



## 2CP5 & 2CP50 SERIES HVAC/REFRIGERATION PRESSURE SENSOR

DESCRIPTION

The 2CP series is ideal for demanding air conditioning and refrigeration applications where long-term reliability and accuracy is a must. The 2CP series provides proven reliability at a competitive price.

Sensata Technologies has been a leading global supplier of pressure sensors and switches for over 50 years. The 2CP has many options, consult the factory to customize a 2CP to meet your application's needs.

FEATURES

- UL recognized
- Ceramic capacitive sensor
- Durable, compact, low-cost design
- Accurate performance over wide temperatures
- Overvoltage and short circuit protected

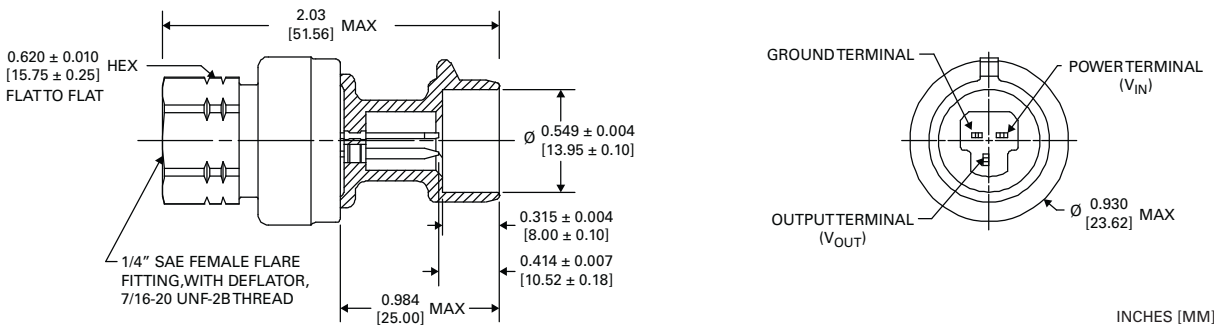
APPLICATIONS

- Discharge and suction pressure monitoring
- Subcooling and superheat calculations
- Compressor oil pressure monitoring
- Condenser fan control
- Compressor staging and unloading
- Electronic expansion valve control
- Remote systems diagnostics and trending

PERFORMANCE CHARACTERISTICS

Pressure Ranges	0 to 15 psi, through 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
Burst Pressure	2CP5 - 1500 psi (brass) 2CP50 - 2500 psi (plated steel)
Cycle Life	10M F.S. cycles
Random Vibration	11g (50 to 2000 Hz)
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 typical
Supply Current	2.5 mA (max sinked or source)
Output Load	10K ohms typical
Output Response Time	10mS
Overvoltage Protection	16 VDC
Reverse Voltage	-14 VDC
Short Circuit Protected	Yes
EMC (512MHz to 1 GHz)	50 V/m
EMC (1 MHz to 512MHz)	100 V/m
ESD (CDF-AEC-Q100-002)	15 kV
Approvals	UL recognized file #SA995 RoHS, REACH available

DIMENSIONAL DRAWINGS



PART NUMBER DECISION TABLE

	2CP5	S	05	2	XXXX	A	N	N	
Pressure Range									Connector Harness
2CP5	=								N = None required
2CP50	=								Y = Packard wire harness, 1 meter standard wire
Pressure Connection Material									Seal Material
S	=								H = HNBR (Hydrogenated Nitrile)
B	=								N = Neoprene
Pressure Connection									Pressure Reference
05	=								A = Absolute
Electrical Connection									S = Sealed gage
2	=								G = Vented gage
									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)

STANDARDS

Sample PN	Production PN	Description
2CP5B0520150ANN	2CP5-71-46	Brass, 0 to 150 psia
2CP5B0520200ANN	2CP5-71-49	Brass, 0 to 200 psia
2CP5B0520300SNN	2CP5-71-50	Brass, 0 to 300 psis
2CP5B0520400SNN	2CP5-71-51	Brass, 0 to 400 psis
2CP5B0520500SNN	2CP5-71-47	Brass, 0 to 500 psis
2CP5S0520500SNN	2CP5-71-48	Steel, 0 to 500 psis

SEAL MATERIALS

Material	Refrigerant Compatibility	Maximum Seal Temperature Range
HNBR (Hydrogenated Nitrile)	R134a, R404a, R407c, R410a, R507	-20°C to 135°C
Neoprene	R12, R22, R134a, R404a, R407c, R410a, R502, R507	-40°C to 120°C