



- -40-85°C Operating Temperature
- 31.75mm (1.25”) diameter
- 10 mm (.40”) height
- 1% Accuracy
- 50-1000 lbf
- .5-4.5Vdc Output
- Fast Response Time (5ms)
- CE Compliant

DESCRIPTION

The PFS02 is a low cost OEM force sensor that allows for applications that were cost prohibitive in the past. The PFS02 offers normalized zero and span for interchangeability, and is thermally compensated for changes in zero and span with respect to temperature. The PFS02 incorporates a MEMS technology piezor-esistive strain gages fused with high temperature glass to a high performance stainless steel substrate. This technology eliminates age-sensitive organic epoxies used in traditional load cell designs providing excellent long term span and zero stability. Operating at very low strains, this technology provides a superior life (1M+) expectancy, superior resolution, and high over-range capabilities. Although the standard model is ideal for some applications, Phoenix Sensors can provide OEM customers with custom designs.

APPLICATIONS

- Medical Devices
- Industrial Scales
- Agricultural Equipment
- Chemical Process
- Load and Compression Sensing

Maximum Environmental Ratings

Operating Temperature -40°C to 85°C
 Storage Temperature Range-50°C to 85°C

Proof force..... 2x full scale force
 Burst force 2.5x full scale force

PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Span (Amplified)	3.8	4.0	4.2	V	1
Zero Force Output (Amplified)	0.3	0.5	0.7	V	1
Accuracy (non linearity, hysteresis, and repeatability)	-1		1	%Span	2
Output Resistance (Unamplified)		2.2		kΩ	
Supply Voltage (Amplified)	3.3	5	5.25	V	1
Response Time (10 to 90%)		5		ms	
Long Term Stability (1 year)		+/- 1			
Compensated Temperature	0		50	°C	
Operating Temperature	-40		+85	°C	
Storage Temperature	-50		+85	°C	

Notes

1. Ratiometric to supply.
2. Best fit straight line.
3. Maximum temperature error over compensated range with respect to 25°C

Application Information

Package

The body design is made of stainless steel (SS316L), which allows for easy manufacturability and long term stability. Automotive grade vibration proof design for engine mount.

Stability

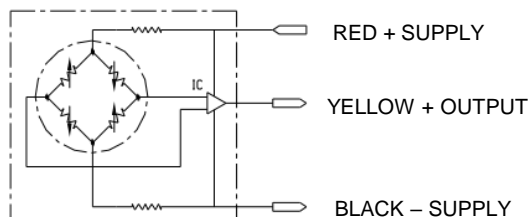
The silicon MEMS media isolated force sensor is mounted to a stainless steel base and sealed into the SS housing. Proprietary factory calibration and analysis provide the customer with the most stable product possible with this technology.

Force ranges

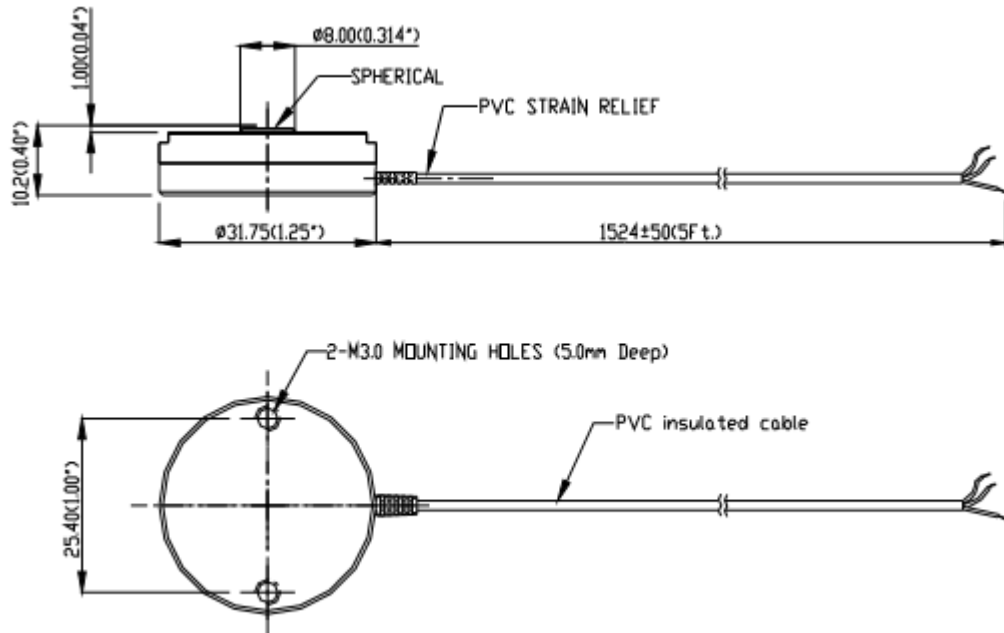
Standard force ranges are 50, 100, 250, 500, 1000 lbf . Custom pressure ranges are available for OEM customers.

Electrical Connections

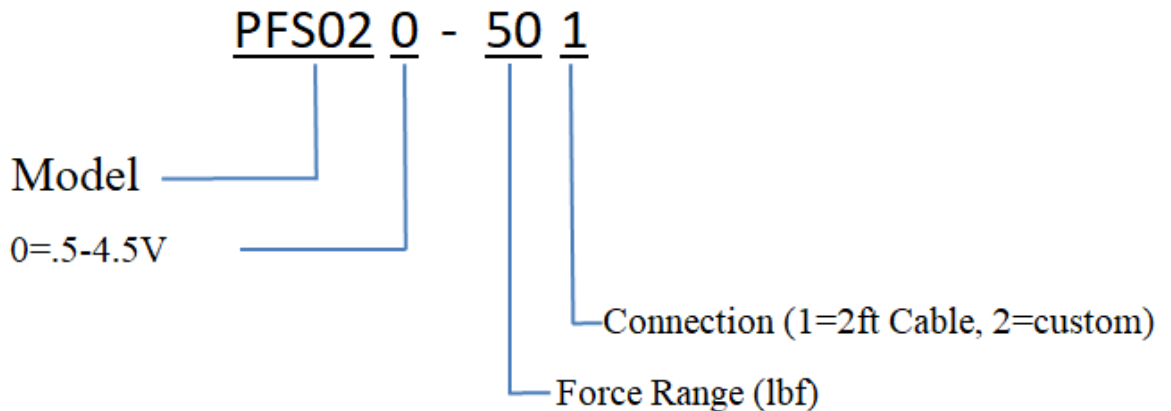
High Level Amplified Output



Mechanical Dimensions (mm)



Part Number Configuration



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