



HVAC/REFRIGERATION PRESSURE SENSOR

81CP52-01, 82CP59-01, 82CP60-01
and 82CP61-01

WORLD CLASS PERFORMANCE

The 81/82CP 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 and 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

0-10 Bar(a) 81CP52-01
0-20 Bar(a) 82CP59-01
0-35 Bar(a) 82CP60-01
0-46 Bar(a) 82CP61-01

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..... 81CP52-01 3.5X
82CP59-01 3X
82CP60-01 2X
82CP61-01 2X
Burst Pressure 110 Bar(a)
Cycle Life 10M F.S. cycles
Random Vibration (50-2000 Hz). 11 g
Drop (any Axis) 1.5 m
Electrical Connection ... Nema 4X, IP65

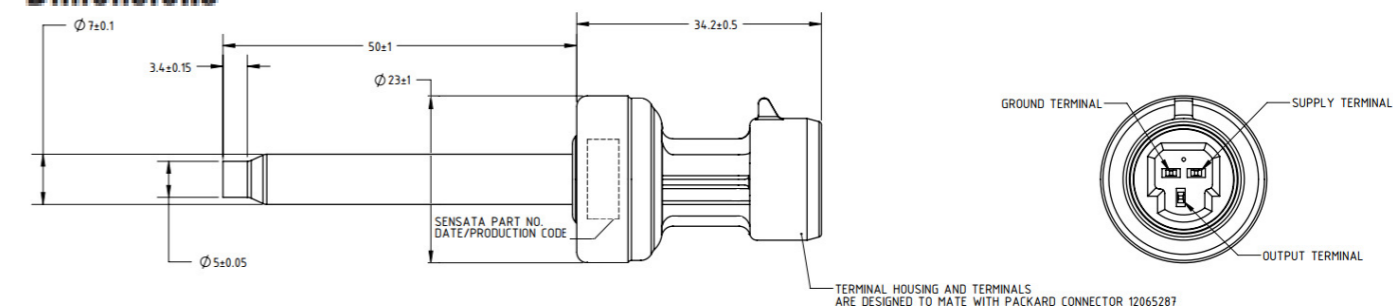
Electrical

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) 15kV

Agency

UL recognized File # SA995
ROHS

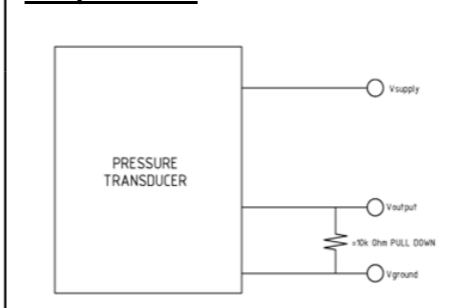
Dimensions



Material:

Housing.....Stainless Steel
Connector.....Polyetherimide Resin (PEI) 20% Glass, Color Black
Tube.....CDA122 Copper

Output load:



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

* Seal selection also depends on oil type used.

The World Depends on Sensors and Controls



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