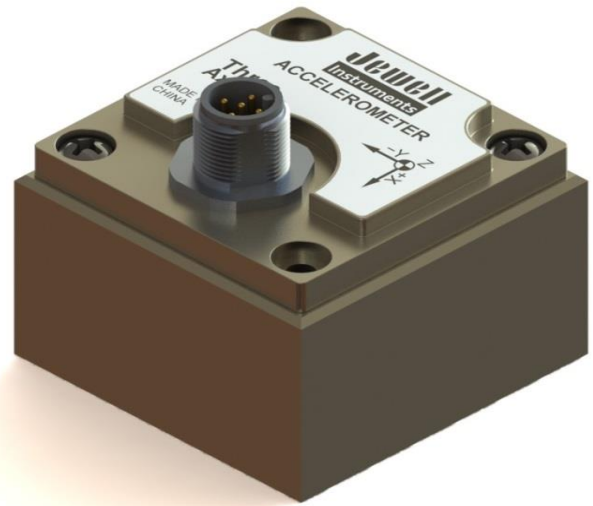


AMA Series - MEMS Analog Accelerometer

Jewell Instruments AMA Series Accelerometers are an excellent choice for cost to performance trade off. The AMA is based on silicon micro-machined MEMS Capacitive Accelerometer technology and designed for low power and high stability.



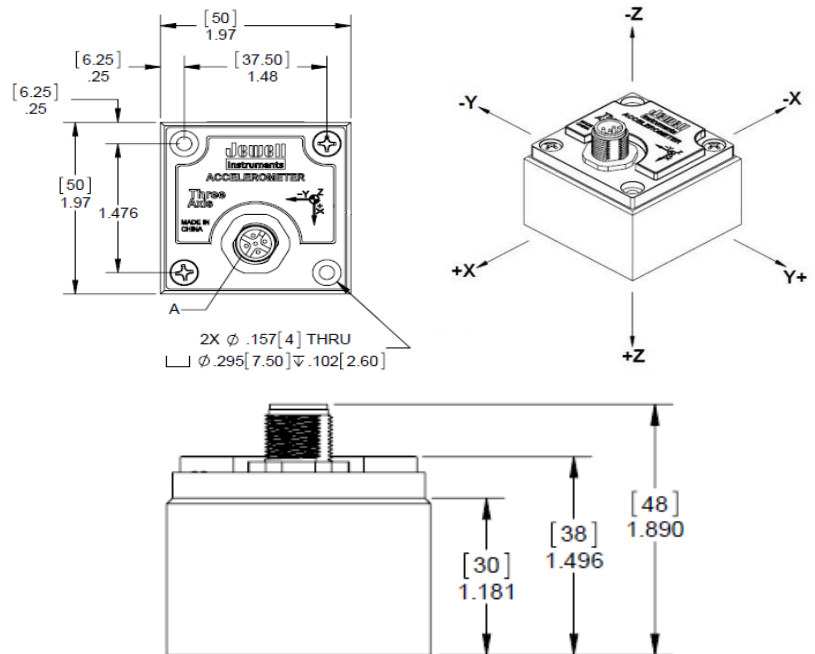
Features

- Single, Dual and Triaxial Configuration
- Excellent long term stability
- Ruggedized for harsh environment operation
- High Sensitivity
- 2m cable whip included

Applications

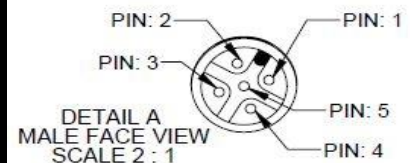
- Tower Cranes
- Robotics
- Low Frequency Vibration Measurement
- Automatic Control Systems
- Vehicle Testing

Outline Diagram



Pin Out

Pin	Function
1	+VDC 9V-36V
2	X Axis Output
3	Y Axis Output
4	Signal/Power Ground
5	Z Axis Output



Performance Specifications

STATIC/DYNAMIC

Measurement Range, (g) ¹	±2	±10
Output Options	0 - 5 Vdc or 4 - 20 mA	
Scale Factor Tolerance (mg)	10	50
Scale Factor Temp Coefficient (ppm/°C, typ.)	100	100
Bias (g, Max.)	0.02	0.05
Bias Temp Coefficient (mg/°C, typ.)	0.65	0.5
Axis Alignment (°)	≤1	≤1
Resolution and Threshold (mg, Max.)	0.1	0.6
Nonlinearity (% of Full Scale, Max.)	0.3	0.5
Nonrepeatability (mg, Max.)	2	10
Bandwidth (Hz, Max.)	400	400
Scale Factor Long Term Stability (1 yr. ppm, Max.)	300	300
Bias Long Term Stability (1 yr. mG, Max.)	1.5	7.5
Noise Spectral Density (μVolts/√Hz)	18	18

