

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 ±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 ±0.8% F.S. typ.
-40°C to +125°C ±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

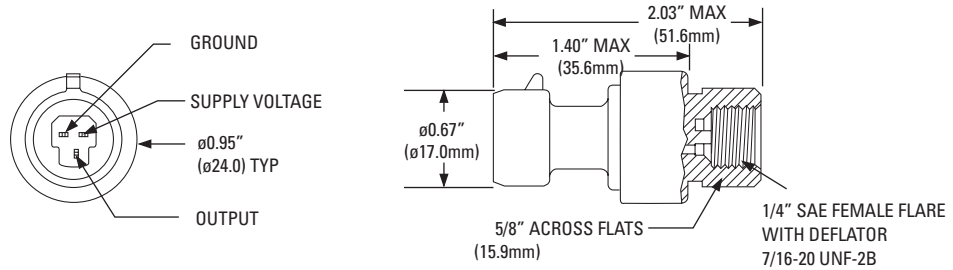
Agency

UL recognized File # SA995
ROHS available

HVAC/REFRIGERATION PRESSURE SENSOR

2CP5/2CP50 Series

Dimensions



Ordering Information

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

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.



Sensata Technologies

529 Pleasant Street, MS B19
 Attleboro, MA 02703-2964
 Phone 1-888-438-2214

Fax: 508-236-2349
 email: sensors@sensata.com
www.sensata.com

Important Notice: Sensata Technologies (Sensata) reserves the right to make changes to or discontinue any product or service identified in this publication without notice. Sensata advises its customers to obtain the latest version of the relevant information to verify, before placing any orders, that the information being relied upon is current. Sensata assumes no responsibility for infringement of patents or rights of others based on Sensata applications assistance or product specifications since Sensata does not possess full access concerning the use or application of customers' products. Sensata also assumes no responsibility for customers' product designs.