

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.



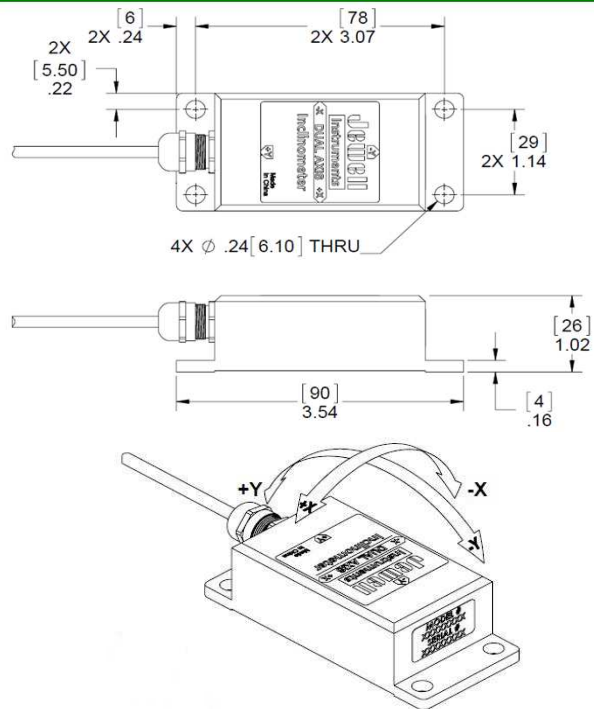
Features & Benefits:

- 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	X-Axis Out
Green	Y-Axis Out
Black	Ground

Rev F

Performance Specifications

STATIC/DYNAMIC

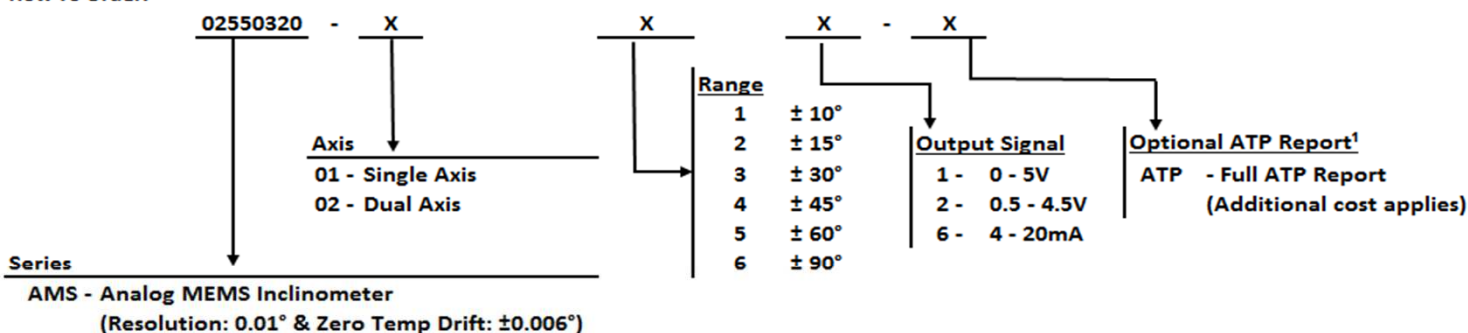
* Angular Range, °	±10°	±30°	±60°	±90°
Resolution, °	0.01	0.01	0.01	0.01
Hysteresis, °	0.02	0.05	0.08	0.1
Zero Offset Tolerance (°)	0.56	0.56	0.56	0.56
Zero Temperature Coefficient, °/°C	±0.01	±0.01	±0.01	±0.01
Scale Factor Tolerance (%)	0.7	1.4	2.8	3
Scale Factor Temperature Coefficient, ppm/°C	≤200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

How To Order:



Example:

02550320-0131-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.