



Model Number 112A21		ICP® PRESSURE SENSOR		Revision: V ECN #: 54975
Performance				
Measurement Range(for ±5V output)	100 psi	690 kPa		
Useful Overrange(for ± 10V output)	200 psi	1,380 kPa	[1]	
Sensitivity(± 10 mV/psi)	50 mV/psi	7.25 mV/kPa		
Maximum Pressure(step)	1 kpsi	6,895 kPa		
Maximum Pressure(Total)	15,000 psi	103,421 kPa		
Resolution	0.4 mpsi	0.0028 kPa	[2]	
Resonant Frequency	≥ 250 kHz	≥ 250 kHz		
Rise Time(Reflected)	≤ 2.0 μ sec	≤ 2.0 μ sec		
Low Frequency Response(- 5 %)	0.5 Hz	0.5 Hz		
Non-Linearity	≤ 1.0 % FS	≤ 1.0 % FS	[3]	
Environmental				
Acceleration Sensitivity	0.002 psi/g	0.0014 kPa/(m/s ²)	[2]	
Temperature Range(Operating)	-100 to +275 °F	-73 to +135 °C		
Temperature Coefficient of Sensitivity	≤ 0.03 %/°F	≤ 0.054 %/°C		
Maximum Flash Temperature	3,000 °F	1,650 °C		
Maximum Vibration	2,000 g pk	19,600 m/s ² pk		
Maximum Shock	20,000 g pk	196,000 m/s ² pk		
Electrical				
Output Polarity(Positive Pressure)	Positive	Positive		
Discharge Time Constant(at room temp)	≥ 1.0 sec	≥ 1.0 sec		
Excitation Voltage	22 to 30 VDC	22 to 30 VDC		
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				
Sensing Geometry	Compression	Compression		
Sensing Element	Quartz	Quartz		
Housing Material	17-4 Stainless Steel	17-4 Stainless Steel		
Diaphragm	Invar	Invar		
Sealing	Welded Hermetic	Welded Hermetic		
Electrical Connector	10-32 Coaxial Jack	10-32 Coaxial Jack		
Weight(with clamp nut)	0.21 oz	6.0 gm		
OPTIONAL VERSIONS				
Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used. [5][6]				
CA - Ablative Coating [5]				
E - Emralon coating				
Coating	Emralon	Emralon		
Electrical Isolation	10 ⁸ Ohm	10 ⁸ Ohm		
Supplied Accessory: Model 065A08 Isolation ring 0.250" OD x 0.218" ID x 0.027" thk anodized aluminum (3)				
Supplied Accessory: Model 065A22 Isolation Seal, .250" OD x .218" ID x .015", Torlon or Vespel (3) [5][6]				
J - Ground Isolated Electrical Isolation(50 V)				
	10 ⁸ Ohm	10 ⁸ Ohm		[5]
N - Negative Output Polarity [5]				
S - Stainless Steel Diaphragm [5][7]				
W - Water Resistant Cable				
Supplied Accessory: Model 060A03 Clamp nut, 5/16-24-2A thd, 1/4" hex, stainless steel (1) [5][7]				
WM - Water Resistant Cable				
Supplied Accessory: Model 060A05 Clamp nut M7 x 0.75-6g thd (1)				
NOTES:				
[1] For +10 volt output, minimum 24 VDC supply voltage required. Negative 10 volt output may be limited by output bias.				
[2] Typical.				
[3] Zero-based, least-squares, straight line method.				
[4] See PCB Declaration of Conformance PS023 for details.				
[5] For sensor mounted in thread adaptor, see adaptor installation drawing for supplied accessories and pressure limitations.				
[6] Used with optional mounting adaptor.				
[7] Clamp nut installed prior to cable attachment				
SUPPLIED ACCESSORIES:				
Model 060A03 Clamp nut, 5/16-24-2A thd, 1/4" hex, stainless steel (1)				
Model 060A05 Clamp nut M7 x 0.75-6g thd (1)				
Model 065A02 Seal ring, sensor flush mount, 0.248" OD x 0.219" ID x 0.015" thk, brass (3)				
Model 065A05 Seal sleeve sensor recess mount 0.248" OD x 0.221" ID x 0.240" thk 17-4 (1)				
Model PCS-1AZ Sensitivity calibration at 100% and 10% of sensor range				
Entered: ND	Engineer: AJA	Sales: RWM	Approved: RPF	Spec Number:
Date: 07/15/2024	Date: 07/15/2024	Date: 07/15/2024	Date: 07/15/2024	112-1210-80
				
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. ICP® is a registered trademark of PCB Piezotronics, Inc.		Phone: 716-684-0001 Fax: 716-684-0987 E-Mail: info@pcb.com		
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