

AMS Series - Analog MEMS Inclinometer



Making Sense out of Motion...

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



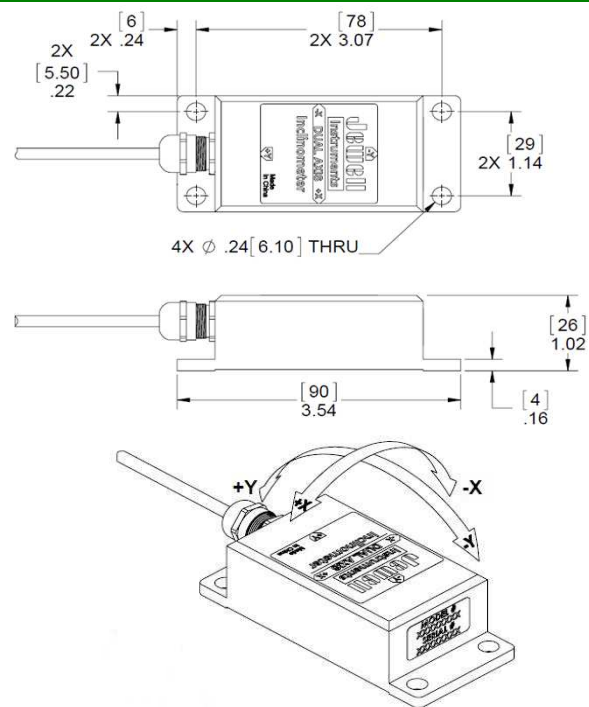
Features & Benefits:

- Single-Axis and Dual-Axis Available
- Resolution: 0.01°
- Zero Temperature Coefficient: $\pm 0.01^\circ/\text{C}$
- High Shock & Vibration Tolerance
- -40° to +85°C Temperature Range
- Analog 0-5V, 0.5-4.5V & 4-20mA Output Options
- 1m cable whip included

Applications:

- Boom Position and Control
- Radar and Vehicle Platform Positioning
- Industrial Measurement and Control
- Drilling Equipment
- Navigation Pitch/Roll Measurement
- Railway Track Alignment & Maintenance

Outline Diagram



*Dimensions in Inches [mm]

Wiring Code

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

Performance Specifications

STATIC/DYNAMIC

* Angular Range, °	±10°	±30°	±60°	±90°
Resolution, °	0.01	0.01	0.01	0.01
Hysteresis, °	0.02	0.05	0.08	0.1
Zero Offset Tolerance (°)	0.56	0.56	0.56	0.56
Zero Temperature Coefficient, °/°C	±0.01	±0.01	±0.01	±0.01
Scale Factor Tolerance (%)	0.7	1.4	2.8	3
Scale Factor Temperature Coefficient, ppm/°C	≤200	≤200	≤200	≤200
Warm Up, s	0.5	0.5	0.5	0.5
Time Constant, s	0.05	0.05	0.05	0.05

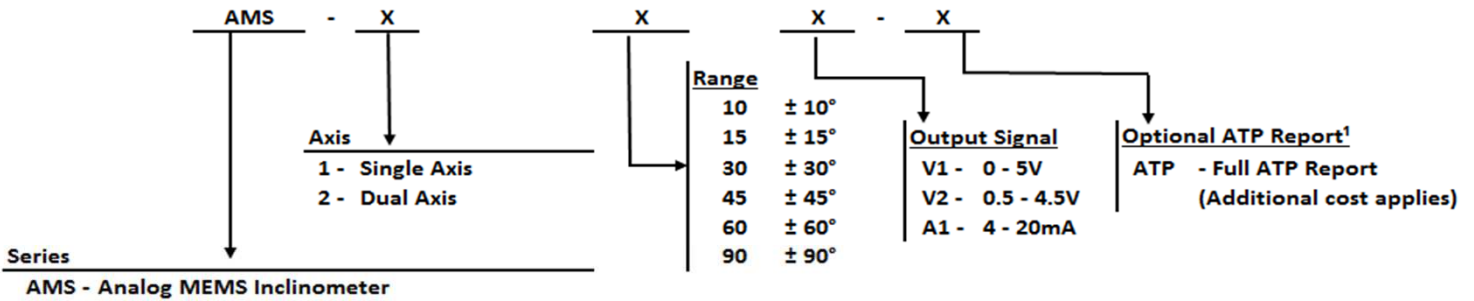
ELECTRICAL AND ENVIRONMENTAL

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 +125°C
Seal	IP67
Cables	1m Cable (standard)
Weight	120g (without cable)
Power Requirements	9-36 VDC @ 60mA

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

Specifications subject to change without notice due to continued product development

How To Order:



Example:

AMS - 1 - 30 - V1 - ATP

AMS Single Axis, +/- 30 degree, 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)	AMS-1-10-V1	02550320-0111	AMS-2-10-V1	02550320-0211
	AMS-1-15-V1	02550320-0121	AMS-2-15-V1	02550320-0221
	AMS-1-30-V1	02550320-0131	AMS-2-30-V1	02550320-0231
	AMS-1-45-V1	02550320-0141	AMS-2-45-V1	02550320-0241
	AMS-1-60-V1	02550320-0151	AMS-2-60-V1	02550320-0251
	AMS-1-90-V1	02550320-0161	AMS-2-90-V1	02550320-0261
Voltage output (0.5-4.5Vdc)	AMS-1-10-V2	02550320-0112	AMS-2-10-V2	02550320-0212
	AMS-1-15-V2	02550320-0122	AMS-2-15-V2	02550320-0222
	AMS-1-30-V2	02550320-0132	AMS-2-30-V2	02550320-0232
	AMS-1-45-V2	02550320-0142	AMS-2-45-V2	02550320-0242
	AMS-1-60-V2	02550320-0152	AMS-2-60-V2	02550320-0252
	AMS-1-90-V2	02550320-0162	AMS-2-90-V2	02550320-0262
Current output (4-20mA)	AMS-1-10-A1	02550320-0116	AMS-2-10-A1	02550320-0216
	AMS-1-15-A1	02550320-0126	AMS-2-15-A1	02550320-0226
	AMS-1-30-A1	02550320-0136	AMS-2-30-A1	02550320-0236
	AMS-1-45-A1	02550320-0146	AMS-2-45-A1	02550320-0246
	AMS-1-60-A1	02550320-0156	AMS-2-60-A1	02550320-0256
	AMS-1-90-A1	02550320-0166	AMS-2-90-A1	02550320-0266

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