pneumatics
- Agriculture & Construction Equipment
- Transportation & Off Road Vehicles
- Engine Controls & Monitors
- Alternative Energy Management
- Load Management
- Process Control & Automation
- Medical
- Military

Technical Specifications

Pressure Range

0-15, 50, 100, 150, 250, 500 psi
0-750, 1000, 1500, 2000, 3000 psi

Physical

Proof pressure

0-15 psi through 0-75 psi 5X
0-100 psi through 0-250 psi 3X
0-500 psi 2X
0-750 psi through 0-3000 psi 1.5X

Burst Pressure

0-15 psi through 0-500 psi 1700 psi min
0-750 psi through 0-2000 psi 5000 psi min
0-3000 psi 8000 psi min

Cycle Life

0-15 psi through 0-500 psi 10M F.S. cycles typ.
0-750 psi through 0-2000 psi 5M F.S. cycles typ.
0-3000 psi consult factory

Random Vibration (50-2000 Hz) 11 g

Mechanical Shock (6 Hz, ½ sine) .. 100 g

Drop (any axis) 1.5 m

Electrical Connection NEMA 4X

Ingress Protection IP 65

Performance

Accuracy ±0.6% F.S. typ.
(static error band @ 25°C, 5.0 VDC)
(linearity, hysteresis, repeatability, calibration)

Total Error Band

-20°C to +85°C ±1.4% F.S. typ.
-40°C to +135°C ±1.7% F.S. typ.

(Values are typical. Higher accuracies are possible, consult factory).

Operating Temperature* -40°C to +135°C

Storage Temperature -40°C to +150°C

*Refer to chart on reverse for seal material compatibility.

Electrical

Supply Voltage 4.5-5.5 Vdc

Output Voltage 0.5-4.5 Vdc

Supply Current 7 mA
(Max. @ 5.5 VDC with no load)

Output Current 2.5 mA
(Max., sink or source)

Output Load range 2K ohms min.

Output Response Time 10 ms max.

Overvoltage Protection 16.5 Vdc

Reverse Voltage Protection -14 Vdc

EMC (1 MHz-1 GHz) 100 V/m

ESD (CDF-AEC-Q100-002) 15 kV

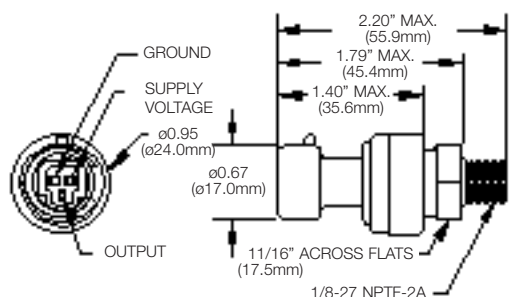
Short Circuit Protected Yes

CERAMIC CAPACITIVE PRESSURE SENSOR

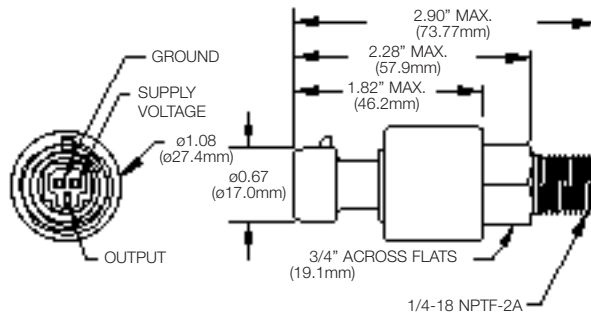
60CP Series, 5 VDC Supply, Ratiometric Output

Dimensions

67CP Dimensional Drawing w/ 1/8" front end

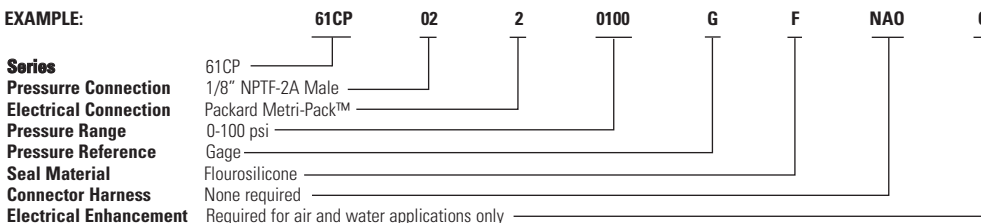


65CP Dimensional Drawing w/ 1/4" front end



Ordering Information

EXAMPLE:



STANDARD OPTIONS

Series	61CP Stainless Steel 65CP Plated Steel (High P)	63CP Plated Steel (Low P) 67CP Brass																	
Pressure Connection	(11/16" Hex - under body) 02 1/8" NPTF-2A Male	03 1/4" NPTF-2A Male	Consult the factory for other pressure connections																
Electrical Connection	2 Packard Metri-Pack™		4 Packard Metri-Pack™ (UL)																
Pressure Ranges	<table border="1"> <tr> <td>61CP, 63CP, 67CP</td> <td>0015 (psi)</td> <td>0050 (psi)</td> <td>0100 (psi)</td> </tr> <tr> <td></td> <td>0150 (psi)</td> <td>0250 (psi)</td> <td>0500 (psi)</td> </tr> <tr> <td>65CP</td> <td>1000 (psi)</td> <td>1500 (psi)</td> <td>2000 (psi)</td> </tr> <tr> <td></td> <td>3000 (psi)</td> <td></td> <td></td> </tr> </table>		61CP, 63CP, 67CP	0015 (psi)	0050 (psi)	0100 (psi)		0150 (psi)	0250 (psi)	0500 (psi)	65CP	1000 (psi)	1500 (psi)	2000 (psi)		3000 (psi)			Consult the factory for other pressure ranges
61CP, 63CP, 67CP	0015 (psi)	0050 (psi)	0100 (psi)																
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65CP	1000 (psi)	1500 (psi)	2000 (psi)																
	3000 (psi)																		
Pressure Reference	A Absolute	G Gage	S Sealed Gage																
Seal Material	E Ethylene Propylene F Fluorosilicone <i>(Use seal compatibility guide for temperature ranges)</i>	H HNBR N Neoprene	V Viton™																
Connector Harness	(Mating Connector) N None required (Wire Lead) A No wire (Wire Length) 0 No Length		(Mating Connector) Y Required (Wire Lead) A No wire B Standard wire ⁽¹⁾ F UL1015, 105°C rated wire ⁽²⁾ (Wire Length) 0 No length 1 1 meter 2 2 meter																
Electrical Enhancement	(blank) Not required		C Required for air and water applications only																

Seal Compatibility Guide

Type	Seal Material	Media Compatibility <i>(Contact Sensata for more information)</i>	Maximum Seal Temperature Range
B	Nitrile (BUNA-N, NBR)	petroleum oils, lubricants, detergent solutions, helium	-20°C to +100°C
H	HNBR (Hydrogenated Nitrile)	petroleum oils, lubricants, detergent solutions	-20°C to +135°C
E	Ethylene Propylene	steam, soaps, polar solvents, brake fluid, acetone, Skydrol™	-40°C to +135°C
F	Fluorosilicone	chlorinated solvents, oils, fuels, air	-40°C to +135°C
N	Neoprene	refrigerants, (freons, ammonia)	-40°C to +120°C
V	Fluorocarbon (Viton™)	fertilizers, freons, butanes, oils, trichlorethylene	-35°C to +135°C

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