

OVERVIEW

The SA6200A API 670 Accelerometer is capable of sensing a wide range of vibration frequencies, which makes it ideal for use on a variety of machines. It consists of a temperature stabilized piezo-electric sensor and an amplifier packaged together in a 316 stainless steel case, from which the sensing circuit is electrically isolated. A built-in amplifier provides a high level, low impedance output, which is the industry standard. Refer to the accessories table of this manual for a choice of mounting alternatives.

FEATURES AND BENEFITS

- High accuracy and repeatability
- Eliminate wiring polarity errors with Metrix' patented Independent Polarity Terminals (IPT®)*
- Eliminate false indications caused by high frequency noise rectified as low frequency using patented anti-ski slope technology

APPLICATIONS

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

API 670 COMPARISON TABLE

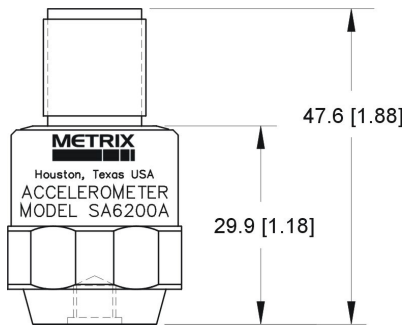
	SA6200A	API 670
Case Material	316 SS	316 SS
Frequency Response (± 3dB)	0.5 Hz- 10 kHz	10 Hz- 10 kHz
Noise Floor	0.003 g rms	0.004 g rms
Mounted Resonance	13kHz	N/A
Hazardous Area Certifications	CSA, ATEX	N/A



SPECIFICATIONS

Dynamics	
Accuracy	2% (repeatability)
Sensitivity (±5%)	100 mV/g (10.2 mV/m/s ²)
Frequency Response	<ul style="list-style-type: none"> • 2 to 5 kHz (± 5%) • 1.5 Hz to 7.5 kHz (±10%) • 0.5 Hz to 10 kHz (±3dB)
Resonant Frequency	13 kHz
Cross Axis Sensitivity	<5%
Measurement Range	50 g
Resolution	0.003 g's RMS
Mechanical	
Case Material	316 Stainless Steel
Connector Type	2-pin hermetic plug See How to Order "C"
Hermetic Seal	Welded
Mounting Stud	1/4-28 UNF, 1/4-20 UNC, or M6 x 1.0 (P/N 3719-007) See How to Order "B"
Sensing Element	Quartz
Weight	91 gm (3.1 oz)
Electrical	
Case Isolation	10 ⁸ W
Excitation Current	2 to 20 mA
Excitation Voltage	18 to 28 VDC, Polarity Indifferent
Full Scale Output Voltage	±5 volts
Output Bias	8 to 12 volts
Settling Time	5 seconds max.
Transient Protection	RFI & ESD
Environmental	
Shock Limit	5,000 g
Temperature Range	-55°C to +120°C (-67°F to +248°F)
Electromagnetic Compatibility	CE Certified
Hazardous Area Cert.	CSA, ATEX & IECEx See How to Order "A"

WEIGHT & DIMENSIONS



Aprox. Weight: 91 gm (3.1 oz)
Units in mm [inches]

Electrical Connector 5/8-24 UNEF-2A 2 PIN
(MIL-C-5015) shown. Note that the connections
are non polarity sensitive (IPT*).

HOW TO ORDER

SA6200A - A B C

A	Hazardous Area Certification	B	Mounting Stud	C	Connector Type
0	Non-Agency Approved	0	1/4-28 UNF		
1	CSA US/CA, Class 1, Div 1, Groups A, B, C, & D, T3 Intrinsically Safe ² when connected per dwg 9352	1	M6 x 1.0		
2	ATEX, Ex ia IIC T3 Ga Intrinsically Safe ² when connected per dwg 9352	2	1/4-20 UNC		
3	CSA US/CA Class 1, Div 2, Groups A, B, C, & D, T3 Non-incendive when connected per dwg 9031	3	NONE		
4	ATEX, Ex nA IIC T3 Gc Non-incendive when connected per dwg 9031	5	1/4-28 UNF & M6 x 1.0		
5	CSA US/CA, Class 1, Div 2, Groups A-D, T3 (non incendive) CSA US/CA, Class 1, Div 1, Groups A-D, T3 (I.S. w/barrier) ATEX/IECEx Ex nA IIC T3 Gc (non incendive) ATEX/IECEx Ex ia IIC T3 Ga (I.S. w/barrier)			1	2-pin Hermetic Plug
6	IECEx, Ex ia IIC T3 Ga Intrinsically Safe ² when connected per dwg 9352				
7	IECEx, Ex nA IIC T3 Gc Non-incendive when connected per dwg 9031				

Ordering Option Example: SA6200A-201: Hazardous area cert ATEX, EEx ia IIC T3 Ga intrinsically safe, 1/4-28 UNF mounting stud and 2 pin hermetic plug.

ACCESSORIES

**8978-111-XXXX, Splash proof Cable Assembly**

Two (2) pin socket connector with integral, molded splash proof boot with 6.4 mm (0.25") diameter polyurethane jacketed cable with twisted shielded pair wires. XXX.X = Cable length in meters.

**9334-111-XXXX-YYYY, Splash proof Cable Assembly with SS armor**

Two (2) pin socket connector with integral, molded splash proof boot with 7.1 mm (0.28") diameter, SST armored jacket with cable, twisted shielded pair wires. XXX.X = Armor length in meters. YYYY = Cable length in meters. Specify lengths in increments of 0.5 m.

**8978-211-XXXX, Cable Assembly**

Two (2) pin socket connector with cable strain relief with 6.4 mm (0.25") diameter polyurethane jacketed cable with twisted shielded pair wires. Note: All 8978 connector/cable assemblies rated to 121°C (250°F) max. XXX.X = Cable length in meters.

**9334-211-XXXX-YYYY, Cable Assembly with SS Armor**

Two (2) pin socket connector with 7.1 mm (0.28") diameter, SST armored jacket with cable, twisted shielded pair wires. XXX.X = Armor length in meters. YYYY = Cable length in meters. Specify lengths in increments of 0.5 m.

**8978-200-0000, Connector Assembly**

Two (2) pin socket connector with cable strain relief, no cable.

**3719-002, Mounting Stud**

1/4-28 UNF to 1/4-28 UNF

3719-007, Mounting Stud

1/4-28 UNF to M6 x 1.0

**7295-002 Accelerometer EP Housing**

Physical protection and access to 1/4-28 UNF 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 housing.

**7084-002 Flange Mount Adaptor**

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 housing.

**9061-XXXX Bulk Cable**

.250" dia. bulk cable with twisted, shielded pair wires. For customer attachment to mating connector P/N 8978-200-0000. Specify XXX.X in 0.1 m increments (e.g. 9061-0250=25.0 m). Polyurethane Jacketed.

**99506-020 Magnetic Mount Adaptor**

1" OD, 35 lb. pull strength adaptor for sensors with 1/4-28 UNF stud. Stainless Steel housing.

**99506-021 Magnetic Mount Adaptor**

Same as 99506-020 except metric version. Housing has M6 x 1.0 center hole and comes with matching sensor mounting stud. Stainless Steel housing.

**9338-101 Spot Facing Kit**

Consists 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.

**NOTES:**

1. IPT (Independent Polarity Terminal) is a registered trademark of Metrix Instrument Co.
2. When wired using approved barrier (not included).