

**Model Number**  
176M47

# CHARGE OUTPUT PRESSURE SENSOR

Revision: E  
ECN #: 55057

**Performance**

	ENGLISH	SI	
Sensitivity(± 20 %)	15 pC/psi	217.5 pC/bar	
Measurement Range	500 psi	34.47 bar	
Maximum Pressure(Total)	2.5 kpsi	172.4 bar	
Resonant Frequency	≥ 50 kHz	≥ 50 kHz	
Transverse Resonance	≥ 5 kHz	≥ 5 kHz	
Frequency Response	10 kHz	10 kHz	[1][2]
Non-Linearity	≤ 1 % FS	≤ 1 % FS	[3]

**Environmental**

Acceleration Sensitivity	0.01 psi/g	.00069 bar/g	[4]
Acceleration Sensitivity	.003 psi/g	.00021 bar/g	[5]
Temperature Range(Continuous)	-70 to 1,200 °F	-57 to 650 °C	
Temperature Range(Receptacle)	-76 to 500 °F	-60 to 260 °C	
Temperature Response	See Graph	See Graph	[5]
Hazardous Area Approval	See Manual	See Manual	
Radiation Exposure Limit(Integrated Neutron Flux)	1 E10 N/cm <sup>2</sup>	1 E10 N/cm <sup>2</sup>	
Radiation Exposure Limit(Integrated Gamma Flux)	1 E8 rad	1 E8 rad	

**Electrical**

Output Polarity(Positive Pressure)	Positive	Positive	
Capacitance(with cable)	850 pF	850 pF	[5]
Resistance(Pin-Pin)(Room Temp)	≥ 10 <sup>12</sup> Ohm	≥ 10 <sup>12</sup> Ohm	
Resistance(Pin-Case)(Room Temp)	≥ 10 <sup>12</sup> Ohm	≥ 10 <sup>12</sup> Ohm	
Resistance(Pin-Pin)(1200°F/650°C)	≥ 50 kohm	≥ 50 kohm	
Resistance(Pin-Case)(1200°F/650°C)	≥ 100 kohm	≥ 100 kohm	
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	10-32 Coaxial Jack	10-32 Coaxial Jack	
Electrical Connector	Integral Cable	Integral Cable	
Cable Type	Hardline	Hardline	
Weight	4.3 oz	122 gm	

**OPTIONAL VERSIONS**

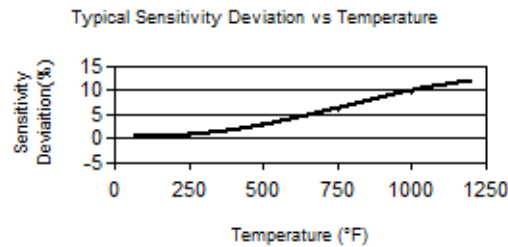
Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used.

**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, straight line method.
- [4]Maximum.
- [5]Typical.
- [6]See PCB Declaration of Conformance PS058 for details.

**SUPPLIED ACCESSORIES:**

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



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