# LOW POWER ICP®
# ACCELEROMETERS

IMI SENSORS
A PCB DIVISION

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# LOW POWER ICP® ACCELEROMETERS

IMI Sensors offers a wide variety ICP® accelerometers with low power requirements for use with battery-powered wireless systems.

- Sensors can operate with a power supply as low as 3VDC.
- Sensors have a current draw of only 500 µA.
- Sensors operate on a 3-wire system.

These accelerometers are ideal for condition monitoring and IoT applications, offering all of the same durability features as their standard ICP® equivalents.

- Welded, hermetically-sealed housing of stainless steel to withstand harsh industrial environments.
- Electrically-isolated housing to prevent noise
- Option of models with rugged military-style connector or integral cable.

## OPTIONAL FEATURES

Most models listed in this brochure are available with optional features. Optional features are indicated by a prefixed model number; to select any of the below-listed features, add the appropriate prefix to the core model number. All prefixes can be combined. When selecting a prefixed model, refer to model-specific outline drawings as some prefixed models' dimensions differ slightly from their unprefixed model equivalents.

| Optional Feature | Prefix | Description |
|---|---|---|
| Hazardous Area Approval | EX | Accelerometer is certified for use in potentially explosive environments via ATEX, CSA and IECEx. Available on all series. |
| Metric Mount | M | Accelerometer includes an M6x1 mounting stud or bolt instead of a ¼-28 mounting stud or bolt. Available on all series. |

# SIDE EXIT ICP® ACCELEROMETER

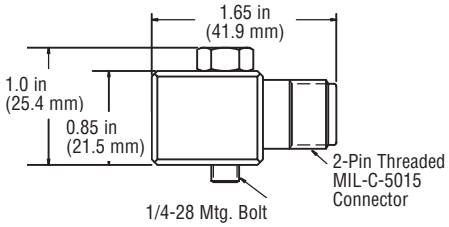
## 602 Series


## ACCELEROMETER WITH MIL CONNECTOR

MODEL 602M64

Low profile housing

Side exit, through-bolt design




| SPECIFICATIONS | |
|---|---|
| **Performance** | |
| Sensitivity (±10%) | 100 mV/g<br>10.2 mV/(m/s²) |
| Measurement Range (12 VDC) | ±50 g<br>±490 m/s² |
| Measurement Range (5 VDC) | ±15 g<br>±147 m/s² |
| Frequency Range (±3 dB) | 0.5 to 8000 Hz |
| Resonant Frequency | 25 kHz |
| Broadband Resolution (1 to 10000 Hz) | 2000 µg<br>19600 µm/s² |
| Non-Linearity | ±1 % |
| Transverse Sensitivity | ≤7 % |
| **Environmental** | |
| Overload Limit (Shock) | 5000 g pk<br>49050 m/s² pk |
| Temperature Range | -65 to +250 °F<br>-54 to +121 °C |
| Enclosure Rating | IP68 |
| **Electrical** | |
| Settling Time (within 1% of bias) | ≤5.0 sec |
| Discharge Time Constant | ≥0.1 sec |
| Excitation Voltage | 5 to 12 VDC |
| Constant Current Excitation | 0.5 mA |
| Output Impedance | <100 Ohm |
| Output Bias Voltage | 2.5 to 6 VDC |
| Spectral Noise (10 Hz) | 18 µg/√Hz |
| Spectral Noise (100 Hz) | 4 µg/√Hz |
| Spectral Noise (1 kHz) | 2 µg/√Hz |
| Electrical Isolation (Case) | >10⁸ Ohm |
| **Physical** | |
| Sensing Element | Ceramic |
| Sensing Geometry | Shear |
| Housing Material | Stainless Steel |
| Sealing | Welded Hermetic |
| Mounting Thread | 1/4-28 Male |
| Mounting Torque | 2 to 5 ft-lb<br>2.7 to 6.8 Nm |
| Electrical Connector | 2-Pin MIL-C-5015 |
| Electrical Connection Position | Side |
| Weight | 2.61 oz<br>74.0 g |
| **Accessories** | |
| Model 081B97: Mounting bolt, 1/4-28 x 1.0" | |

