

Model Number 209C12	ICP® FORCE SENSOR	Revision: F ECN #: 45224
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	<u>ENGLISH</u>	<u>SI</u>	
Performance			
Sensitivity(± 15 %)	2200 mV/lb	494,604 mV/kN	
Measurement Range(Compression)	2.2 lb	0.00979 kN	
Measurement Range(Tension)	1.0 lb	0.00445 kN	
Maximum Static Force(Compression)	11.0 lb	0.0489 kN	
Maximum Static Force(Tension)	1.0 lb	0.00445 kN	
Broadband Resolution(1 to 10,000 Hz)	0.00002 lb-rms	0.00009 N-rms	[1]
Low Frequency Response(-5 %)	0.05 Hz	0.05 Hz	[2]
Upper Frequency Limit	30,000 Hz	30,000 Hz	[3]
Environmental			
Temperature Range	-65 to +250 °F	-54 to +121 °C	
Temperature Coefficient of Sensitivity	≤ 0.05 %/°F	≤ 0.09 %/°C	
Electrical			
Discharge Time Constant(at room temp)	≥ 10 sec	≥ 10 sec	
Excitation Voltage	18 to 30 VDC	18 to 30 VDC	
Constant Current Excitation	2 to 20 mA	2 to 20 mA	
Output Impedance	≤ 100 Ohm	≤ 100 Ohm	
Output Bias Voltage	8 to 12 VDC	8 to 12 VDC	
Spectral Noise(1 Hz)	0.0000123 lb/√Hz	0.0000548 N/√Hz	[1]
Spectral Noise(10 Hz)	0.0000009 lb/√Hz	0.0000042 N/√Hz	[1]
Spectral Noise(100 Hz)	0.0000004 lb/√Hz	0.0000017 N/√Hz	[1]
Spectral Noise(1000 Hz)	0.0000001 lb/√Hz	0.0000003 N/√Hz	[1]
Output Polarity(Compression)	Positive	Positive	
Physical			
Stiffness	2 lb/μin	0.35 kN/μm	[1]
Size (Hex x Height)	0.372 in x 0.83 in	9.53 mm x 21.08 mm	
Weight	0.29 oz	8.2 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	No Metric Equivalent	

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.		
M - Metric Mount		
Supplied Accessory : Model M081A05 Mounting Stud 10-32 to M6 x 0.75 x 0.27" long BeCu (H900), no shoulder (1) replaces Model 081A05		
N - Negative Output Polarity		
Output Polarity(Compression)	Negative	Negative
W - 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] See PCB Declaration of Conformance PS023 for details.

SUPPLIED ACCESSORIES:
 Model 081A05 Mounting stud, 10-32 to 10-32 x 0.27" long, BeCu (H900), no shoulder (1)
 Model 084A38 Thermal boot (for Series 209) (1)

Entered: LK	Engineer: MJK	Sales: KWW	Approved: APB	Spec Number:
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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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Phone: 716-684-0001
 Fax: 716-684-0987
 E-Mail: info@pcb.com