

Model Number

223B

## ICP® FORCE SENSOR

Revision: J

ECN #: 31810

**Performance**

	ENGLISH	SI
Sensitivity(± 15 %)	0.42 mV/lb	94.42 mV/kN
Measurement Range(Compression)	12,000 lb	53.38 kN
Measurement Range(Tension)	4000 lb	17.79 kN
Maximum Static Force(Compression)	10,000 lb	44.48 kN
Maximum Static Force(Tension)	4500 lb	20.02 kN
Broadband Resolution(1 to 10,000 Hz)	0.40 lb-rms	1.78 N-rms
Low Frequency Response(-5 %)	0.0003 Hz	0.0003 Hz
Upper Frequency Limit	10 kHz	10 kHz
Non-Linearity	≤ 1 % FS	≤ 1 % FS

**Environmental**

Temperature Range	-65 to +250 °F	-54 to +121 °C
Temperature Coefficient of Sensitivity	≤ 0.03 %/°F	≤ 0.054 %/°C

**Electrical**

Discharge Time Constant(at room temp)	≥ 2000 sec	≥ 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	≤ 100 ohm	≤ 100 ohm
Output Bias Voltage	8 to 14 VDC	8 to 14 VDC
Output Polarity(Compression)	Positive	Positive

**Physical**

Stiffness	4 lb/μin	0.70 kN/μm
Size (Diameter x Height)	1.10 in x 2.00 in	27.94 mm x 50.8 mm
Weight	4.2 oz	120 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	1/2 - 20 Female	1/2 - 20 Female



[5]

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.

ICP® is a registered trademark of PCB Group, Inc.

**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.

**J** - Ground Isolated

**M** - Metric Mount

Mounting Thread

M12 x 1.25 Female

**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] Zero-based, least-squares, straight line method.

[5] See PCB Declaration of Conformance PS023 for details.

Entered: BLS	Engineer: BH	Sales: JYM	Approved: EB	Spec Number:
--------------	--------------	------------	--------------	--------------

Date: 11-23-09	Date: 11-23-09	Date: 11-23-09	Date: 11-23-09	1290
----------------	----------------	----------------	----------------	------

**PCB PIEZOTRONICS™**

**FORCE / TORQUE DIVISION**

3425 Walden Avenue, Depew, NY 14043

Phone: 716-684-0001

Fax: 716-684-8877

E-Mail: force@pcb.com