

# Accelerometer

## SA6250 High-Frequency Accelerometers



Capable of sensing a wide range of vibration frequencies, this accelerometer is ideal for use on a variety of machines. A built-in amplifier provides a high level, low impedance output, for connection to a Metrix signal conditioner for 4-20 mA output or to an SM6100 vibration output monitor for relay output. It consists of a temperature stabilized piezo-electric sensor and an amplifier packaged together in a stainless steel case, from which the sensing circuit is electrically isolated. A choice of mounting styles is available.

### Specifications

#### Dynamics:

Sensitivity (±5%):	100mV/g
Resolution:	0.002 g
Frequency Response:	1.7Hz-10KHz (±10%)
	0.8 Hz-15 KHz (± 3dB)
Resonant Frequency:	13 KHz
Cross Axis Sensitivity:	<5%
Measurement Range:	±50 g

#### Electrical:

Case Isolation:	>10 <sup>9</sup> ohms
Excitation Current:	2 to 20 mA
Excitation Voltage:	18 to 28 VDC
Full Scale	
Output Voltage:	±5 volts
Output Bias:	8 to 12 volts
Settling Time:	2 seconds max.
Transient Protection:	RFI & ESD

#### Mechanical:

Case Material:	303 SS
Connector Type:	See "How to Select C"
Hermetic Seal:	Welded
Mounting Stud:	1/4-28 UNF or M6 X 1.0 (P/N 3719-007)
Sensing Element:	Ceramic

#### Environmental:

Shock Limit:	5,000 g
Temperature Range:	-54°C to +121°C
Electromagnetic	
Compatibility:	CE Certified
Hazardous Area	
Certification:	See How To Select "A"

SEISMIC PRODUCTS

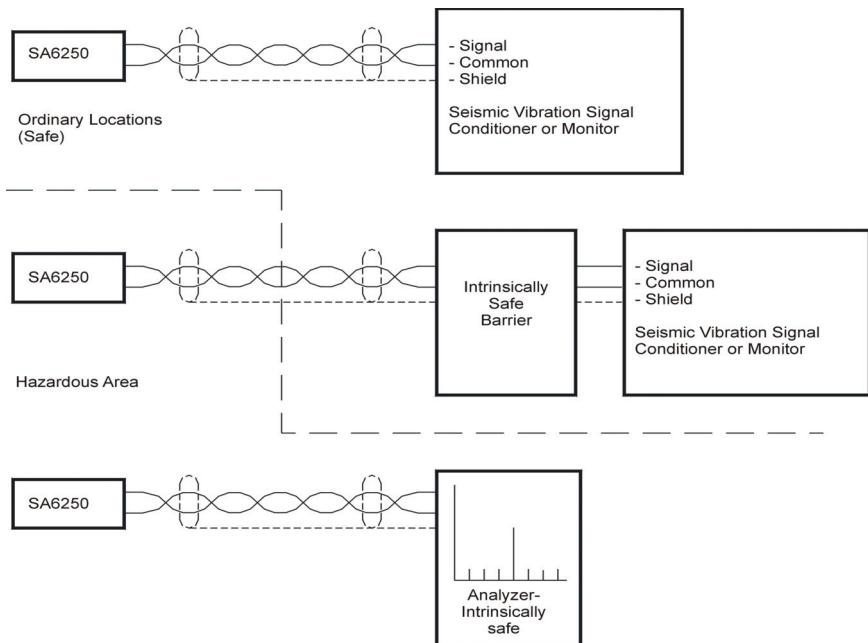
### Features

- Highest Frequency Response
- Hermetic S.S. Case
- Intrinsically Safe Versions Available

### Applications

- Motors
- Gear Boxes
- Paper Machines
- Process Pumps
- Fans
- Rotor Blade Pass Sensing
- Turbocharger Engine Vibration
- Cooling Tower Fans

### Typical Mounting



### How to Select

**SA6250 -**  **A**  **B**  **C**

**A**  **Hazardous Area Rating**

= CSA intrinsically safe\* for Class I, Div. 1, Grps A-D; Temp. Code T4

\* When wired using approved barrier (not included).

