



70CP SERIES

Ceramic Capacitive Pressure Sensor 6 to 30 VDC Supply, 4 to 20 mA or Voltage Output

DESCRIPTION

The 70CP series pressure sensors are ideally suited for environmentally demanding OEM industrial applications. This series accommodates a wide range of input voltages (6 to 30 VDC) and provides several output options, including 4 to 20 mA. Housed in stainless steel, plated steel or brass, the 70CP series offers performance and economy.

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

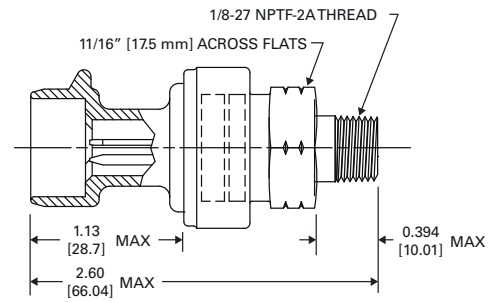
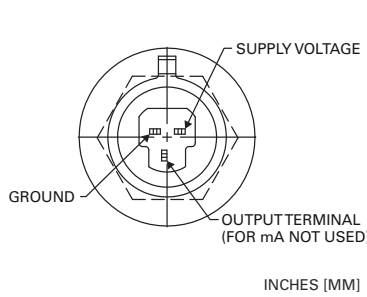
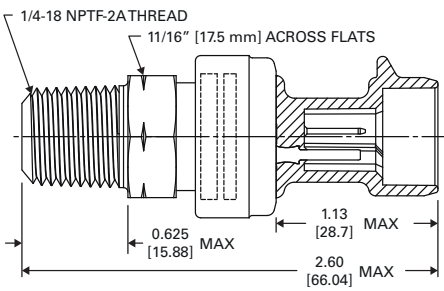
APPLICATIONS

- 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)
Total Error Band	±1.5% F.S. (0°C to +85°C)
Operating Temperature	-40°C to +125°C
Storage Temperature	-40°C to +150°C
Proof Pressure	5X 15 to 75 psi, 3X 100 to 250 psi, 2X 500 psi, 1.5X 750psi
Burst Pressure	1700 psi
Cycle Life	15 to 500 psi = 10M F.S. cycles 750 psi = 5M F.S. cycles
Random Vibration	10g (50 to 2000 Hz)
Mechanical Shock	100g (6 Hz, ½ sine)
Drop (any Axis)	1.5m
Supply Voltage	6 to 30 VDC
Output	Current Output: 4 to 20 mA Voltage Output: 1 to 4 VDC or 1 to 4.9 VDC
Output Load, Voltage Current	10K ohms
Output Load, Current Current	(Vs*-6) / 0.02 ohms
Overvoltage Protection	40 VDC
Reverse Voltage Protection	-40 VDC
Output Response Time	10mS max
Short Circuit Protected	Yes
EMC (512 MHz to 1GHz)	100 V/m
EMC (1 MHz to 512MHz)	50 V/m
4 to 20 mA Version	30 V/m
ESD (CDF-AEC-Q100-002)	15 kV
Approvals	RoHS, REACH available

DIMENSIONAL DRAWINGS (71CP03 & 77CP02)



PART NUMBER DECISION TABLE

71CP	02	5	0100	G	F	A	A0	C
Pressure Range	Pressure Connection	Electrical Connection	Pressure Ranges	Pressure Reference	Seal Material	Electrical Enhancement	Wire Lead	Wire Length
71CP = Stainless Steel 73CP = Plate Steel 77CP = Brass	02 = 1/8" NPTF-2A Male 03 = 1/4" NPTF-2A Male	5 = Packard Metri-Pack™	From 0-15 psi (0015) to 0-750 psi (0750) From 0-1 bar (M001) to 0-50 bar (M050)	A = Absolute S = Sealed gage G = Vented gage	B = Nitrile (BUNA-N, NBR) E = Ethylene Propylene F = Fluorosilicone H = HNBR (Hydrogenated Nitrile) N = Neoprene V = Viton™	= None C = Required for air and water applications	A = None B = Std wire ¹ F = UL1015, 105°C rated wire ² <small>1. Black, Red, Green 2. Black, Red, Blue</small>	0 = None 1 = 1 meter 2 = 2 meter
								Output Type
								A = 4 to 20 mA B = 1 to 4 VDC D = 1 to 4.9 VDC

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 fluids, 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



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