

Model Number  
260A12

# 3-COMPONENT CHARGE OUTPUT FORCE SENSOR

Revision: B  
ECN #: 22798

|   | ENGLISH   | SI   |     |
|---|---|--|-----|
| <b>Performance</b>  |   |  |     |
| Sensitivity (± 15 %) (x or y axis)                                    | 32 pC/lb  | 7.19 pC/N  | [2] |
| Sensitivity (± 15 %) (z axis)   | 15 pC/lb  | 3.37 pC/N  | [2] |
| Measurement Range (z axis)  | 1000 lb   | 4.45 kN  |     |
| Measurement Range (x or y axis)                                       | 1000 lb   | 4.45 kN  |     |
| Maximum Force (z axis)  | 1320 lb   | 5.87 kN  |     |
| Maximum Force (x or y axis)   | 1000 lb   | 4.45 kN  |     |
| Maximum Moment (z axis)   | 40 ft-lb  | 54.23 N-m  |     |
| Maximum Moment (x or y axis)  | 70 ft-lb  | 94.91 N-m  |     |
| Upper Frequency Limit   | 90 kHz  | 90 kHz   |     |
| Non-Linearity   | ≤ 1 % FS  | ≤ 1 % FS   | [3] |
| Cross Talk (between x and y axis)                                     | ± 3 %   | ± 3 %  |     |
| Cross Talk (between (x or y axis) and z axis)                         | ± 5 %   | ± 5 %  |     |
| <b>Environmental</b>  |   |  |     |
| Temperature Range   | -100 to +350 °F   | -73 to +177 °C   |     |
| <b>Electrical</b>   |   |  |     |
| Capacitance (all channels)  | 30 pF   | 30 pF  | [1] |
| Insulation Resistance (all channels)                                  | ≥ 10 <sup>12</sup> ohm  | ≥ 10 <sup>12</sup> ohm                                 |     |
| Output Polarity (in direction of markings)                            | Negative  | Negative   |     |
| <b>Physical</b>   |   |  |     |
| Preload   | ≤ 10,000 lb   | ≤ 44.48 kN   | [4] |
| Stiffness (z axis)  | 19 lb/μin   | 3.3 kN/μm  | [1] |
| Stiffness (x or y axis)   | 6 lb/μin  | 1 kN/μm  | [1] |
| Size (Height x Length x Width x Bolt Diameter x ID x Sensing Surface) | 0.390 in x 1.25 in x 1.25 in x 0.500 in x 0.512 in x 0.920 in | 9.90 mm x 31.8 mm x 31.8 mm x 13 mm x 13 mm x 23.37 mm |     |
| Weight  | 1.5 oz  | 42.5 gm  |     |
| Housing Material  | Stainless Steel   | Stainless Steel  |     |
| Sealing   | Hermetic  | Hermetic   |     |
| Electrical Connector (Quantity, 3)                                    | 10-32 Coaxial Jack  | 10-32 Coaxial Jack                                     |     |
| Electrical Connection Position  | Side  | Side   |     |

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.

### M - Metric Mount

Supplied Accessory : Model M081A74 Mounting Stud (1) replaces Model 081A74

### W - Water Resistant Cable

Electrical Connection Position

Side Side

### NOTES:

- [1] Typical.
- [2] Sensitivites are for listed preload. Sensitivites may vary ±5% depending on preload used.
- [3] Zero-based, least-squares, straight line method.
- [4] Preload should be at least 10 times the X and Y operating range used.

### SUPPLIED ACCESSORIES:

- Model 081A74 Pre-load bolt (for Models 260A02, 260A12, and 260A32) (1)
- Model 082M12 Anti-friction washer (for Models 260A02, 260A12, and 260A32) (1)
- Model 083A13 Pilot bushing (for Models 260A02, 260A12, and 260A32) (1)

|                     |                       |                     |                      |              |
|---------------------|-----------------------|---------------------|----------------------|--------------|
| Entered: <i>BLS</i> | Engineer: <i>mgic</i> | Sales: <i>JJW</i>   | Approved: <i>SNB</i> | Spec Number: |
| Date: <i>9-7-05</i> | Date: <i>9-8-05</i>   | Date: <i>9/8/05</i> | Date: <i>9/8/05</i>  | <b>14903</b> |

**PCB PIEZOTRONICS™**  
FORCE / TORQUE DIVISION  
3425 Walden Avenue, Depew, NY 14043

Phone: 716-684-0001  
Fax: 716-684-8877  
E-Mail: force@pcb.com