

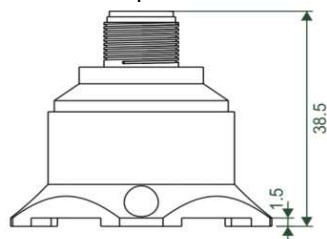
AKA-300

Triaxial MEMS Analog Inclinometer

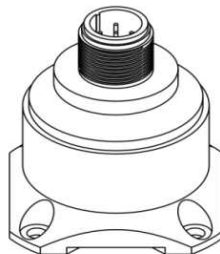
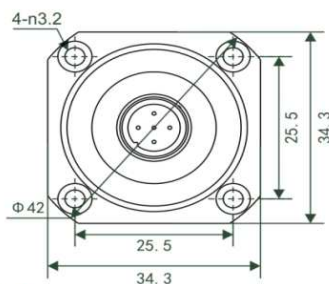
Jewell Instruments AKA Series Accelerometers are an excellent choice for cost to performance trade off. The AKA is based on silicon micro-machined MEMS Capacitive Accelerometer technology and designed for low power and high stability.

FEATURES:

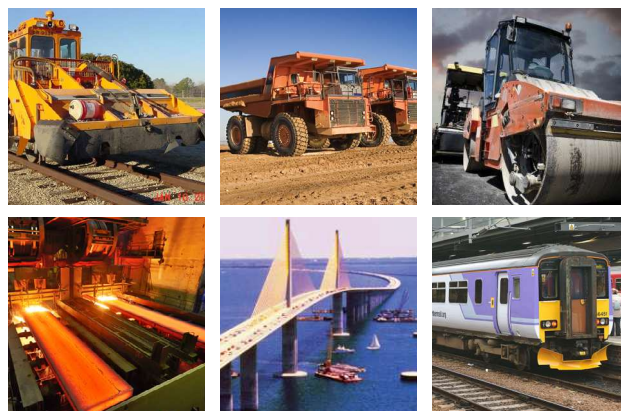
- Triaxial Configuration
- Measuring ranges of $\pm 2G$ thru $\pm 40G$
- 100g shock protection
- Up to 725 Hz bandwidth
- Ruggedized for harsh environment operation
- IP67 rating
- High Sensitivity with 1mg resolution
- 0-5V output/4-20mA outputs available
- 9-36Vdc input voltage
- 2 meter cable whip (Included)
- M12 connector
- RoHS compliant



Size: 34.3*34.3*38.5mm



Dimensions: in [mm]



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



AKA-300-SC: 0-5VDC OUTPUT

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PERFORMANCE SPECIFICATIONS

STATIC/DYNAMIC

INPUT RANGE (g)	±2	±4	±8	±10	±20	±40
FULL RANGE OUTPUT (VDC) ¹	0-5					
NONLINEARITY (% FRO) ² max	<0.5	<0.5	<0.8	<1.0	<1.0	<1.0
CALIBRATION DEVIATION (mg)	<1.0					
BIAS TEMP COEFFICIENT (%/°C max)	0.01	0.01	0.01	0.05	0.05	0.05
BANDWIDTH (Hz, 3db)	725					
CROSS AXIS SENSITIVITY, (%)	1.0					
0° OUTPUT Error (mV)	<0.01	<0.01	<0.01	<0.08	<0.08	<0.08
NOISE SPECTRAL DENSITY (µg/√Hz)	21.0	21.0	21.0	86.6	86.6	86.6
RESOLUTION & THRESHOLD (mg) max	<1.0					

NOTES:

1. Full Range is defined "from negative full input angle to positive full input angle."
2. Nonlinearity is specified as deviation of output referenced to theoretical sine function value, independent of misalignment.

