

# ***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 associated lubricants.

## Technical Specifications

Note: Performance Specifications with  $5\text{V} \pm 0.002\text{Vdc}$  supply at  $25^\circ\text{C}$

|                              |  |
|------------------------------|--|
| Pressure Ranges:             | 0 – 100 PSI through 0 – 1,000 PSI<br>Absolute or Sealed Gage     |
| Proof Pressure:              | 3x (FSO) (100 through 300 PSI)<br>2x (FSO) (400 through 750 PSI) |
| Burst Pressure:              | 5x (100 through 300 PSI)<br>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<br>with Step Change on Input    |
| <b>Output Voltage</b>        |  |
| 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 ( $-20^\circ\text{C}$ to $+100^\circ\text{C}$ )     |
| 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 $\frac{1}{2}$ 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"   |
| Output Load:                 | $> 25\text{k}\ \Omega$   |
| Over-Voltage Protection:     | 16 Vdc   |
| Reverse Polarity Protection: | -5 Vdc   |
| Main Housing Material:       | CA3600 Brass   |



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.

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## 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<br>(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

**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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- Поставка более 17-ти миллионов наименований электронных компонентов;
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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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