| Model Number **640B02** | **4-20 MA OUTPUT VELOCITY SENSOR** | Revision B ECN #: 24962 |
|---|---|---|

| **Performance** | **ENGLISH** | **SI** | |
|---|---|---|---|
| Measurement Range | 0.0 to 2 in/sec pk | 0.0 to 50.8 mm/s pk | [1] |
| Output | 4-20 mA | 4-20 mA | |
| Frequency Range (±10 %) | 180 to 60000 cpm | 3 to 1000 Hz | [2][3] |
| Broadband Resolution | 0.01 in/sec pk | 0.26 mm/s pk | [4] |
| Non-Linearity | ±1 % | ±1 % | |
| **Environmental** | | | |
| Temperature Range | -40 to 185 °F | -40 to 85 °C | |
| **Electrical** | | | |
| Excitation Voltage | 12 to 30 VDC | 12 to 30 VDC | |
| Settling Time (within 2% of value) | <15 sec | <15 sec | |
| Electrical Isolation (Case) | $>10^8$ Ohm | $>10^8$ Ohm | |
| **Physical** | | | |
| Size (Hex x Height) | 1.0 in x 2.6 in | 25.4 mm x 66 mm | |
| Weight | 4.7 oz | 131 gm | |
| Mounting Thread | 1/4-28 UNF | No Metric Equivalent | |
| Mounting Torque | 3 to 5 ft-lb | 4 to 7 Nm | |
| Sensing Element | Ceramic | Ceramic | |
| Sensing Geometry | Shear | Shear | |
| Housing Material | Stainless Steel | Stainless Steel | |
| Sealing | Welded Hermetic | Welded Hermetic | |
| Electrical Connector | 2-Pin MIL-C-5015 | 2-Pin MIL-C-5015 | |
| Electrical Connection Position | Top | Top | |
| Electrical Connections (Pin A) | 4-20 mA Pos (+) | 4-20 mA Pos (+) | |
| Electrical Connections (Pin B) | 4-20 mA Neg (-) | 4-20 mA Neg (-) | |

CE[5]

C SA US Ex

*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 standard model except where noted below. More than one option maybe used.)

**EX** - Hazardous Area Approval- contact factory for specific approvals

| | | |
|---|---|---|
| Hazardous Area Approval | DIV II, CL I, GRPS A-D, ExnL, AExnA, IIC T4 | DIV II, CL I, GRPS A-D, ExnL, AExnA, IIC T4 |
| Hazardous Area Approval | EEx ia IIC T4, -40°C≤Ta≤80°C, II 1 G | EEx ia IIC T4, -40°C≤Ta≤80°C, II 1 G |
| Hazardous Area Approval | EEx nL IIC T4, -40°C≤Ta≤80°C, II 3 G | EEx nL IIC T4, -40°C≤Ta≤80°C, II 3 G |
| Hazardous Area Approval | DIV I, CL I, II, III, GRPS A-G, Exia, AExia, IIC T4 | DIV I, CL I, II, III, GRPS A-G, Exia, AExia, IIC T4 |

**M** - Metric Mount

Supplied Accessory: Model M081A61 Mounting stud, 1/4-28 to M6 x 1 replaces Model 081A40

**RV** - Buffered Analog Signal Output - 100 mV/g (±20%)

| | | |
|---|---|---|
| Electrical Connector | 3-Pin MIL-C-5015 | 3-Pin MIL-C-5015 |
| Electrical Connections (Pin A) | 4-20 mA Pos (+) | 4-20 mA Pos (+) |
| Electrical Connections (Pin B) | 4-20 mA Neg/Signal Output Neg | 4-20 mA Neg/Signal Output Neg |
| Electrical Connections (Pin C) | Signal Output Pos | Signal Output Pos |

**Notes**

[1] Conversion Factor 1 in/sec = 0.0254 m/sec.
[2] 1Hz = 60 cpm (cycles per minute).
[3] Current will fluctuate at frequencies below 5 Hz.
[4] Typical.
[5] See PCB Declaration of Conformance PS039 or PS053 for details.

**Supplied Accessories**

081A40 Mounting Stud (1)
ICS-4 NIST-traceable single-axis amplitude response calibration from 0 cpm (0 Hz) to upper 10% frequency for 4 - 20 mA output vibration sensor (1)

| Entered: NJF | | | | Spec Number: |
|---|---|---|---|---|
| Date: 09/22/2006 | | | | **27244** |

IMI SENSORS
A PCB PIEZOTRONICS DIV.

3425 Walden Avenue
Depew, NY 14043
UNITED STATES
Phone: 716-684-0003
Fax: 716-684-3823
E-mail: imi@pcb.com
Web site: www.imi-sensors.com