

Model Number  
208C04

**ICP® FORCE SENSOR**

Revision F  
ECN #: 17909

Performance	ENGLISH	SI
Sensitivity ( $\pm 15\%$ )	5 mV/lb	1124 mV/kN
Measurement Range (Compression)	1000 lb	4.448 kN
Measurement Range (Tension)	500 lb	2.224 kN
Maximum Static Force (Compression)	6000 lb	26.69 kN
Maximum Static Force (Tension)	500 lb	2.224 kN
Broadband Resolution (1 to 10000 Hz)	0.01 lb-rms	0.04448 N-rms
Low Frequency Response (-5 %)	0.0003 Hz	0.0003 Hz
Upper Frequency Limit	36 kHz	36 kHz
Non-Linearity	$\leq 1\%$ FS	$\leq 1\%$ FS
<b>Environmental</b>		
Temperature Range	-65 to +250 °F	-54 to +121 °C
Temperature Coefficient of Sensitivity	$\leq 0.05\%$ /°F	$\leq 0.09\%$ /°C
<b>Electrical</b>		
Discharge Time Constant (at room temp)	$\geq 2000$ sec	$\geq 2000$ sec
Excitation Voltage	20 to 30 VDC	20 to 30 VDC
Constant Current Excitation	2 to 20 mA	2 to 20 mA
Output Impedance	$\leq 100$ Ohm	$\leq 100$ Ohm
Output Bias Voltage	8 to 14 VDC	8 to 14 VDC
Spectral Noise (1 Hz)	0.000798 lb/ $\sqrt{\text{Hz}}$	0.00356 N/ $\sqrt{\text{Hz}}$
Spectral Noise (10 Hz)	0.000286 lb/ $\sqrt{\text{Hz}}$	0.00128 N/ $\sqrt{\text{Hz}}$
Spectral Noise (100 Hz)	0.0000860 lb/ $\sqrt{\text{Hz}}$	0.000384 N/ $\sqrt{\text{Hz}}$
Spectral Noise (1000 Hz)	0.0000276 lb/ $\sqrt{\text{Hz}}$	0.000123 N/ $\sqrt{\text{Hz}}$
Output Polarity (Compression)	Positive	Positive
<b>Physical</b>		
Stiffness	6 lb/ $\mu\text{in}$	1.05 kN/ $\mu\text{m}$
Size (Hex x Height x Sensing Surface)	0.625 in x 0.625 in x 0.500 in	15.88 mm x 15.88 mm x 12.7 mm
Weight	0.80 oz	22.7 gm
Housing Material	Stainless Steel	Stainless Steel
Sealing	Hermetic	Hermetic
Electrical Connector	10-32 Coaxial Jack	10-32 Coaxial Jack
Electrical Connection Position	Side	Side
Mounting Thread	10-32 Female	Not Applicable
Mounting Torque (Recommended)	16 to 20 in-lb	181 to 226 N-cm

**Optional Versions** (Optional versions have identical specifications and accessories as listed for standard model except where noted below. More than one option maybe used.)

<b>N</b> - Negative Output Polarity		
Output Polarity (Compression)	Negative	Negative
<b>W</b> - Water Resistant Cable		
Electrical Connector	Sealed Cable	Sealed Cable
Electrical Connection Position	Side	Side

**Notes**

- [1] Typical.
- [2] Calculated from discharge time constant.
- [3] Estimated using rigid body dynamics calculations.
- [4] Zero-based, least-squares, straight line method.
- [5] See PCB Declaration of Conformance PS023 for details.

**Supplied Accessories**

- 080A81 Thread Locker (1)
- 081B05 Mounting Stud (10-32 to 10-32) (2)
- 084A03 Impact Cap (1)



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: LAB	Engineer: LAB		Spec Number:
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