34208A Accelerometer

深圳市亿为测控电子有限公司
Shenzhen Bill-Well Measurement & Control Electronics Co., Ltd.

±250, ±500 g
Wide Bandwidth to 10 kHz
Precision Aligned

Triaxial Analog Accelerometers

The Measurement Specialties 34208A triaxial accelerometer offers precision measurements over the entire -40 to +85°C temperature range. Each axis is precisely aligned within 0.75 degree of the theoretical ideal to minimize errors due to misalignment or transverse sensitivity.

A tough, compact housing holds potted electronics and the small size and built-in power regulation allow the 34208A to fit where other accelerometers can't. Choose from range options of ±250 or ±500 g, and bandwidth options of 1, 2.5, 5, or 10 kHz to best suit your application.

The voltage output of the 34208A is directly proportional to the acceleration along the axis. Each DC-coupled output is fully scaled, referenced, and temperature compensated. Users are supplied with a calibration certificate listing sensitivity and offset for each sensor.

The accelerometers have a nominal full scale output swing of ±2.25 volts. The zero g output level is nominally +2.5 volts. Custom versions of the 34208A can be provided.

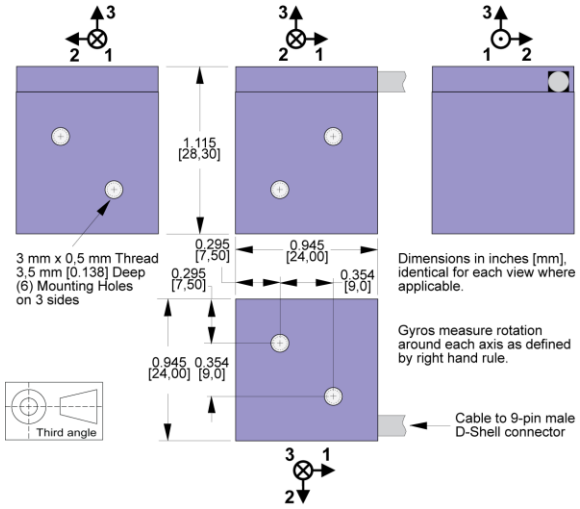
FEATURES

- Bandwidth to 10 kHz
- Precision Aligned
- High Accuracy and Linearity over Wide Temperature Range
- Rugged for Harsh Environments
- NIST Traceable Calibration
- Built-in Power Supply Regulation
- Easy Installation
- Three Year Warranty

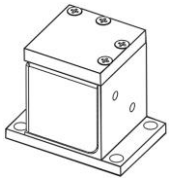
APPLICATIONS

- Shock/Safety Testing
- Construction Equipment
- Research & Development
- Test & Measurement
- Military/Aerospace

dimensions

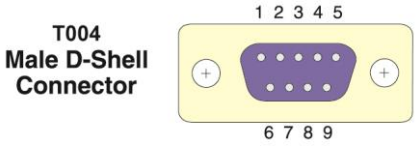


Two 3 mm x 0.5 mm threaded holes are provided on each of three orthogonal faces for mounting



Shown with mounting adapter 34170B (sold separately)

connections



Pin	1	2	3	4	5	6	7	8	9
Signal	A1+	Signal-	A2+	+5 V Out	A3+	T+	Self Test L	+Vs	Gnd
Wire	Brown	Red	Orange	Yellow	Green	Blue	Violet	Grey	White

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Performance Specifications

$T_A = T_{min}$ to T_{max} ; $8.5 \le V_S \le 36$ V; Acceleration = 0 g unless otherwise noted; within one year of calibration. Improved specifications available upon request.

PARAMETERS	Min	Typical	Max	Units	Conditions/Notes
Range: Measurement Full Scale					On each axis; specify with Option Rnnn
Option R250		±250		g	
Option R500		±500		g	
Sensitivity at 25ºC					Precise values on cal certificate
Option R250		±6.6		mV/g	
Option R500		±3.3		mV/g	
Drift Tmin to Tmax		±1 (TBD)		%	Percent of sensitivity at 25ºC
Zero g Bias Level					
At 25 ºC		2.5		V	Precise values on cal certificate
Drift to Tmin or Tmax		±1000		mg	At 1.25ºC/min. temperature rate of change
Alignment					Precise values on cal certificate
Deviation from Ideal Axes			±0.75	degrees	Can be compensated if required
Transverse Sensitivity		±0.25		%	Inherent sensor error, excluding misalignment
Nonlinearity		0.2	2	% FSR	Best fit straight line
Frequency Response	0		10	kHz	Upper cutoff per Option Bnnn, -3 dB pt ±10%
Noise Density		2.8		mg/√Hz	10 Hz to 400 Hz
Self-Test Input Impedance	10			kΩ	Pullup. Logic “1” ≥ 3.5 V, Logic “0” ≤ 1.5 V
Temperature Sensor					Accuracy ±1 ºC
Sensitivity		6.45		mV/ºC	
0ºC Bias Level		509		mV	
Outputs					
Output Voltage Swing	0.25		4.75	V	I_{OUT} = ±0.5 mA
Capacitive Drive Capability	1000			pF	
Power Supply (V_S)					
Input Voltage Limits	-20		+38	V	-20 V continuous
Input Voltage Operating	+8.5		+36	V	
Input Current		15	20	mA	No load; quiescent
Rejection Ratio		>120		dB	DC
Temperature Range (T_A)	-40		+85	ºC	
Mass		35		grams	Precise values on cal certificate
Shock Survival	-4000		+4000	g	Any axis for 0.5 ms, powered or unpowered

*Scale linearly with Range Option Rnnn

ordering info