60CP SERIES CERAMIC CAPACITIVE PRESSURE SENSOR

5VDC Supply, Ratiometric Output

DESCRIPTION

The 60CP series pressure sensors are ideally suited for environmentally demanding industrial applications. Using a 5.0 V excitation input, the 60 series sensors provides a .5-4.5 V signal ratiometric 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 and switches for over 50 years.

FEATURES

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

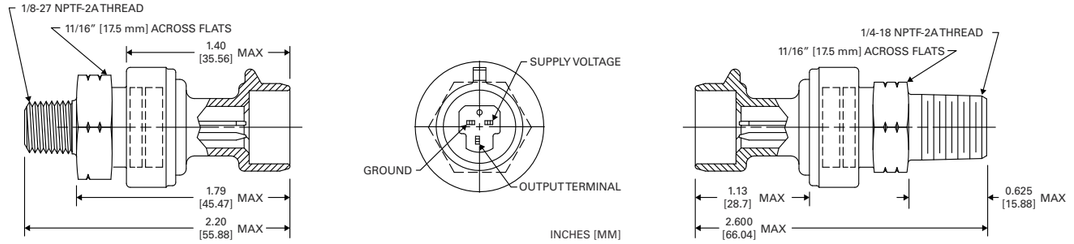
APPLICATIONS

- Compressors & pumps
- Hydraulics & pneumatics
- Agriculture & construction equipment
- Transportation & off-road vehicles
- Engine controls & monitors
- Alternative energy management
- Load management
- Process control & automation
- Medical
- Military

PERFORMANCE CHARACTERISTICS

Pressure Ranges	0 to 15, 50, 100, 150, 250, 500 psi 0 to 750 psi
Accuracy	±0.8% F.S. (linearity, hysteresis, repeatability and calibration) Static error band @ 25°C, 5.0VDC
Total Error Band	±1.0% (-20°C to +85°C) ±1.5% (-40°C to +125°C)
Operating Temperature	-40°C to +135°C
Storage Temperature	-40°C to +150°C
Proof Pressure	5X 15 to 75 psi, 3X 100 to 300 psi, 2X 500 psi, 1.5X 750psi
Burst Pressure	1700 psi min
Cycle Life	15 to 500 psi = 10M F.S. cycles 750 psi = 5M F.S. cycles
Random Vibration	11g (50 to 2000 Hz)
Mechanical Shock	100g (6 Hz, ½ sine)
Drop (any Axis)	1.5m
Electrical Connection	Nema 4X, IP65
Supply Voltage	4.5 to 5.5 VDC
Output Voltage	0.5 to 4.5 VDC
Supply Current	7 mA (max @ 5.5 VDC no load)
Output Current	2.5 mA (max sinked or source)
Output Load	2K ohms minimum
Output Response Time	10mS max
Overvoltage Protection	16.5 VDC
Reverse Voltage	-14 VDC
Short Circuit Protected	Yes
EMC (1 MHz to 1GHz)	100 V/m
ESD (CDF-AEC-Q100-002)	15 kV
Approvals	RoHS, REACH available

DIMENSIONAL DRAWINGS (61CP02 & 67CP03)



PART NUMBER DECISION TABLE

61CP 02 2 0100 G F NA0 C

Pressure Range
61CP = Stainless Steel
63CP = Plate Steel
67CP = Brass

Pressure Connection
02 = 1/8" NPTF-2A Male
03 = 1/4" NPTF-2A Male

Electrical Connection
2 = Packard Metri-Pack™

Pressure Ranges (see standards below)
From 0-15 psi (**0015**) to 0-750 psi (**0750**)
From 0-1 bar (**M001**) to 0-50 bar (**M050**)

Pressure Reference
A = Absolute
S = Sealed gage
G = Vented gage

Seal Material
B = Nitrile (BUNA-N, NBR)
E = Ethylene Propylene
F = Flourosilicone
H = HNBR (Hydrogenated Nitrile)
N = Neoprene
V = Viton™

Mating Connector
N = None
Y = Required

Wire Lead
A = None
B = Std wire[1]
F = UL1015, 105°C rated wire[2]

Wire Length
0 = None
1 = 1 meter
2 = 2 meter

1. Black, Red, Green
2. Black, Red, Blue

Electrical Enhancement
= None
C = Required for air and water applications

SEAL COMPATIBILITY GUIDE

Seal Material	Media Compatibility	Max Seal Temperature Range
Nitrile (BUNA-N, NBR)	Petroleum oils, lubricants, detergent solutions, helium	-20°C to 100°C
HNBR (Hydrogenated Nitrile)	Petroleum oils, lubricants, detergent solutions	-20°C to +135°C
Ethylene Propylene	Steam, soaps, polar solvents, brake fuilds, acetone, Skydrol™	-40°C to +135°C

Seal Material	Media Compatibility	Max Seal Temperature Range
Fluorosilicone	Chlorinated solvents, oils, fuels, air	-40°C to +135°C
Neoprene	Refrigerants (freons/ammonia)	-40°C to +120°C
Fluorocarbon (Viton™)	Fertilizers, freons, butanes, oils, trichlorethylene	-35°C to +135°C