*Specifications subject to change without notice on account of continued product development

PIN OUTS

A	VCC 9-36V
B	X-AXIS VOLTAGE SIGNAL
C	Y-AXIS VOLTAGE SIGNAL
D	GND
E	Z-AXIS VOLTAGE SIGNAL



PRODUCT SPECIFICATIONS

ELECTRICAL

NUMBER OF AXES	3
INPUT VOLTAGE RANGE (VDC)	±9 to ±36
INPUT CURRENT (mA, max)	<60mA at 12Vdc

ENCLOSURE

WEIGHT	73.5g
PROTECTION CLASS (per IEC 529)	IP67
CONNECTOR	Standard M12

ENVIRONMENTAL

OPERATING TEMP. RANGE	-45° to +85°C
STORAGE TEMP. RANGE	-55° to +100°C
VIBRATION	20 grms
SHOCK	100g, 11msec ½ sine

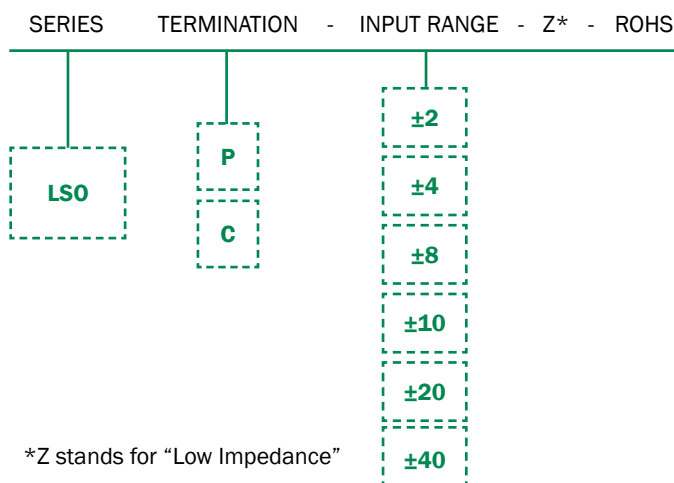
NOTES:

3. Jewell Instruments recommendations
4. Manufacture is Amphenol or equivalent

ORDERING INFORMATION

HOW TO ORDER

Model Numbers are comprised of the series, the connector option, and the input range.



*Z stands for "Low Impedance"

	MODEL #	PART #
±2	AKA-300-SC-02	02550422-101
±4	AKA-300-SC-04	02550422-102
±8	AKA-300-SC-08	02550422-103
±10	AKA-300-SC-10	02550422-104
±20	AKA-300-SC-20	02550422-105
±40	AKA-300-SC-40	02550422-106



AKA-300-LC: 0-5VDC OUTPUT

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PERFORMANCE SPECIFICATIONS

STATIC/DYNAMIC

INPUT RANGE (g)	±2	±4	±8	±10	±20	±40
FULL RANGE OUTPUT (VDC) ¹	0-5					
NONLINEARITY (% FRO) ² max	<0.5	<0.5	<0.8	<1.0	<1.0	<1.0
CALIBRATION DEVIATION (mg)	<1.0					
BIAS TEMP COEFFICIENT (%/°C max)	0.01	0.01	0.01	0.05	0.05	0.05
BANDWIDTH (Hz, 3db)	725					
CROSS AXIS SENSITIVITY, (%)	1.0					
0° OUTPUT Error (mV)	<0.01	<0.01	<0.01	<0.08	<0.08	<0.08
NOISE SPECTRAL DENSITY (µg/√Hz)	21.0	21.0	21.0	86.6	86.6	86.6
RESOLUTION & THRESHOLD (mg) max	<1.0					

NOTES:

1. Full Range is defined "from negative full input angle to positive full input angle."
2. Nonlinearity is specified as deviation of output referenced to theoretical sine function value, independent of misalignment.

