

# 34206A Accelerometer

±100 g  
Superior Zero g Bias Stability  
Low Noise – Wide Bandwidth



## Triaxial Analog Accelerometers

The Measurement Specialties 34206A triaxial accelerometer offers precision measurements over the entire -40 to +85°C temperature range with superior bias stability and measurement resolution.

A tough, compact housing holds potted electronics and the small size and built-in power regulation allow the 34206A to fit where other accelerometers can't. Choose from various bandwidth options to best suit your application.

The voltage output of the 34206A 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 34206A can be provided.

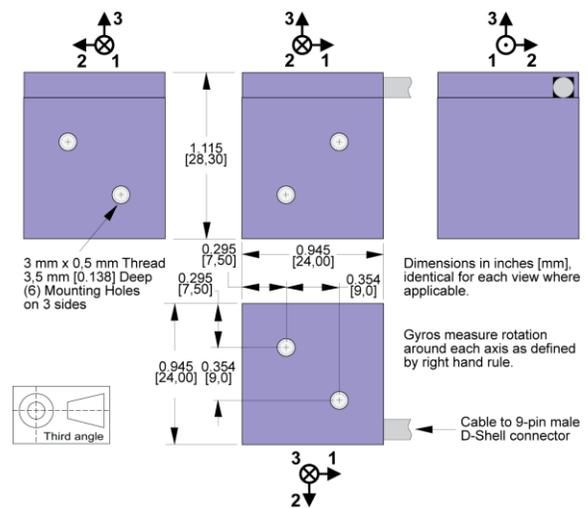
## FEATURES

- Superior Zero g Bias Stability
- Low Noise
- Bandwidth to 2.5 kHz
- 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

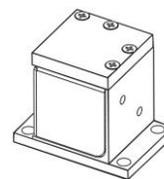
## APPLICATIONS

- Vehicle Dynamics
- Construction Equipment
- Research & Development
- Test & Measurement
- Military/Aerospace

## dimensions



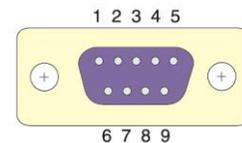
Two 3 mm x 0.5 mm threaded holes are provided on each of three orthogonal faces for mounting



Shown with mounting adapter 34170B (sold separately)

## connections

T004  
Male D-Shell  
Connector



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

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# 34206A Accelerometer

## Performance Specifications

$T_A = T_{min}$  to  $T_{max}$ ;  $8 \leq V_S \leq 18$  V; Acceleration = 0 g unless otherwise noted; within one year of calibration. Improved specifications available upon request.

PARAMETERS	Min	Typical	Max	Units	Conditions/Notes
<b>Range:</b> Measurement Full Scale			±100	g	On each axis
<b>Sensitivity</b>					
At 25°C		20		mV/g	Nom ±100 g. Precise values on cal certificate
Drift $T_{min}$ to $T_{max}$			±2.0	%	Percent of sensitivity at 25°C
<b>Zero g Bias Level</b>					
At 25°C		2.5		V	Precise values on cal certificate
Drift to $T_{min}$ or $T_{max}$		±80	±200	mg	At 1.25°C/min. temperature rate of change
<b>Alignment</b>					
Deviation from Ideal Axes		±0.35	±3.0	degrees	Precise values on cal certificate Can be compensated if required
<b>Nonlinearity</b>					
		±0.25	±1	% FSR	Best fit straight line
<b>Frequency Response</b>					
	0		2500	Hz	Upper cutoff per Option Bnnn, -3 dB pt ±10%
<b>Noise Density</b>					
		100		µg/√Hz	$T_A = 25^\circ\text{C}$
<b>Temperature Sensor</b>					
Sensitivity		6.45		mV/°C	Accuracy ±1 °C
0°C Bias Level		509		mV	
<b>Outputs</b>					
Output Voltage Swing	0.25		4.75	V	$I_{OUT} = \pm 0.5$ mA
Capacitive Drive Capability	500			pF	
<b>Power Supply (<math>V_S</math>)</b>					
Input Voltage Operating	+8		+18	V	Will withstand -20 V continuous or 36 V for <1 sec.
Input Current		33	50	mA	No load; quiescent
Rejection Ratio		>120		dB	DC
<b>Temperature Range (<math>T_A</math>)</b>					
	-40		+85	°C	
<b>Mass</b>					
		35		grams	Precise values on cal certificate
<b>Shock Survival</b>					
	-5000		+5000	g	Any axis for 0.1 ms, powered or unpowered

## ordering info

34206A - R100 - B2k5 - T004

Instrument  
34206A

Range  
R100 : ±100 g

Bandwidth  
B2k5 : 0 to 2500 Hz  
B2k1 : 0 to 2100 Hz  
B1k4 : 0 to 1400 Hz  
B944 : 0 to 944 Hz  
B380 : 0 to 380 Hz  
B208 : 0 to 208 Hz

Termination

T004 : 4 ft. cable with DB9M  
T000 : PCB Mount (Not shown, Call SI)  
Tnnn : Custom length, nnn ft. (Call SI)

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