# TOP EXIT
# ICP® ACCELEROMETER

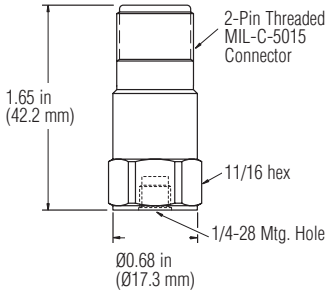
603 Series


## ACCELEROMETER WITH MIL CONNECTOR

MODEL 603M113

Small size, top exit connector

IMI's most popular low power accelerometer



# SWIVELER®
# ICP® ACCELEROMETER

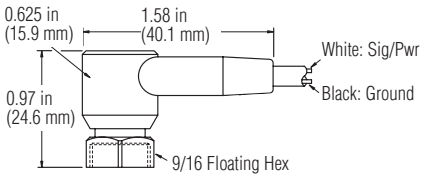
## 607 Series

## ACCELEROMETER WITH INTEGRAL POLYURETHANE CABLE

MODEL 607M83

World's smallest industrial accelerometer to easily fits in tight spaces

Patented 360º swivel mount design provides hassle-free cable orientation




| SPECIFICATIONS | |
|---|---|
| **Performance** | |
| Sensitivity (±15%) | 100 mV/g<br>10.2 mV/(m/s²) |
| Measurement Range (12 VDC) | ±50 g<br>±490 m/s² |
| Measurement Range (5 VDC) | ±15 g<br>±147 m/s² |
| Frequency Range (±3 dB) | 0.5 to 10000 Hz |
| Resonant Frequency | 25 kHz |
| Broadband Resolution (1 to 10000 Hz) | 2000 µg<br>19600 µm/s² |
| Non-Linearity | ±1 % |
| Transverse Sensitivity | ≤7 % |
| **Environmental** | |
| Overload Limit (Shock) | 5000 g pk<br>49050 m/s² pk |
| Temperature Range | -65 to +250 °F<br>-54 to +121 °C |
| Enclosure Rating | IP68 |
| **Electrical** | |
| Settling Time (within 1% of bias) | ≤5.0 sec |
| Discharge Time Constant | ≥0.1 sec |
| Excitation Voltage | 5 to 12 VDC |
| Constant Current Excitation | 0.5 mA |
| Output Impedance | <100 Ohm |
| Output Bias Voltage | 2.5 to 6 VDC |
| Spectral Noise (10 Hz) | 18 µg/√Hz |
| Spectral Noise (100 Hz) | 4 µg/√Hz |
| Spectral Noise (1 kHz) | 2 µg/√Hz |
| Electrical Isolation (Case) | >10⁸ Ohm |
| **Physical** | |
| Sensing Element | Ceramic |
| Sensing Geometry | Shear |
| Housing Material | Stainless Steel |
| Sealing | Welded Hermetic |
| Mounting Thread | 1/4-28 Male |
| Mounting Torque (Stud) | 3 to 4 ft-lb<br>4.1 to 5.4 Nm |
| Mounting Torque (Hex Nut) | 2 to 3 ft-lb<br>2.7 to 4.1 Nm |
| Electrical Connector | Molded Integral Cable |
| Electrical Connection Position | Side |
| Weight | 1.1 oz<br>31 g |
| **Accessories** | |
| Model 080A156: Mounting stud, 1/2-20 to 1/4-28 | |

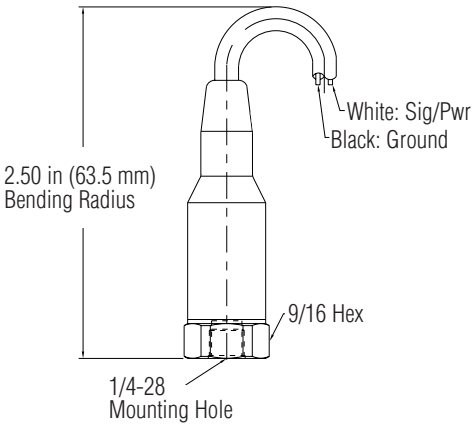
# SMALL FOOTPRINT ICP® ACCELEROMETER

## 608 Series

## ACCELEROMETER WITH INTEGRAL CABLE

MODEL 608M50

Smallest footprint of any industrial accelerometer




| SPECIFICATIONS | |
|---|---|
| **Performance** | |
| Sensitivity (±10%) | 100 mV/g<br>10.2 mV/(m/s²) |
| Measurement Range (12 VDC) | ±50 g<br>±490 m/s² |
| Measurement Range (5 VDC) | ±15 g<br>±147 m/s² |
| Frequency Range (±3 dB) | 0.5 to 10000 Hz |
| Resonant Frequency | 22 kHz |
| Broadband Resolution (1 to 10000 Hz) | 2000 µg<br>19600 µm/s² |
| Non-Linearity | ±1 % |
| Transverse Sensitivity | ≤7 % |
| **Environmental** | |
| Overload Limit (Shock) | 5000 g pk<br>49050 m/s² pk |
| Temperature Range | -65 to +250 °F<br>-54 to +121 °C |
| Enclosure Rating | IP68 |
| **Electrical** | |
| Settling Time (within 1% of bias) | ≤5.0 sec |
| Discharge Time Constant | ≥0.1 sec |
| Excitation Voltage | 5 to 12 VDC |
| Constant Current Excitation | 0.5 mA |
| Output Impedance | <100 Ohm |
| Output Bias Voltage | 2.5 to 6 VDC |
| Spectral Noise (10 Hz) | 18 µg/√Hz |
| Spectral Noise (100 Hz) | 4 µg/√Hz |
| Spectral Noise (1 kHz) | 2 µg/√Hz |
| Electrical Isolation (Case) | >$10^8$ Ohm |
| **Physical** | |
| Sensing Element | Ceramic |
| Sensing Geometry | Shear |
| Housing Material | Stainless Steel |
| Sealing | Molded |
| Mounting Thread | 1/4-28 Female |
| Mounting Torque | 2 to 5 ft-lb<br>2.7 to 6.8 Nm |
| Electrical Connector | Integral Cable |
| Electrical Connection Position | Top |
| Cable Type | Polyurethane |
| Weight | 3.5 oz<br>99.3 g |
| **Accessories** | |
| Model 081A40: Mounting stud, 1/4-28 x 0.438 | |

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3425 Walden Avenue, Depew, NY 14043 USA

pcb.com/imi-sensors | imi@pcb.com | 800 959 4464 | +1 716 684 0003



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