



# 603 Series Low Cost ICP® Accelerometers

Versatile accelerometers designed for industrial applications

## Highlights

Wide variety of options available to accommodate most industrial applications:

- Multiple sensitivity options available for both slow speed and impacting high speed applications.
- Integral polyurethane cable options available for submersible applications.
- Intrinsically safe and armored cable options available for hazardous environments.
- Dual output options available for simultaneous monitoring of both vibration and temperature.

## Typical Applications

Industrial, permanent-mount applications:

- Vibration monitoring on plant and process machinery, including motors, pumps, gearboxes and bearings.



IMI Sensors has developed the 603 Series, a line of ICP® accelerometers for industrial vibration monitoring applications. All of the sensors in the product line include a shear-mode ceramic element housed in a rugged hermetically-welded stainless steel enclosure. All models include case-isolated electronics to eliminate noise issues.

## Hazardous Area Approvals (EX / CS Versions):

### CSA (Canada & US)

- AEx ia IIC T4 Class I, Division 1, Groups A, B, C, D
- AEx ia IIC T4 Class II, Division 1, Groups E, F, G
- AEx ia IIC T4 Class III, Division 1
- AEx nA IIC T4 Class I, Division 2, Groups A, B, C, D
- Ex ia IIC T4 Class I, Division 1, Groups A, B, C, D
- Ex ia IIC T4 Class II, Division 1, Groups E, F, G
- Ex ia IIC T4 Class III, Division 1
- Ex nL IIC T4 Class I, Division 2, Groups A, B, C, D

### ATEX

- Ex ia IIC T4
- Ex ia IIC T4 Ga
- Ex nA IIC T4 Gc
- Ex nL IIC T4
- Eex ia IIC T4
- Eex nL IIC T4

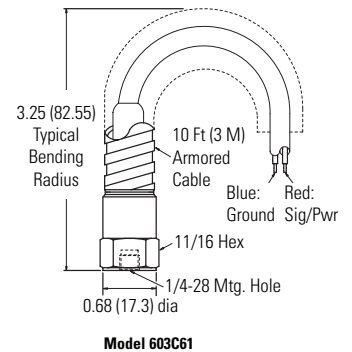
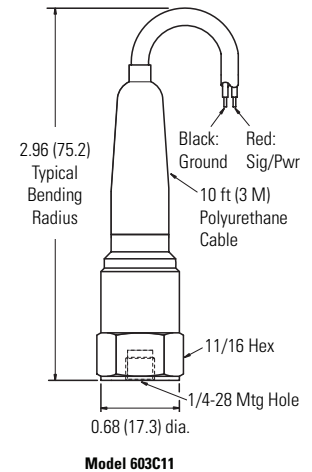
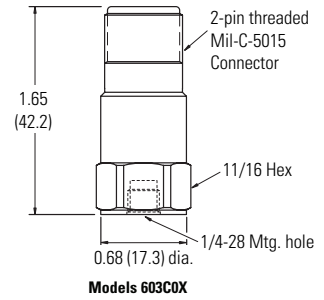


Low Cost  
ICP® Accelerometers  
Series 603

# 603 Series Low Cost ICP® Accelerometers



Technical Specifications						
	603C00	603C05	603C01	603C11	603C61	603C02
<b>Performance</b>						
Sensitivity	10 mV/g 1.02 mV/(m/s <sup>2</sup> )	50 mV/g 5.1 mV/(m/s <sup>2</sup> )		100 mV/g 10.2 mV/(m/s <sup>2</sup> )		500 mV/g 51.0 mV/(m/s <sup>2</sup> )
Measurement Range	±500 g ±4,905 m/s <sup>2</sup>	±100 g ±981 m/s <sup>2</sup>		±50 g ±490 m/s <sup>2</sup>		±10 g ±98 m/s <sup>2</sup>
Frequency Range (±3 dB)	0.5 to 10,000 Hz	1.2 to 10,000 Hz		0.5 to 10,000 Hz		0.5 to 3,000 Hz
Resonant Frequency	25,000 Hz					
Broadband Resolution	2,000 µg 19,620 µm/s <sup>2</sup>	750 µg 7,358 µm/s <sup>2</sup>		350 µg 3,434 µm/s <sup>2</sup>		300 µg 2,943 µm/s <sup>2</sup>
Non-Linearity						±1%
Transverse Sensitivity						≤7%
<b>Environmental</b>						
Overload Limit (Shock)	5,000 g pk 49,050 m/s <sup>2</sup> pk					
Temperature Range	-65 to +250 °F -54 to +121 °C			-65 to +200 °F -54 to +93 °C		
Enclosure Rating	IP68					
<b>Electrical</b>						
Settling Time	≤ 3.0 sec	≤ 2.0 sec	≤ 2.0 sec		≤ 5.0 sec	
Discharge Time Constant	≥ 0.4 sec		≥ 0.3 sec			
Excitation Voltage	18 to 28 VDC					
Constant Current Excitation	2 to 20 mA					
Output Impedance	< 150 ohm				< 500 ohm	
Output Bias Voltage	8 to 12 VDC					
Spectral Noise (10 Hz)	85.0 µg/√Hz	18.0 µg/√Hz	8.0 µg/√Hz			
Spectral Noise (100 Hz)	20.0 µg/√Hz	10.0 µg/√Hz	5.0 µg/√Hz		3.0 µg/√Hz	
Spectral Noise (1 kHz)	5.0 µg/√Hz	7.0 µg/√Hz	4.0 µg/√Hz		3.0 µg/√Hz	
Electrical Isolation (Case)	>10 <sup>9</sup> ohm					
<b>Physical</b>						
Sensing Element	Ceramic					
Sensing Geometry	Shear					
Housing Material	Stainless Steel					
Sealing	Welded Hermetic					
Mounting Thread	1/4-28 Female					
Mounting Torque	2 to 5 ft lb 2.7 to 6.8 N-m					
Electrical Connector	2-pin MIL-C-5015		Pigtails	Pigtails	2-pin MIL-C-5015	
Electrical Connector Position	Top		N/A		Top	
Cable Type	N/A		Polyurethane	Armored Polyurethane	N/A	
Cable Length	N/A		10 ft 3.0 m		N/A	
Size (Hex x Height)	0.69 x 1.65 in 18.0 x 42.2 mm		0.69 x 4.70 in 18.0 x 119.0 mm		0.69 x 1.65 in 18.0 x 42.2 mm	
Weight (without cable)	1.8 oz 51 gm					
<b>Similar Models</b>						
Hazardous Area Approved	EX603C00	EX603C05	CS603C01 EX603C01	EX603C11	EX603C61	EX603C02
Dual Output	N/A	N/A	TO603C01	TO603C11	N/A	TO603C02



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**ISO 9001 CERTIFIED ■ A2LA ACCREDITED to ISO 17025**

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**IMI Sensors** designs and manufactures a full line of industrial accelerometers, sensors, vibration switches, vibration transmitters, cables and accessories for predictive maintenance, continuous vibration monitoring, and machinery equipment protection. Products include rugged industrial ICP® accelerometers, 4-20 mA industrial vibration sensors and transmitters for 24/7 monitoring, electronic and mechanical vibration switches, the patented Bearing Fault Detector, high temperature accelerometers with UHT-12™ element to +1200 °F (+649 °C), 2-wire Smart Vibration Switch, and the patented Reciprocating Machinery Protector. CE approved and intrinsically safe versions are available for most products.

Visit [www.imi-sensors.com](http://www.imi-sensors.com) to locate your nearest sales office.