

AKA-300-LC Series

4-20mA Output Low-Cost Triaxial MEMS Analog Accelerometer

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



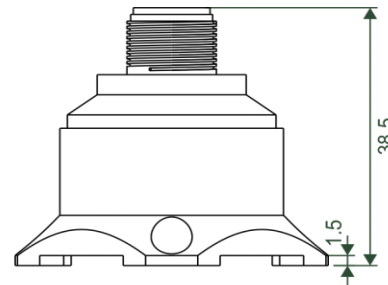
Features

- Triaxial Configuration
- Measuring ranges of $\pm 2G$ thru $\pm 40G$
- 100g shock protection
- Up to 725 Hz bandwidth
- Ruggedized for harsh environment operation
- IP67 rating
- High Sensitivity with 1mg resolution
- 4-20mA output
- 9-36Vdc input voltage
- 2 meter cable whip (Included)
- M12 connector
- RoHS compliant

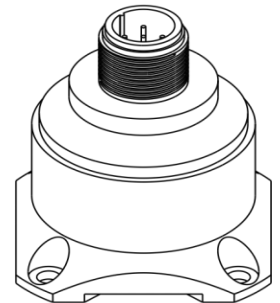
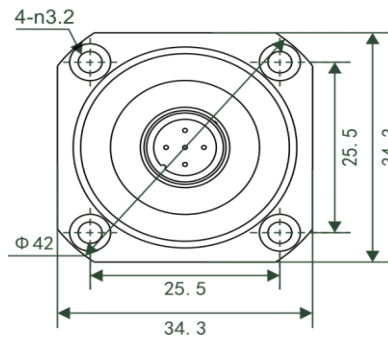
Applications

- Tower Cranes
- Wind Power Monitoring
- Robotics
- Traffic System Analysis
- Low Frequency Vibration Measurement
- Medical Equipment testing
- Automatic Control Systems
- Large Machinery Monitoring
- Vehicle Testing

Outline Diagram



Size: 34.3*34.3*38.5mm



Pin Out



Performance Specifications

STATIC/DYNAMIC

Measurement Range, (g) ¹	±2	±4	±8	±10	±20	±40
Output Signal (mA) ²	4-20					
Calibration Deviation (mg)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Measuring Axis	X, Y, & Z (3-axis)					
Bias Temp Coefficient (%/°C)	0.01	0.01	0.01	0.05	0.05	0.05
0° Output Error (mA)	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003
Cross Axis Sensitivity (%)	1.0	1.0	1.0	2.0	2.0	2.0
Resolution @ 1 Hz (mg, max)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Nonlinearity (% of Full Scale, Max.)	<0.5	<0.5	<0.8	<1.0	<1.0	<1.0
Sensitivity (±10%, mV/g)	1250.0	625.0	312.5	250.0	125.0	62.5
Bandwidth (Hz, 3db)	725	725	725	725	725	725
Noise Spectral Density (µg/√Hz)	21.0	21.0	21.0	86.6	86.6	86.6

ELECTRICAL AND ENVIRONMENTAL

Input Voltage (Vdc)	9 to 36 Vdc
Operating Current	<60mA at 12Vdc
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C
Shock Resistance	100g (11msec ½ sine)
Vibration (grms random 20 to 2,000 Hz)	20

MECHANICAL

Enclosure Dimensions	34.3mm (L) x 34.3mm (W) x 38.5mm (H)
Weight (grams)	73.5
Seal	IP67
Connector	Standard M12

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

2 - Output voltage 0.5-4.5 Vdc (- Full Scale to + Full Scale, Zero g = 2.5Vdc)

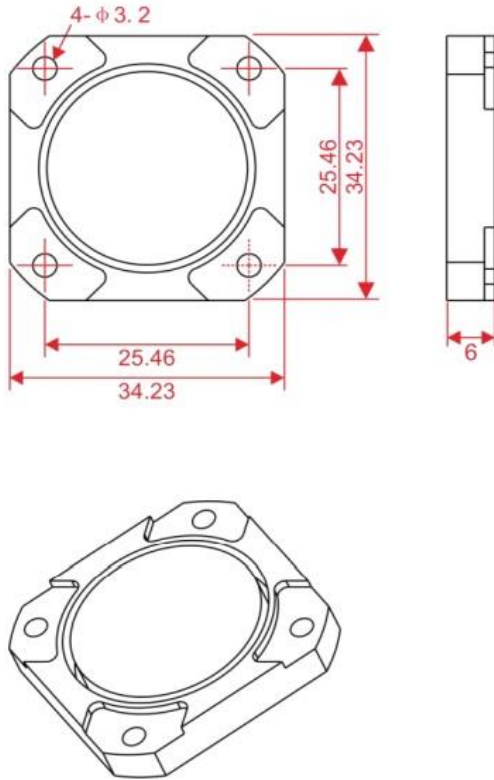
*Specifications subject to change without notice due to continued product development

AKA-300-LC Series

4-20mA Output Low-Cost Triaxial MEMS Analog Accelerometer

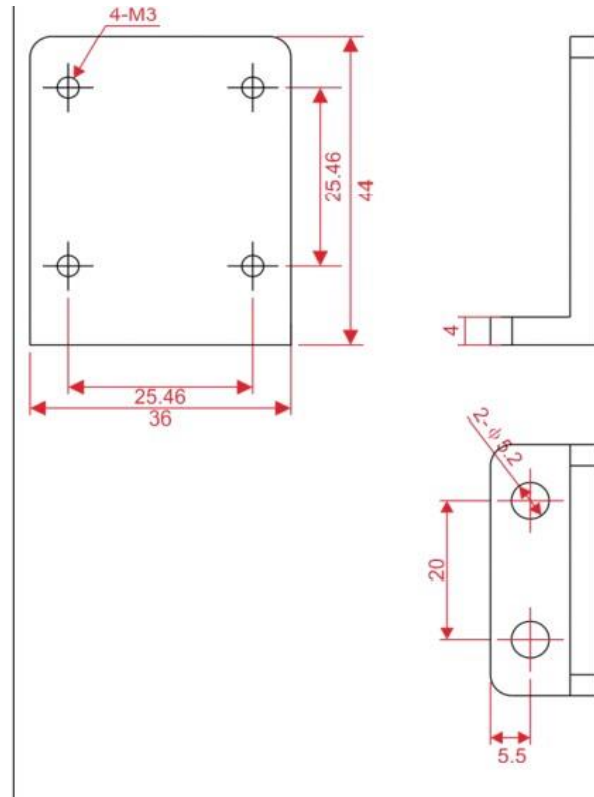
AKA and DKA Series Accessories

Magnetic Base



PN: TBD

L-Style Mounting Bracket



PN: TBD

HOW TO ORDER:

AKA	-	300	-	LC	-	XX
↓		↓		↓		↓
Analog Series		Tri-axis (X,Y, Z)		L: 4-20mA Output		Range
				↓		02 - ±2g
				C: M12 Connector		04 - ±4g
						08 - ±8g
						10 - ±10g
						20 - ±20g
						40 - ±40g

Model: **AKA-300-LC-10**

Description: AKA series, triaxial configuration, 4-20mA output, ±10g range, and M12 Connector with standard mounting and 2M long mating connector/cable.