AVERY INSTRUMENT

INNOVATIVE

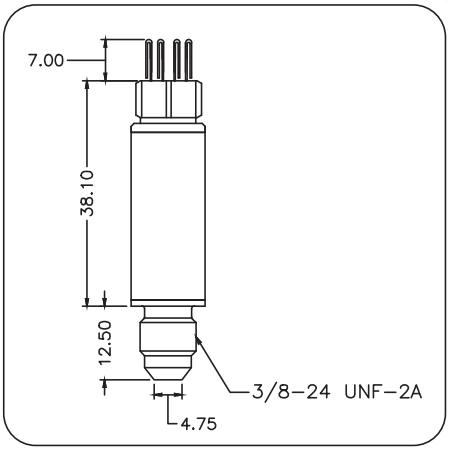
AV805 High Temperature

Miniature Pressure Sensor

isOMEM™

Overview

The AV805 series miniature pressure sensor uses a fully active four arm Wheatstone bridge, dielectrically isolated Silicon on Sapphire sensing element based on proprietary technology. The pressure sensor is packaged in both standard and custom designs. The standard design offers a 10-32 UNF-2A process connection, millivolt output signal, 12mm diameter housing, and cable. This miniature pressure sensor can be packaged with an independent PT1000 temperature sensor output.



Benefits

* High strength titanium-alloy sensing element
* Pressures up to 20,000 PSI
* Wide operating temperature from -60 to +200°C
* ≤ ±0.15% BFSL accuracy

Environmental Data

Temperature	
Operating	-60 to +200°C
Thermal Limits	
Compensated Range	-20 to +100°C
TC Zero	0.01% per °C
TC Span	0.02% per °C
Shock	100g, 11msec, 1/2 sine
Vibration	100g, 10 to 1000Hz

Physical Description

Wetted Material	Absolute, Gauge, Sealed Gauge
Electrical Connection	Cable
Insulation resistance	500VDC

Electrical Information

Output	millivolt
Power Supply	5VDC typical
Requirements	10VDC max

Performance @ 25°C (77°F)

Accuracy*	≤±0.15% FSO BFSL
Stability (1 year)	≤±0.25% of FS
Pressure Range	0 to 20,000PSI
Over Pressure	2x, min
Burst Pressure	5x, min
Full Scale Output	100mV, min
	125mV, typical
	150mV, max
Output Resistor	3.5 KΩ
Zero Offset	±5mV
Response Time	0.1ms, typical
	0.2ms, max

* Accuracy includes non-linearity, hysteresis & non-repeatability

Process Connection Max Pressure Guide

PROCESS CONNECTION	MAXIMUM PRESSURE
10-32 UNF-2A Male w/O-ring Groove	3,000 PSI
M5x0.8 Male	3,000 PSI
M10x1 Male	10,000 PSI
1/4" NPT Male	10,000 PSI
3/8-24 UNF Male with 74°C Cone	20,000 PSI
7/16-20 UNF Male with 74°C Cone	20,000 PSI

"Customers of Avery sensor products should make their own evaluation on the suitability of the product for their end application. Specifications are subject to change without notice" Jan 2022.