



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# ***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.

Warning: The product information contained in this catalogue is given purely as information and does not constitute a representation, warranty or any form of contractual commitment. Kavlico reserve the right to modify their products without notice. It is imperative that we should be consulted over any particular use or application of our products and it is the responsibility of the buyer to establish, particularly through all the appropriate tests, that the product is suitable for the use or application. Under no circumstances will our warranty apply, nor shall we be held responsible for any application (such as any modification, addition, deletion, use in conjunction with other electrical or electronic components, circuits or assemblies, or any other unsuitable material or substance) which has not been expressly agreed by us prior to the sale of our products.

© 2013 Kavlico. All rights reserved.

## 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!