Model: 121A44

ICP® Pressure Sensor
Intrinsic safe ICP® pressure sensor, 50 psi, 100 mV/psi, case isolated, 2-pin connector, temp to 250F

	ENGLISH	SI	
Performance			
Measurement Range (for ±5V output)	50 psi	344.8 kPa	
Sensitivity (±15 %)	100 mV/psi	14.5037 mV/kPa	
Maximum Pressure	8 kpsi	55.16 MPa	[2]
Resolution	0.5 mpsi	0.003 kPa	
Resonant Frequency	≥60 kHz	≥60 kHz	
Rise Time (Reflected)	≤4 µ sec	≤4 µ sec	
Low Frequency Response (-5 %)	0.5 Hz	0.5 Hz	
Non-Linearity	≤2.0 % FS	≤2.0 % FS	[1]
Environmental			
Acceleration Sensitivity	≤0.05 psi/g	≤0.035 kPa/(m/s²)	
Temperature Range (Operating)	-65 to +250 °F	-54 to +121 °C	
Hazardous Area Approval	CSA (C-US) NRTL - Canadian Standards Association	CSA (C-US) NRTL - Canadian Standards Association	[3][4] [5][6]
Hazardous Area Approval	ATEX	ATEX	[7][8] [9]
Electrical			
Output Polarity (Positive Pressure)	Positive	Positive	
Discharge Time Constant (at room temp)	≥1.0 sec	≥1.0 sec	
Excitation Voltage	22 to 28 VDC	22 to 28 VDC	
Constant Current Excitation	2 to 20 mA	2 to 20 mA	
Output Impedance	<100 Ohm	<100 Ohm	
Output Bias Voltage	10 to 15 VDC	10 to 15 VDC	
Electrical Isolation	≥100000000 Ohm	≥100000000 Ohm	
Physical			
Sensing Geometry	Compression	Compression	
Sensing Element	Quartz	Quartz	
Housing Material	316L Stainless Steel	316L Stainless Steel	
Diaphragm	316L Stainless Steel	316L Stainless Steel	
Sealing	Welded Hermetic	Welded Hermetic	
Electrical Connector	2-Pin MIL-C-5015	2-Pin MIL-C-5015	
Weight	2.7 oz	75.6 gm	

All specifications are at room temperature unless otherwise specified.

Product Notes

[1] Zero-based, least-squares, straight line method.
[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] AEx ia IIC T4, DIV1 CL1 GR A-D
[4] AEx nA IIC T4, DIV2 CL1 GR A-D
[5] Ex ia IIC T4, DIV1 CL1 GR A-D
[6] Ex nL IIC T4, DIV2 CL1 GR A-D
[7] Ex ia IIC T4.
[8] Ex nA IIC T4.
[9] Ex nL IIC T4.
[10] See PCB Declaration of Conformance PS059 for details.