### **ICP® PRESSURE SENSOR** 102M 80A Performance **ENGLISH** SI Measurement Range(for ±5V output) 100 psi 689.5 kPa [1] 200 psi Useful Overrange(for ± 10V output) 1,379 kPa 7.25 mV/kPa Sensitivity(± 15 %) 50 mV/psi Maximum Pressure(Total) 7.5 kpsi 51,711 kPa [3] Maximum Pressure(step) 1,000 psi 6,900 kPa Resolution 2 mpsi 0.014 kPa Resonant Frequency ≥ 250 kHz ≥ 250 kHz Rise Time(Reflected) ≤ 2.0 µ sec ≤ 2.0 µ sec Non-Linearity ≤ 1.0 % FS ≤ 1.0 % FS **Environmental** Acceleration Sensitivity 0.002 psi/g $0.0014 \text{ kPa/(m/s}^2)$ [4] Temperature Range(Operating) -320 to 212 °F -196 to 100 ℃ Temperature Coefficient of Sensitivity ≤ 0.06 %/°F ≤ 0.108 %/°C Maximum Flash Temperature 3.000 °F 1648.89 ℃ Maximum Vibration 2,000 g pk $19,600 \text{ m/s}^2 \text{ pk}$ Maximum Shock 20,000 g pk 196,000 m/s<sup>2</sup> pk Electrical Discharge Time Constant(at room temp) ≥ 1.0 sec ≥ 1.0 sec 15 to 30 VDC 15 to 30 VDC **Excitation Voltage** Constant Current Excitation 2 to 20 mA 2 to 20 mA Output Impedance 100 Ohm 100 Ohm Output Bias Voltage 3 to 8 VDC 3 to 8 VDC Physical Housing Material 304L/316L Stainless Steel 304L/316L Stainless Steel Thread Adaptor Material Vascomax C-300 Vascomax C-300 Diaphragm 316L Stainless Steel 316L Stainless Steel Sealing Welded Hermetic Welded Hermetic Electrical Connector 10-32 Coaxial Jack 10-32 Coaxial Jack

0.9 oz

## **OPTIONAL VERSIONS**

Revision: B

ECN #: 54975

Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used.

[2]

[4]

[5]

25 am

[1]-5V output may be limited by the output bias.

[2] For +10 volt output, minimum 24 VDC supply voltage required. Negative 10 volt output may be limited by output bias.

[3] Due to high sensitivity, the static pressure should be applied and removed very slowly. Rate should prevent more than 10 Volt change in output until Output Bias Voltage returns to normal (approximately 15 times discharge time constant).

[4]Typical.

[5]Zero-based, least-squares, straight line method.

[6] See PCB Declaration of Conformance PS023 for details.

# **SUPPLIED ACCESSORIES:**

Model PCS-10AA Single point sensitivity coefficient at sensor minimum operating temperature (-320°F / -196°C limit)

Model PCS-1AZ Sensitivity calibration at 100% and 10% of sensor range

Entered: ND	Engineer: AJA	Sales: RWM	Approved: RPF	Spec Number:
Date: 07/16/2024	Date: 07/16/2024	Date: 07/16/2024	Date: 07/16/2024	70091



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Weight

**Model Number** 

All specifications are at room temperature unless otherwise specified.

In the interest of constant product improvement, we reserve the right to change specifications without notice.

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