



## AKA-300-LC SERIES

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

The 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.

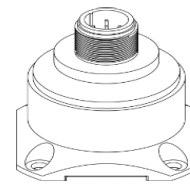
### FEATURES

- 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

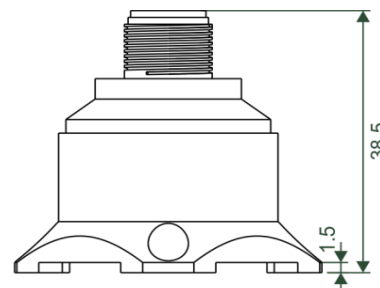
### APPLICATIONS

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

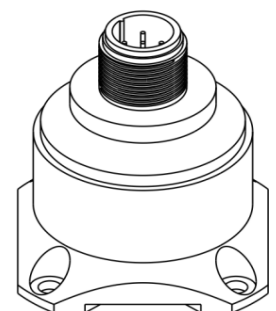
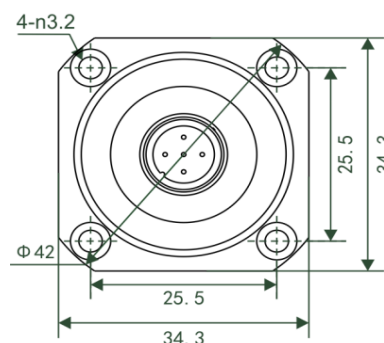
### PIN OUT



### OUTLINE DIAGRAM



Size: 34.3\*34.3\*38.5mm





**PERFORMANCE SPECIFICATIONS**

**STATIC/DYNAMIC**

| Measurement Range, (g) <sup>1</sup>  | ±2                 | ±4     | ±8     | ±10    | ±20    | ±40    |
|--------------------------------------|--------------------|--------|--------|--------|--------|--------|
| Output Signal (mA) <sup>2</sup>      | 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**

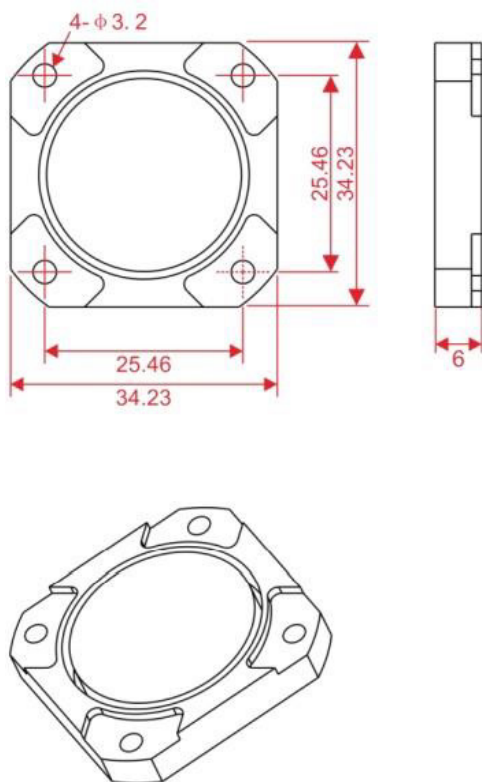
|                      |                                      |
|----------------------|--------------------------------------|
| Enclosure Dimensions | 34.3mm (L) x 34.3mm (W) x 38.5mm (H) |
| Weight (grams)       | 73.5                                 |
| Seal                 | IP67                                 |
| 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



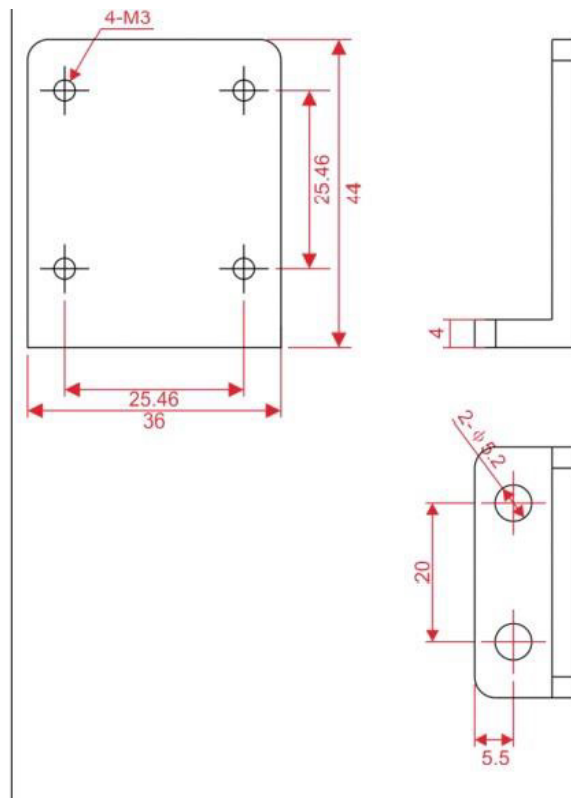
■ AKA AND DKA SERIES ACCESSORIES

**Magnetic Base**



PN: TBD

**L-Style Mounting Bracket**



PN: TBD

■ ORDERING CODE

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

**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.