

Model Number
176A31

CHARGE OUTPUT PRESSURE SENSOR

Revision: C
ECN #: 55057

Performance

	ENGLISH	SI	
Sensitivity(+/- 20 %)	6 pC/psi	87 pC/bar	
Measurement Range	3,000 psi	206.8 bar	
Maximum Pressure(Total)	5,200 psi	358.5 bar	
Resonant Frequency	≥ 100 kHz	≥ 100 kHz	
Transverse Resonance	> 15 kHz	> 15 kHz	
Frequency Response(± 5 %)	20 kHz	20 kHz	[1][2]
Non-Linearity	≤ 1 % FS	≤ 1 % FS	[3]

Environmental

Acceleration Sensitivity	0.0036 psi/g	.00025 bar/g	[4]
Acceleration Sensitivity	.002 psi/g	.00014 bar/g	[5]
Temperature Range(Operating)	-94 to 1,400 °F	-70 to 760 °C	
Temperature Range(Connector)	-65 to 900 °F	-53.9 to 482.2 °C	
Temperature Response	See Graph	See Graph	[5]
Hazardous Area Approval	See Manual	See Manual	
Radiation Exposure Limit(Integrated Neutron Flux)	1E10 N/cm ²	1E10 N/cm ²	
Radiation Exposure Limit(Integrated Gamma Flux)	1E8 rad	1E8 rad	

Electrical

Output Polarity(Differential)	Differential	Differential	
Capacitance	70 pF	70 pF	[5]
Resistance(Pin-Pin)(Room Temp)	≥ 1E12 Ohm	≥ 1E12 Ohm	
Resistance(Pin-Case)(Room Temp)	≥ 1E12 Ohm	≥ 1E12 Ohm	
Resistance(Pin-Pin)(1400°F/760°C)	≥ 50,000 Ohm	≥ 50,000 Ohm	
Resistance(Pin-Case)(1400°F/760°C)	≥ 100,000 Ohm	≥ 100,000 Ohm	
Insulation Resistance	See Graph	See Graph	
Insulation Resistance	See Graph	See Graph	
Insulation Resistance	See Graph	See Graph	
Insulation Resistance	See Graph	See Graph	

Physical

Sensing Element	UHT-12™	UHT-12™	
Sensing Geometry	Compression	Compression	
Housing Material	Nickel Alloy	Nickel Alloy	
Sealing	Welded Hermetic	Welded Hermetic	
Electrical Connector	7/16-27 2-PIN	7/16-27 2-PIN	
Cable Type	Hardline	Hardline	
Cable Length	3 ft	0.91 m	
Weight(with cable)	4.73 oz	134 gm	[5]

OPTIONAL VERSIONS

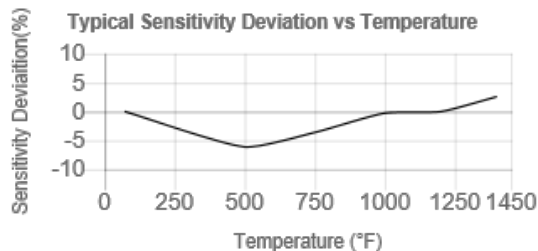
Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used.

NOTES:

- [1]Low frequency response is determined by external signal conditioning electronics.
- [2]Upper frequency response is calculated from Resonant Frequency.
- [3]Zero-based, least-squares line method.
- [4]Maximum.
- [5]Typical.
- [6]See PCB Declaration of Conformance PS058 for details.

SUPPLIED ACCESSORIES:

Model 72836-01 Silver Plated, Nickel Alloy, Seal. (3)
Model PCS-1 Calibration of dynamic pressure sensors at 100% full scale, max 15 kpsi range.



CE
UK
CA [6]



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.

Entered: ND	Engineer: AJA	Sales: MV	Approved: RPF	Spec Number:
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PCB PIEZOTRONICS
AN AMPHENOL COMPANY
Phone: 716-684-0001
Fax: 716-684-0987
E-Mail: info@pcb.com

3425 Walden Avenue, Depew, NY 14043