Model Number				
176A13				

# **CHARGE OUTPUT PRESSURE SENSOR**

Revision: D ECN #: 55057

170413			
Performance	ENGLISH	SI	
Sensitivity(± 20 %)	16 pC/psi	232 pC/bar	
Measurement Range	290 psi	20 bar	
Maximum Pressure(Total)	5,000 psi	344.7 bar	
Resonant Frequency	≥ 50 kHz	≥ 50 kHz	
Transverse Resonance	10 kHz	10 kHz	[1]
Frequency Response(+/- 5 %)	10 kHz	10 kHz	[2][3]
Non-Linearity	≤ 1 % FS	≤ 1 % FS	[4]
Environmental			
Acceleration Sensitivity	0.003 psi/g	0.00021 bar/g	[1]
Acceleration Sensitivity	.007 psi/g	.00050 bar/g	[5]
Temperature Range(Continuous)	-94 to 1,200 °F	-70 to 650 ℃	
Temperature Range(Connector)	-76 to 250 °F	-60 to 121 °C	
Temperature Response	See Graph	See Graph	
Hazardous Area Approval	See Manual	See Manual	
Radiation Exposure Limit(Integrated	1E8 rad	1E8 rad	
Gamma Flux)			
Radiation Exposure Limit(Integrated	1E10 N/cm <sup>2</sup>	1E10 N/cm <sup>2</sup>	
Neutron Flux)			
Electrical			
Output Polarity	Differential	Differential	
Capacitance(with cable pin - pin)	153 pF	153 pF	[1]
Resistance(Pin-Pin)(Room Temp)	≥ 10 <sup>9</sup> Ohm	≥ 10 <sup>9</sup> Ohm	
Resistance(Pin-Case)(Room Temp)	≥ 10 <sup>9</sup> Ohm	≥ 10 <sup>9</sup> Ohm	
Resistance(Pin-Pin)(1200°F/650°C)	≥ 50 kohm	≥ 50 kohm	
Resistance(Pin-Case)(1200°F/650°C)	≥ 100 kohm	≥ 100 kohm	
Physical			
Sensing Element	UHT-12™	UHT-12™	
Sensing Geometry	Compression	Compression	
Housing Material	Nickel Alloy	Nickel Alloy	
Sealing	Welded Hermetic	Welded Hermetic	
Electrical Connector	LEMO	LEMO	
Cable Type	Hardline	Hardline	
Cable Length	10 ft	3.05 m	
Weight(with cable)	7.68 oz	217.7 gm	
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## **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]Typical.

[2]Upper frequency response is calculated from Resonant Frequency.

[3] Low frequency response is determined by external signal conditioning electronics.

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

[5]Maximum.

[6] See PCB Declaration of Conformance PS058 for details.

# CH<sub>[6]</sub>

# Sensitivity Deviaition(%) 300 600 900 1200 Temperature (°F)

Typical Sensitivity Deviation vs Temperature



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.

## **SUPPLIED ACCESSORIES:**

Model PCS-1 Calibration of dynamic pressure sensors at 100% full scale, max 15 kpsi range.

Entered: ND	Engineer: AJA	Sales: MV	Approved: RPF	Spec Number:
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