*Specifications subject to change without notice on account of continued product development

PIN OUTS

A	VCC 9-36V
B	X-AXIS VOLTAGE SIGNAL
C	Y-AXIS VOLTAGE SIGNAL
D	GND
E	Z-AXIS VOLTAGE SIGNAL



PRODUCT SPECIFICATIONS

ELECTRICAL

NUMBER OF AXES	3
INPUT VOLTAGE RANGE (VDC)	±9 to ±36
INPUT CURRENT (mA, max)	<60mA at 12Vdc

ENCLOSURE

WEIGHT	73.5g
PROTECTION CLASS (per IEC 529)	IP67
CONNECTOR	Standard M12

ENVIRONMENTAL

OPERATING TEMP. RANGE	-45° to +85°C
STORAGE TEMP. RANGE	-55° to +100°C
VIBRATION	20 grms
SHOCK	100g, 11msec ½ sine

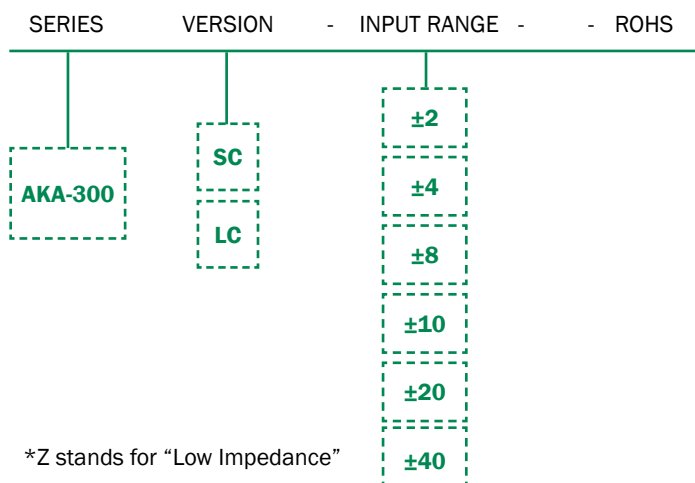
NOTES:

- Jewell Instruments recommendations
- Manufacture is Amphenol or equivalent

ORDERING INFORMATION

HOW TO ORDER

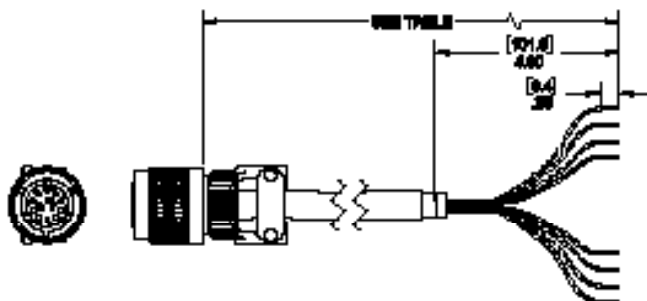
Model Numbers are comprised of the series, the connector option, and the input range.



	MODEL #	PART #
±2	AKA-300-LC-02	02550422-201
±4	AKA-300-SC-04	02550422-202
±8	AKA-300-SC-08	02550422-203
±10	AKA-300-SC-10	02550422-204
±20	AKA-300-SC-20	02550422-205
±40	AKA-300-SC-40	02550422-206

ACCESSORIES

CONNECTOR CABLE



PART #	MODEL #	LENGTH m (ft)
62101011-001	6-Pin Mating Connector	-
879605-007	DSI-CBL-02M-1	2 (6.56)
879605-008	DSI-CBL-03M-1	3 (9.84)
879605-020	DSI-CBL-05M-1	5 (16.4)
Contact manufacturer for custom lengths		

AKA-300 SERIES ORDERING INFORMATION

	VERS	MODEL	PART
±2	SC	AKA-300-SC-02	02550422-101
	LC	AKA-300-LC-02	02550422-201
±4	SC	AKA-300-SC-04	02550422-102
	LC	AKA-300-SC-04	02550422-202
±8	SC	AKA-300-SC-08	02550422-103
	LC	AKA-300-SC-08	02550422-203
±10	SC	AKA-300-SC-10	02550422-104
	LC	AKA-300-SC-10	02550422-205
±20	SC	AKA-300-SC-20	02550422-105
	LC	AKA-300-SC-20	02550422-205
±40	SC	AKA-300-SC-40	02550422-106
	LC	AKA-300-SC-40	02550422-206

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