### **Model Number ICP® PRESSURE SENSOR** 102B10 Performance **ENGLISH** SI Measurement Range(for ±5V output) 100 psi 690 kPa 200 psi Useful Overrange(for ± 10V output) 1,380 kPa [1] Sensitivity(± 15 %) 50 mV/psi 7.25 mV/kPa Maximum Pressure(step) 1,000 psi 6.900 kPa Maximum Pressure(Total) 15 kpsi 103,425 kPa [2] Resolution 2 mpsi 0.014 kPa [3] Resonant Frequency ≥ 250 kHz ≥ 250 kHz Rise Time(Reflected) ≤ 2.0 µ sec ≤ 2.0 µ sec Low Frequency Response(- 5 %) 0.50 Hz 0.50 Hz Non-Linearity ≤ 1.0 % FS ≤ 1.0 % FS [4] Environmental $0.0014 \text{ kPa/(m/s}^2)$ Acceleration Sensitivity 0.002 psi/g [3] Temperature Range(Operating) -400 to +212 °F -240 to +100 °C Temperature Coefficient of Sensitivity ≤ 0.06 %/°F ≤ 0.108 %/°C Maximum Vibration 2,000 g pk 19,600 m/s<sup>2</sup> pk Maximum Shock 20,000 g pk 196,000 m/s<sup>2</sup> pk Electrical Output Polarity(Positive Pressure) Positive Positive Discharge Time Constant ≥ 1.0 sec ≥ 1.0 sec 20 to 30 VDC 20 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 8 to 14 VDC 8 to 14 VDC Physical Sensina Element Ouartz Ouartz Housing Material 304L/316L Stainless Steel 304L/316L Stainless Steel Thread Adaptor Material 316L Stainless Steel 316L Stainless Steel

316L Stainless Steel

Welded Hermetic

10-32 Coaxial Jack

0.388 oz

316L Stainless Steel

Welded Hermetic

10-32 Coaxial Jack

11.00 gm

# **OPTIONAL VERSIONS**

Revision: B

ECN #: 55146

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

M - Metric Mount

Supplied Accessory: Model 065A34 Seal ring 0.435" OD x 0.397" ID x 0.030" Cu (3)

## NOTES:

- [1]Excitation voltage >=28 volts required.
- [2] 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).
- [3]Typical.
- [4]Zero-based, least-squares, straight line method.
- [5]See PCB Declaration of Conformance PS023 for details.

### **SUPPLIED ACCESSORIES:**

Model 065A44 Seal ring 0.435" OD x 0.377" ID x 0.030" thk Cu (3)

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: RPF	Sales: RWM	Approved: RPF	Spec Number:
Date: 08/22/2024	Date: 08/22/2024	Date: 08/22/2024	Date: 08/22/2024	74947



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AN AMPHENOL COMPANY

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# UK

Diaphragm Sealing

Weight

Electrical Connector

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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