

AML Series - Low Cost Analog MEMS Inclinometer

Making Sense out of Motion...

The Jewell Instruments model AML is a low cost analog MEMS inclinometer for industrial applications. Standard units are available with 0-5V, 0.5-4.5V and 4-20mA output options. All AML series inclinometers are rated IP67 waterproof up to 1m. Custom ranges and output types are also available on request.



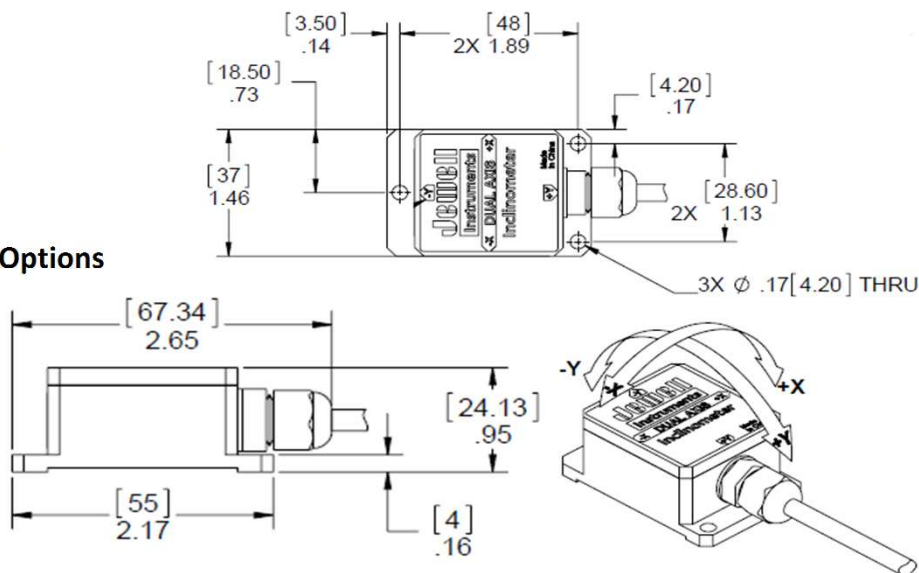
Outline Diagram

Features & Benefits:

- Single and Dual-Axis Available
- Resolution: 0.05°
- Zero Temperature Coefficient: $\pm 0.02^\circ/\text{C}$
- High Shock & Vibration Tolerance
- -40° to $+85^\circ\text{C}$ Temperature Range
- Analog 0-5V, 0.5-4.5V & 4-20mA Output Options
- 1m cable whip included

Applications:

- Solar Tracking & Panel Positioning
- Vehicle Wheel Alignment
- Industrial Automation & Control
- Radar/Antenna Mast Alignment
- Platform Leveling
- Navigation Pitch/Roll Measurement



**Dimensions in Inches [mm]*

Wiring Code

Wire	Function
Red	+VDC 9V~36V
Yellow	X-Axis Out
Green	Y-Axis Out
Black	Ground

Rev I

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Performance Specifications

STATIC/DYNAMIC

* Angular Range, °	±10°	±30°	±60°	±90°
Resolution, °	0.05	0.05	0.05	0.05
Hysteresis, °	0.1	0.2	0.2	0.2
Zero Offset Tolerance (°)	0.56	0.56	0.56	0.56
Zero Temperature Coefficient, °/°C	±0.02	±0.02	±0.02	±0.02
Scale Factor Tolerance (%)	0.7	1.4	2.8	3
Scale Factor Temperature Coefficient, ppm/°C	≤350	≤350	≤350	≤350
Warm Up, s	0.5	0.5	0.5	0.5
Time Constant, s	0.05	0.05	0.05	0.05

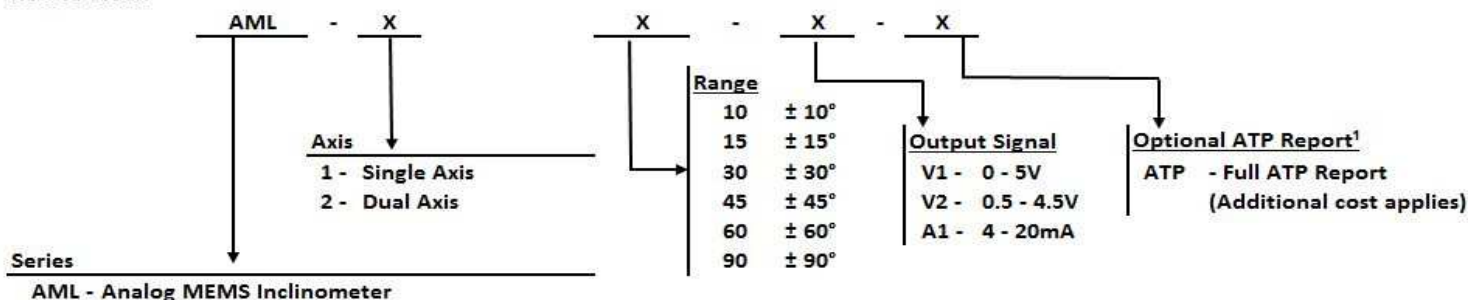
ELECTRICAL AND ENVIRONMENTAL

Output	0-5V, 0.5 - 4.5V or 4-20mA
Electromagnetic Compatibility	EN61000 and GBT17626
Impact Resistance	100g@11ms, 3 times/axis (1/2 sinusoid)
Vibration Resistance	10grms @ 10-1000Hz
Temperature Rating , Operation	-40 to +85°C
Temperature Rating, Storage	-55 to +100°C
Seal	IP67
Cables	1m Cable (standard)
Weight	90g (without cable)
Power Requirements	9-36 VDC @ 60mA

Notes: * - Custom ranges available, please see model number structure below.

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

How To Order:



Example:

AML - 1 - 60 - V1 - ATP

AML, Single Axis, +/- 60 degree range, 0-5V 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 Numbers

	Single-axis		Dual-axis	
	Model #	Part #	Model #	Part #
Voltage output (0-5Vdc)	AML-1-10-V1	02550322-0111	AML-2-10-V1	02550322-0211
	AML-1-15-V1	02550322-0121	AML-2-15-V1	02550322-0221
	AML-1-30-V1	02550322-0131	AML-2-30-V1	02550322-0231
	AML-1-45-V1	02550322-0141	AML-2-45-V1	02550322-0241
	AML-1-60-V1	02550322-0151	AML-2-60-V1	02550322-0251
	AML-1-90-V1	02550322-0161	AML-2-90-V1	02550322-0261
Voltage output (0.5-4.5Vdc)	AML-1-10-V2	02550322-0112	AML-2-10-V2	02550322-0212
	AML-1-15-V2	02550322-0122	AML-2-15-V2	02550322-0222
	AML-1-30-V2	02550322-0132	AML-2-30-V2	02550322-0232
	AML-1-45-V2	02550322-0142	AML-2-45-V2	02550322-0242
	AML-1-60-V2	02550322-0152	AML-2-60-V2	02550322-0252
	AML-1-90-V2	02550322-0162	AML-2-90-V2	02550322-0262
Current output (4-20mA)	AML-1-10-A1	02550322-0116	AML-2-10-A1	02550322-0216
	AML-1-15-A1	02550322-0126	AML-2-15-A1	02550322-0226
	AML-1-30-A1	02550322-0136	AML-2-30-A1	02550322-0236
	AML-1-45-A1	02550322-0146	AML-2-45-A1	02550322-0246
	AML-1-60-A1	02550322-0156	AML-2-60-A1	02550322-0256
	AML-1-90-A1	02550322-0166	AML-2-90-A1	02550322-0266

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