

P158 Refrigeration Pressure Transducers

Typical Applications

- High and Low Side Pressure Measurements in
- Refrigeration Systems
- Product Refrigeration
- Refrigerant Recovery
- Transport Refrigeration
- Environmental Test Equipment

Standard Full Scale Pressure Ranges

0-100, 150, 300, 400, 500 and 750 PSIA, PSIS

Features

- SAE female Process Connection with Built-in Schrader Deflator
- Linear Amplified Output
- Temperature Compensated
- Superior Long Term Stability
- Excellent Repeatability/Hysteresis
- EMI/RFI Rejection
- Low Power Consumption
- Ten Million Cycle Life Expectancy
- Outstanding Shock & Vibration Performance
- Over Voltage, Reverse Polarity and Short Circuit Protection



Description

The model P158 is based on Kavlico's ceramic capacitive technology with a custom ASIC. The Brass housing surrounds a pressure transducer designed specifically for refrigeration applications. It can endure the high vibration, broad temperature ranges and humidity conditions found in refrigeration systems while withstanding high overpressures and pressure pulsations without damage or degradation.

The P158 package has a built-in Metri-Pack 150, electrical connector and supports male and female process connections. The P158 is offered with seal materials that are suitable for many of the latest refrigerants such as R134a, R22, R123, R12, including many of the proprietary blends, and assocated lubricants.









Technical Specifications

Note: Performance Specifications with $5v \pm 0.002$ Vdc supply at 25° C

Pressure Ranges: 0 - 100 PSI through 0 - 1,000 PSI

Absolute or Sealed Gage

Proof Pressure: 3x (FSO) (100 through 300 PSI)

2x (FSO) (400 through 750 PSI)

Burst Pressure: 5x (100 through 300 PSI) 2250 PSI (400 through 750 PSI)

Supply Voltage: $5.0 \pm .5 \text{ V}$

Supply Current: 5 mA (Max)

Linearity Error: $\pm 0.5\%$ of Full Span Max.

Response Time: 15ms Max to 63% of F.S. Pressure

with Step Change on Input

Output Voltage

Zero/Null Pressure: $0.50 \pm 0.08 \, \text{Vdc}$ Full Pressure: $4.50 \pm 0.08 \, \text{Vdc}$ Ratiometricity: $\pm 0.51\%$ of Span

Total Error Band: 2.0% of Span (-20°C to +100°C)

Output Impedance: $< 100 \Omega$

Operating Temperature: $-30^{\circ}\text{C to } +100^{\circ}\text{C}$ Storage Temperature: $-40^{\circ}\text{C to } +135^{\circ}\text{C}$

Service Life: 10 Million Full Pressure Cycles

Vibration: 10G's P-P Sinusoidal, from 10-2000 Hz

Ingress Protection: IP67

Shock: 75 G's ½ Sine Wave

Stability: $\pm 0.5\%$ of Full Span over 1-Year

Weight: 100 grams (Max)

Electrical Termination: Packard Electric Metri-Pack 150 Series

Pressure Connection: See "How to Order"

 $\begin{array}{ll} \mbox{Output Load:} & >25\mbox{k}\ \Omega \\ \mbox{Over-Voltage Protection:} & 16\mbox{ Vdc} \\ \mbox{Reverse Polarity Protection:} & -5\mbox{ Vdc} \\ \end{array}$

Main Housing Material: CA3600 Brass

How to Order

P158 Pressure Transducer

Pressure Range

100 0 - 100 PSI 150 0 - 150 PSI 300 0 - 300 PSI

400 0 - 400 PSI **500** 0 - 500 PSI

750 0 - 750 PSI

Reference

A Absolute

S Sealed Gage

Seal Material

C Neoprene -40 to + 125° C F Ethylene Propylene -40 to + 121° C H HNBR -30 to + 135° C

Pressure Connection

1 1/4 - 18 NPT (External Threads)

2 1/4 SAE Female Flare w/Schrader Deflator (7/16 - 20 UNF Internal Threads)

4 1/8 - 27 NPT

Electrical Connection

A With Mating Connector, w/12", 18 AWG Leads

C Without Mating Connector

P158 - 500 - S - F - 1 - A

Example: P158 - 500 - S - F - 1 - A

Description: P158 Pressure Transducer, 0 - 500 PSIS (Sealed Gage),

with Ethylene Propylene Seal Material,

1/4 - 18 NPT Pressure Connection, and Mating Connector



Before installation and operation, ensure that the appropriate pressure sensor has been selected in terms of pressure range, design and specific measuring conditions. Non-compliance can result in serious injury and/or damage to the equipment.

Don't see what you want?

Call us at +1 (619) 710-2068 to customize this product to meet your application-specific needs!

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