



## HVAC/REFRIGERATION PRESSURE SENSOR

### *2CP5/2CP50 Series*

### WORLD CLASS PERFORMANCE

The 2CP5/2CP50 Series is ideal for demanding Air Conditioning and Refrigeration applications where long-term reliability & accuracy is a must. This series provides proven reliability at a competitive price.

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

### Features & Benefits

- UL recognized
- Ceramic capacitive sensor
- Durable, compact design
- Low cost
- 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

### Technical Specifications

#### Pressure Ranges

0-15 psi through 0-650 psi  
Standards listed on reverse side  
For non-standard device contact Sensata.

#### Performance

Accuracy .....  $\pm 0.6\%$  F.S. typ.  
(linearity, hysteresis, repeatability, and calibration)  
Static Error Band @ 25°C, 5.0 VDC  
Total Error Band:  
-20°C to +85°C .....  $\pm 0.8\%$  F.S. typ.  
-40°C to +125°C .....  $\pm 1.0\%$  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

#### Physical

Proof Pressure..... 5X 15-75 psi  
3X 100-300 psi  
2X 500 + psi  
Burst Pressure ..... 2CP5 1500 psi (brass)  
2CP50 2500 psi (plated steel)  
Cycle Life ..... 10M F.S. cycles  
Random Vibration ..... 11 g  
(50-2000 Hz).  
Drop (any Axis) ..... 1.5 m  
Electrical Connection ... Nema 4X, IP65

#### Electrical

Supply Voltage ( $V_{in}$ ) ..... 4.5 to 5.5 Vdc  
Output Voltage ( $V_{out}$ ) ..... 0.5 to 4.5 Vdc typical  
Supply Current ..... 8 mA max  
(Max @ 5.5Vdc with no load)  
Output Current ..... 2.5 mA  
(Max sink or source)  
Output Load ..... 10K ohms typical  
Output Response Time ..... 10 ms  
Overvoltage Protection ..... 16 Vdc  
Reverse Voltage ..... -14 Vdc  
Short Circuit Protected ..... Yes  
EMC (512 MHz-1 GHz) ..... 50 V/m  
EMC (1 MHz-512 MHz) ..... 100 V/m  
ESD (CDF-AEC-Q100-002) ..... 15k V

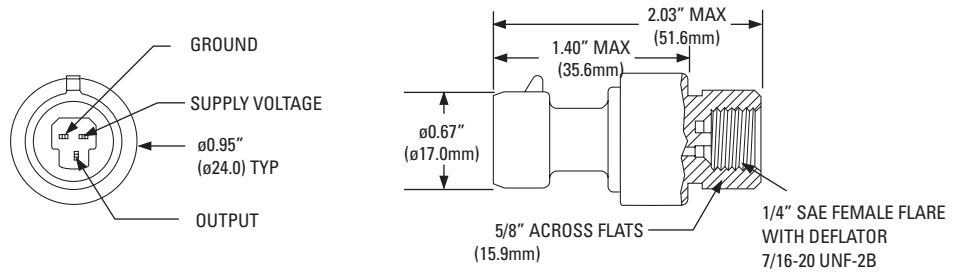
#### Agency

UL recognized File # SA995  
ROHS available

# HVAC/REFRIGERATION PRESSURE SENSOR

## 2CP5/2CP50 Series

### Dimensions



### Ordering Information

#### EXAMPLE

Series	Pressure Connection Material	Pressure Connection	Electrical Connection	Pressure Ranges	Pressure Reference	Seal Material	Connector Harness
2CP5	S	05	2	XXXX	A	N	N
2CP50	B						
2CP5 (up to 500 psi)	S Plated Steel	05 1/4" SAE Female flare with deflator, 7/16"-20 UNF-2B Consult Sensata for other pressure connections	2 Packard Metri-Pack (Mates with Packard # 12065287)	From 0-15 psi (0015) to 0-650 psi (0650) See "Standards" below	A Absolute S Sealed gage G Gage	H HNBR N Neoprene Please use refrigerant compatibility table for selection - others available upon request	N none required Y Packard Wire Harness 1-meter standard wire For other options please contact Sensata

### Standards

	Sample Order Number	Production Number	Comments
1	2CP5B0520150ANN	2CP5-46	brass, 0-150 psia
2	2CP5B0520200ANN	2CP5-49	brass, 0-200 psia
3	2CP5B0520300SNN	2CP5-50	brass, 0-300 psis
4	2CP5B0520400SNN	2CP5-51	brass, 0-400 psis
5	2CP5B0520500SNN	2CP5-47	brass, 0-500 psis
6	2CP5S0520500SNN	2CP5-48	brass, 0-500 psis

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

\* Seal selection also depends on oil type used.



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The World Depends on Sensors and Controls