**B**  **Mounting Stud**

= 1/4-28 UNF  
 = M6 x 1.0

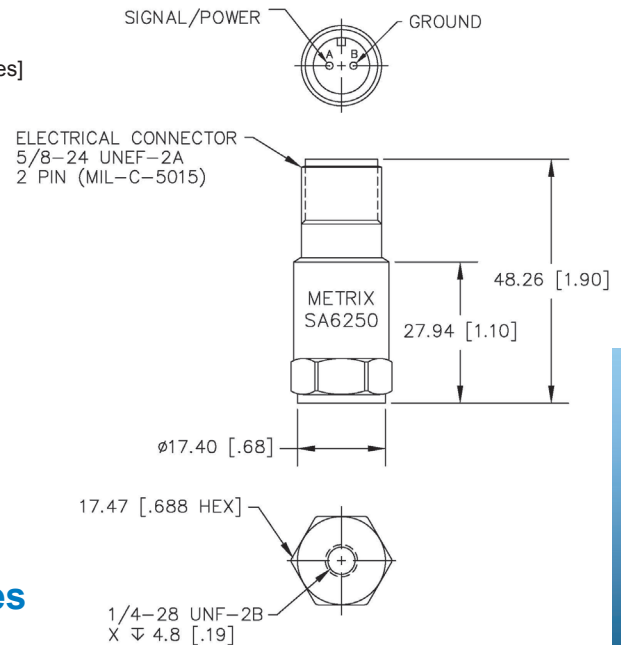
**C**  **Connector Type**

= 2 pin Hermetic Plug

Weight: 91 gm [3.1 oz]

Dimensions in mm [inches]

### Weight & Dimensions



SEISMIC PRODUCTS

### How to Select Mating Connector/Cable Assemblies

**8978 -**

**A**

Accelerometer Connector /  
Cable Type / Termination Code

1	1	1	Two (2) pin socket connector with integral, molded splashproof boot / .025" dia. polyurethane jacketed cable with twisted, shielded pair wires / pigtail termination
2	0	0	Two (2) pin socket connector only with cable strain relief (cable and termination by customer)
2	1	1	Two (2) pin socket connector with cable strain relief / 0.25" diameter polyurethane jacketed cable with twisted, shielded pair wires / pigtail termination

**B**

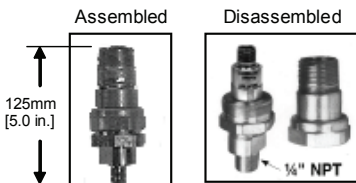
Cable Length (in .10m increments)

0	0	3	0	= 3.0 m (9.8 ft)
0	0	5	0	= 5.0 m (16.3 ft)



NOTE: All 8978 connector/cable assemblies are rated to 121°C (250°F) max.

#### 7295



Weight: 0.7 kg [1.5 lb]

#### 7084



#### 99605-02X



Weight: 0.57 kg [1 lb] Weight: .25 kg [0.5 lb]

PART NO.	NAME	MODELS USED WITH	DESCRIPTION	HOUSING MATERIAL
7295-002	Accelerometer EP Housing	SA6250-X0X	Physical protection and access to 1/4"-28 mount accelerometers. Rain tight & ex-proof for CSA Class 1, Grps A-D, Div.1. 1/4" NPT stud for mounting to machine case. 1" NPT top conduit union.	Zinc Plated Steel
7084-002	Flange Mount Adaptor	7295-002	For surface mounting of 7295 housing. 1/4" NPT center hole. 3 equally spaced 6.6 (.26) dia. mount holes on 38 (1.50) dia. circle.	Stainless Steel
99506-020	Magnetic Mount Adaptor	SA6250-X0X	Strong rare earth magnet provides up to 16 kg [35 lbs] pull force for temporary mounting of 1/4"-28 tapped accelerometers. Housing has 1/4"-28 center hole & includes sensor mounting stud.	Stainless Steel
99506-021	Magnetic Mount Adaptor	SA6250-X1X	Same as 99506-020 except metric version. Housing has M6X1 center hole and comes with matching sensor mounting stud.	Stainless Steel
9061-XXXX	Bulk Cable	8978-200-0000	.250" dia. bulk cable with twisted, shielded pair wires. For customer attachment to mating connector P/N 8978-200-0000. Specify -XXXX in 0.1 m increments (e.g. 9061-0250=25.0 m).	Polyurethane Jacketed
6400	Sensor Switch Box	SA6250-XXX	Switch selectable BNC with up to 12 inputs for connection to a portable data collector/FFT analyzer. NEMA 4X (IP 65) enclosure.	Non-metallic Composite
9338-101	Spot Facing Kit	SA6250-X0X	Spot facing kit consist of a 1" HS air-craft counter bore with 3/16" guide pin, two each, along with 3/16" drill bits, two each, #3 drill bits, two each, 1/4-28 tapered taps and 1/4-28 bottom taps, two each.	