

# P158

## Refrigeration Pressure Transducers

### 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 over- pressures 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.

### 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

### 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

### Technical Specifications

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

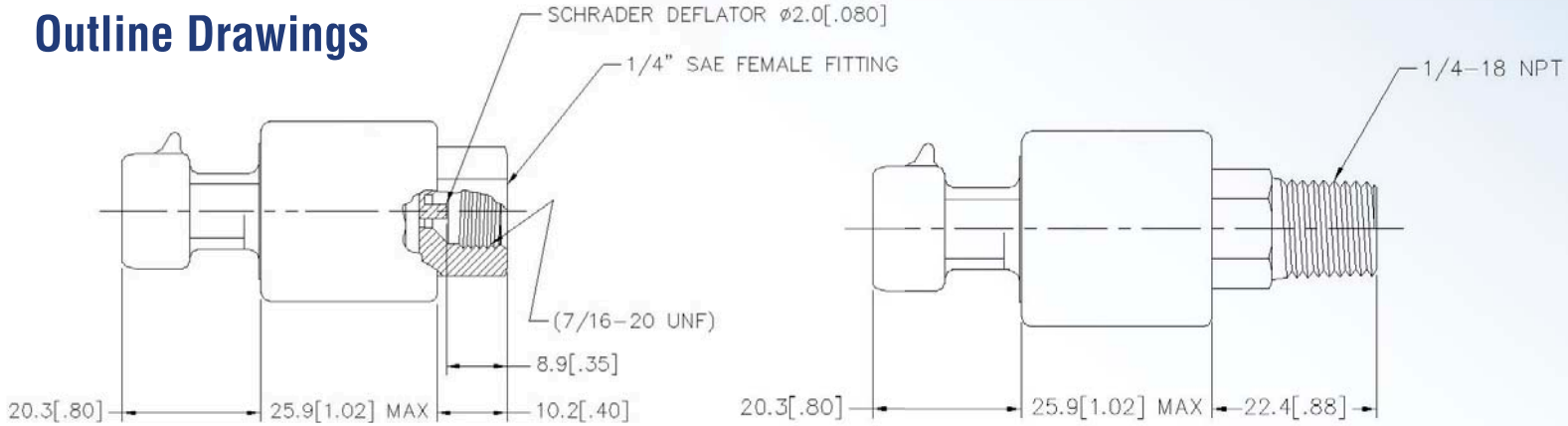
Pressure Ranges:	0 – 100 PSI through 0 – 1,000 PSI Absolute or Sealed Gage	Output Impedance:	< 100 $\Omega$
Proof Pressure:	3x (FSO) (100 through 300 PSI) 2x (FSO) (400 through 750 PSI)	Operating Temperature:	-30°C to + 100°C
Burst Pressure:	5x (100 through 300 PSI) 2250 PSI (400 through 750 PSI)	Storage Temperature:	-40°C to + 135°C
Supply Voltage:	5.0 $\pm$ .5 V	Service Life:	10 Million Full Pressure Cycles
Supply Current:	5 mA (Max)	Vibration:	10G's P-P Sinusoidal, from 10-2000 Hz
Linearity Error:	$\pm 0.5\%$ of Full Span Max.	Shock:	75 G's $\frac{1}{2}$ Sine Wave
Response Time:	15ms Max to 63% of F.S. Pressure with Step Change on Input	Stability:	$\pm 0.5\%$ of Full Span over 1-Year
Output Voltage:		Weight:	100 grams (Max)
Zero/Null Pressure:	0.50 $\pm 0.08$ Vdc	Electrical Termination:	Packard Electric Metri-Pack 150 Series See "How to Order"
Full Pressure:	4.50 $\pm 0.08$ Vdc	Pressure Connection:	
Ratiometricity:	$\pm 0.51\%$ of Span	Recommended Interface Impedance:	Min. Load 25 k $\Omega$
Total Error Band:	$\leq 2.0\%$ of Span (-20°C to 100°C)	Over-Voltage Protection:	16 Vdc
		Reverse Polarity Protection:	-5 Vdc
		Material - Main Housing:	CA3600 Brass



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### Outline Drawings



### How to Order

#### P158 Pressure Transducer

##### Pressure Ranges

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

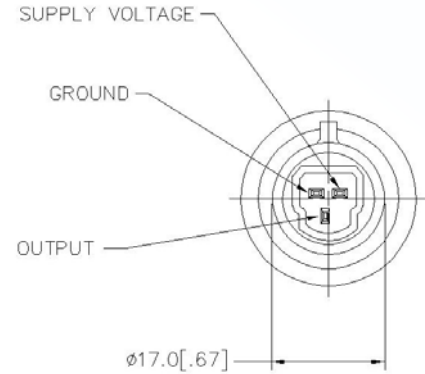
C	Neoprene	-40 to 125°C
F	Ethylene Propylene	-40 to 121°C
H	HNBR	-30 to 135°C

##### 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



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P158 500 S F 1 A

Example: P158-500S-FIA

Contact Kavlico for accuracy options, custom packaging, alternative pressure ranges, pressure connections or other OEM or application specific requirements.



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