IMI SENSORS
A PCB DIVISION

MODELS **(EX)637A06**
& (EX)638A06

CRYOGENIC ICP® ACCELEROMETERS

- Specialized cryogenic circuitry & quartz sensing technology to promote survivability in extremely cold applications.
- Electrically-isolated housing to prevent noise issues without the addition of an isolation base.
- Welded, hermetically-sealed housing of 316L stainless steel & rugged two-pin MIL connector to withstand harsh industrial environments.
- Intrinsically safe versions available for use in potentially explosive environments.

CE IECEx

DESIGNED FOR USE IN INDUSTRIAL ENVIRONMENTS DOWN TO -320 °F

Cryogenic ICP® accelerometers are specifically designed to operate in environments down to -320 °F (-196 °C) F with the use of specialized, built-in, cryogenic circuitry and a quartz shear sensing technology. Each sensor is hermetically-sealed in a 316L stainless steel housing. They are individually tested to determine the thermal coefficient of sensitivity at -320 °F (-196 °C) ensuring reliable operation.

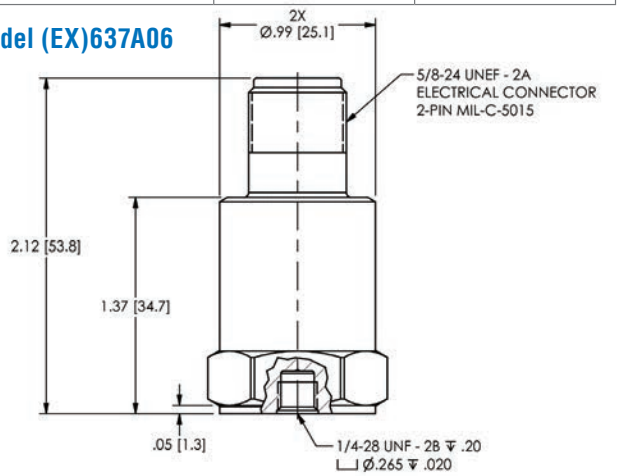
TYPICAL APPLICATIONS

- Cryogenic Centrifugal and Reciprocating Pumps for:
  - Liquefied natural gas (LNG) processing
  - Industrial gas processing
  - Pharmaceutical production
  - Frozen food production/storage

SPECIFICATIONS		
Model Number	**(EX)637A06**	**(EX)638A06**
Performance		
Sensitivity	25 mV/g 2.54 mV/(m/s²)	25 mV/g 2.54 mV/(m/s²)
Measurement Range	±200 g pk ±1962 m/s²	±200 g pk ±1962 m/s²
Frequency Range (±5%)	10 to 400 Hz	10 to 400 Hz
Frequency Range (±3 dB)	4 to 1500 Hz	4 to 1500 Hz
Filter Type	Low Pass	Low Pass
Electrical Filter Corner Frequency	1.5 kHz	1.5 kHz
Electrical Filter Roll-Off	12 dB/octave	12 dB/octave
Resonant Frequency	≥ 20 kHz	≥ 20 kHz
Broadband Resolution	1 mg rms 0.01 m/s² rms	1 mg rms 0.01 m/s² rms
Non-Linearity	±1%	±1%
Transverse Sensitivity	≤5%	≤5%
Electrical		
Settling Time	≤ 3 sec	≤ 3 sec
Discharge Time Constant	0.05 to 0.5 sec	0.05 to 0.5 sec
Excitation Voltage	18 to 28 VDC	18 to 28 VDC
Constant Current Excitation	1.6 to 20 mA	1.6 to 20 mA
Output Impedance	≤ 100 Ohm	≤ 100 Ohm
Output Bias Voltage	7 to 11 VDC	7 to 11 VDC
Spectral Noise (1 Hz)	600 µg/√Hz	600 µg/√Hz
Spectral Noise (10 Hz)	120 µg/√Hz	120 µg/√Hz
Spectral Noise (100 Hz)	36 µg/√Hz	36 µg/√Hz
Spectral Noise (1 kHz)	25 µg/√Hz	25 µg/√Hz
Spectral Noise (10 kHz)	6 µg/√Hz	6 µg/√Hz
Electrical Isolation (Case)	Case Isolated	Case Isolated

SPECIFICATIONS		
Model Number	**(EX)637A06**	**(EX)638A06**
Environmental		
Overload Limit (Shock)	±1000 g pk ±9810 g pk	±1000 g pk ±9810 g pk
Temperature Range	-320 to +250 °F -196 to +121 °C	-320 to +250 °F -196 to +121 °C
Hazardous Area Approval	ATEX, ETL, IECEx (EX only)	
Physical		
Sensing Element	Quartz	Quartz
Sensing Geometry	Shear	Shear
Housing Material	Stainless Steel	Stainless Steel
Sealing	Welded Hermetic	Welded Hermetic
Mounting Thread	¼-28 Female	¼-28 Male
Mounting Torque	2 to 5 ft-lb 2.7 to 6.8 Nm	2 to 5 ft-lb 2.7 to 6.8 Nm
Electrical Connector	2-pin MIL-C-5015	2-pin MIL-C-5015
Electrical Connector Position	Top	Side
Size	0.88 x 2.06 in 22.0 x 52.3 mm	1.00 x 2.25 x 1.00 in 25.4 x 57.4 x 25.4 mm
Weight	3.3 oz 94 gm	6.4 oz 181 gm

Model (EX)637A06



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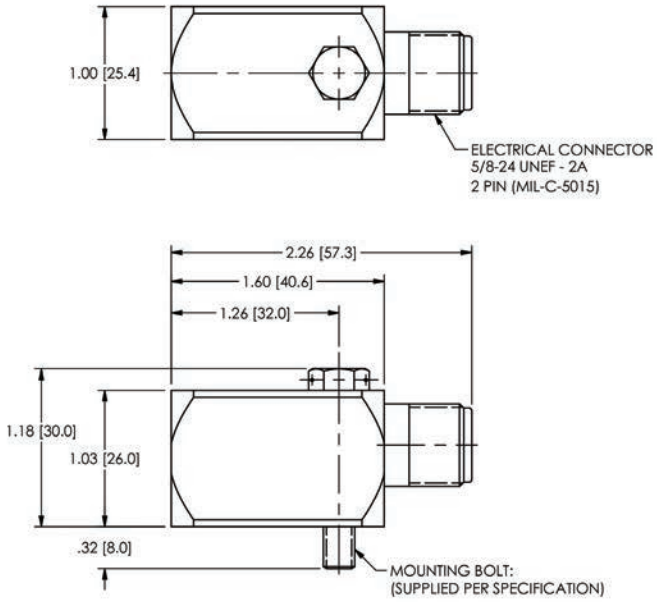

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