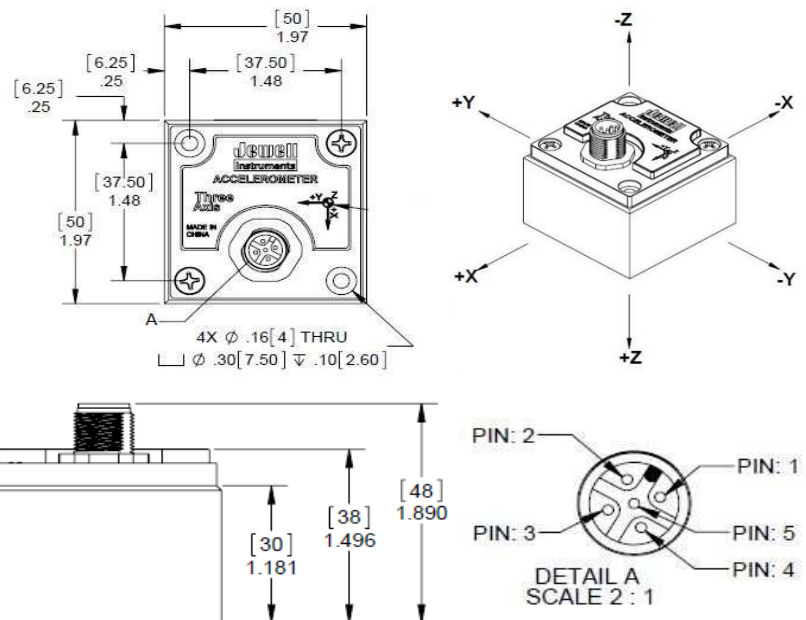


# DMA Series - Digital MEMS Accelerometers

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



## Outline Diagram



## 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

## Pin Out

Pin	Function	
	RS232	RS485/UART TTL
1	+VDC	+VDC
2	RXD	D+
3	TXD	D-
4	Ground	Ground
5	N/A	N/A

## Performance Specifications

### STATIC/DYNAMIC

Measurement Range, (g) <sup>1</sup>	±2	±10	±40
Scale Factor Tolerance (mg)	2	5	10
Scale Factor Temp Coefficient (ppm/°C, typ.)	100	100	100
Zero (g, Max.)	0.01	0.05	0.15
Zero Temp Coefficient (mg/°C, typ.)	0.1	0.5	1.5
Axis Misalignment (°)	≤1	≤1	≤1
Resolution and Threshold (mg, Max.)	0.1	0.6	2.8
Nonlinearity (% of Full Scale, Max.)	0.2	0.5	0.6
Nonrepeatability (mg, Max.)	2	10	20
Bandwidth (Hz, Max.)	400	400	400
Scale Factor Long Term Stability (1 yr. ppm, Max.)	300	300	300
Bias Long Term Stability (1 yr. mG, Max.)	1.5	7.5	22
Noise Spectral Density (μVolts/√Hz)	18	18	18

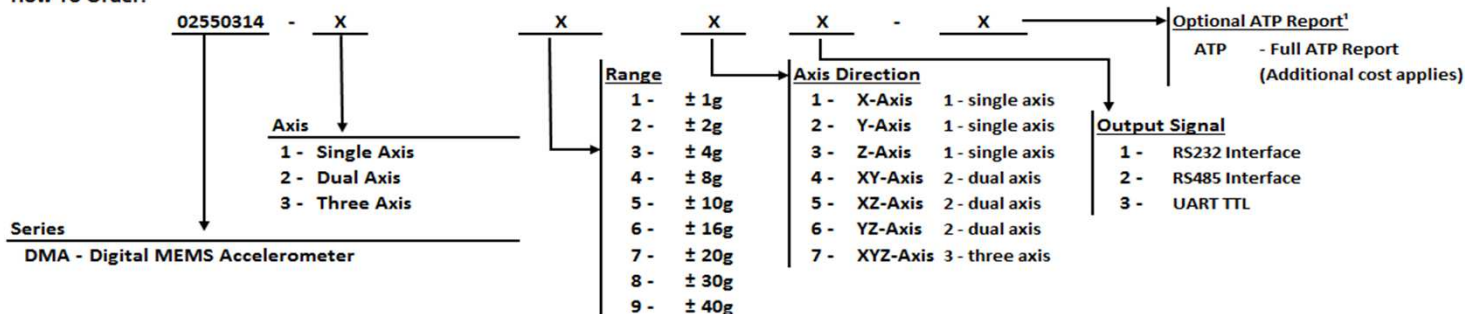
### ELECTRICAL AND ENVIRONMENTAL

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.

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

#### How To Order:



Example:

02550314-2242-ATP

DMA Series, dual axis, ±2° range, XY-axis, RS485 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.

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