ELECTRICAL AND ENVIRONMENTAL

Input Voltage (Vdc)	9 to 36 Vdc
Operating Current	<3mA at 12Vdc
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C
Shock	100g (11msec ½ sine)
Vibration (grms random 20 to 2,000 Hz)	20
Weight (grams)	100
Seal	IP67

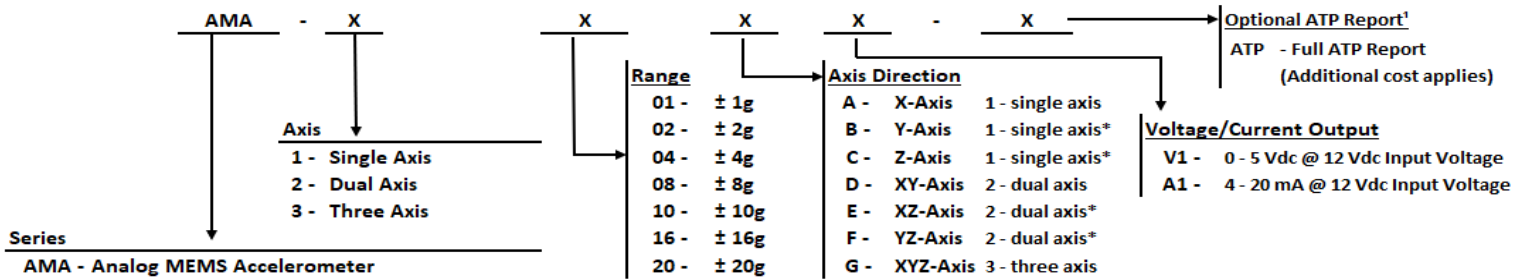
Notes: 1 - Intermediate ranges available, please see model number structure below. Custom ranges available on request.

2 - Output voltage 0-5 Vdc (- Full Scale to + Full Scale, Zero g = 2.5Vdc)

*Specifications subject to change without notice due to continued product development

AMA Series - MEMS Analog Accelerometer

HOW TO ORDER:



Example:

AMA - 2 - 02 - D - V1 - ATP

AMA Series, dual axis, ±2° range, XY-axis, 0 - 5 Vdc Output, Full ATP Report

1 - Note: "ATP" must be added to the end of the part number for a full ATP report. An additional cost will apply.

ATP Report Includes: Scale Factor, Axis Misalignment, Bias, Linearity, Input Current.

*Part number not included on datasheet, but available on request

PART NUMBERS:

	Single-axis		Dual-axis		Triaxial	
	Model #	Part #	Model #	Part #	Model #	Part #
Voltage output (0-5Vdc)	AMA-1-01-A-V1	02550313-1111	AMA-2-01-D-V1	02550313-2141	AMA-3-01-G-V1	02550313-3171
	AMA-1-02-A-V1	02550313-1211	AMA-2-02-D-V1	02550313-2241	AMA-3-02-G-V1	02550313-3271
	AMA-1-04-A-V1	02550313-1311	AMA-2-04-D-V1	02550313-2341	AMA-3-04-G-V1	02550313-3371
	AMA-1-08-A-V1	02550313-1411	AMA-2-08-D-V1	02550313-2441	AMA-3-08-G-V1	02550313-3471
	AMA-1-10-A-V1	02550313-1511	AMA-2-10-D-V1	02550313-2541	AMA-3-10-G-V1	02550313-3571
	AMA-1-16-A-V1	02550313-1611	AMA-2-16-D-V1	02550313-2641	AMA-3-16-G-V1	02550313-3671
	AMA-1-20-A-V1	02550313-1711	AMA-2-20-D-V1	02550313-2741	AMA-3-20-G-V1	02550313-3771
Current output (4-20mA)	AMA-1-01-A-A1	02550313-1112	AMA-2-01-D-A1	02550313-2142	AMA-3-01-G-A1	02550313-3172
	AMA-1-02-A-A1	02550313-1212	AMA-2-02-D-A1	02550313-2242	AMA-3-02-G-A1	02550313-3272
	AMA-1-04-A-A1	02550313-1312	AMA-2-04-D-A1	02550313-2342	AMA-3-04-G-A1	02550313-3372
	AMA-1-08-A-A1	02550313-1412	AMA-2-08-D-A1	02550313-2442	AMA-3-08-G-A1	02550313-3472
	AMA-1-10-A-A1	02550313-1512	AMA-2-10-D-A1	02550313-2542	AMA-3-10-G-A1	02550313-3572
	AMA-1-16-A-A1	02550313-1612	AMA-2-16-D-A1	02550313-2642	AMA-3-16-G-A1	02550313-3672
	AMA-1-20-A-A1	02550313-1712	AMA-2-20-D-A1	02550313-2742	AMA-3-20-G-A1	02550313-3772

NOTE: If ATP report is required, please add "-ATP" to model & part numbers. Additional charges will apply

