

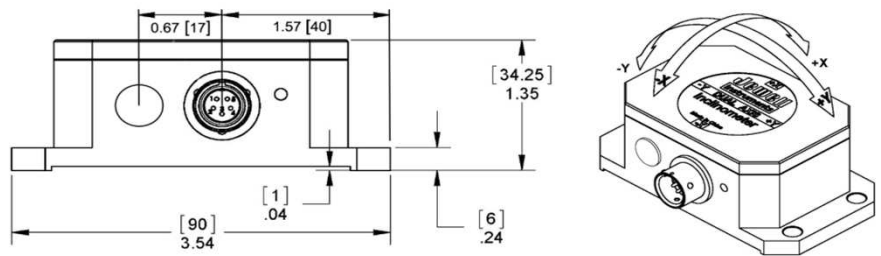
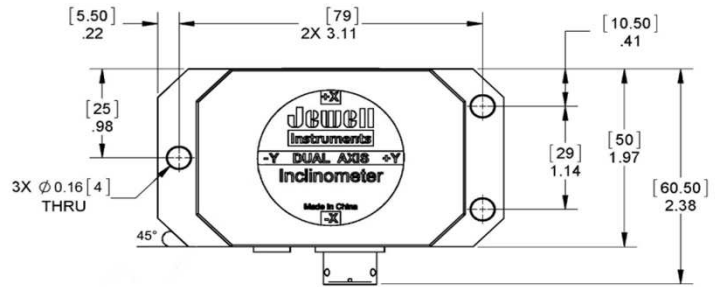
# AMH Series - Analog MEMS Inclinometer

Making Sense out of Motion...

The Jewell Instruments model AMH is a high precision MEMS inclinometer. Standard units are available with 0-5V, 0.5-4.5V, or 4-20mA output options. All AMH series inclinometers are rated IP67 for waterproofing up to 1m. Custom ranges and output types are also available on request.



## Outline Diagram



\*Dimensions in Inches [mm]

## Features & Benefits:

- Single-Axis and Dual-Axis Available
- Resolution: 0.001°
- Zero Temperature Coefficient:  $\pm 0.006^\circ/\text{C}$
- Analog 0-5V, 0.5 - 4.5V & 4-20mA Output Options
- -40° to +85°C Operating Range
- 1m cable whip included

## Applications:

- Geotechnical Monitoring
- Radar & Vehicle Platform Leveling
- Drill Rig Alignment
- Offshore/Subsea Platform Pitch & Roll
- Industrial Measurement & Control
- Railway Track Alignment & Maintenance

## Pin Out



3-pin Connector  
(Single Axis)



5-pin Connector  
(Dual Axis)

3-pin	5-pin	Function
1	1	+VDC 9V~36V
2	2	X-Axis Out
--	3	Y-Axis Out
3	4	Ground
--	5	Factory Use Only

## Performance Specifications

### STATIC/DYNAMIC

* Angular Range, °	±10°	±30°	±60°
Resolution, °	0.001	0.001	0.001
Hysteresis, °	0.005	0.008	0.01
Zero Tolerance (°)	0.01	0.01	0.01
Zero Temperature Coefficient, °/°C	±0.006	±0.006	±0.006
Scale Factor Tolerance (%)	0.7	1.4	2.8
Scale Factor Temperature Coefficient, ppm/°C	≤200	≤200	≤200
Warm Up, s	0.5	0.5	0.5
Time Constant, s	0.05	0.05	0.05

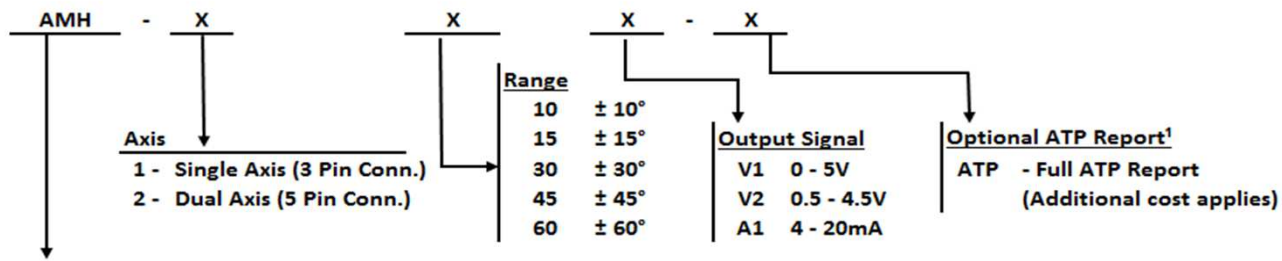
### ELECTRICAL AND ENVIRONMENTAL

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
Enclosure	Anodized Aluminum
Seal	IP67
Cables	1m Cable (standard)
Weight	150g (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:



Series  
AMH - Analog MEMS Inclinometer

Example:  
AMH - 1 - 15 - V1 - ATP  
AMH Single Axis, +/- 15 degrees, 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)	AMH-1-10-V1	02550318-0111	AMH-2-10-V1	02550318-0211
	AMH-1-15-V1	02550318-0121	AMH-2-15-V1	02550318-0221
	AMH-1-30-V1	02550318-0131	AMH-2-30-V1	02550318-0231
	AMH-1-45-V1	02550318-0141	AMH-2-45-V1	02550318-0241
	AMH-1-60-V1	02550318-0151	AMH-2-60-V1	02550318-0251
Voltage output (0.5-4.5Vdc)	AMH-1-10-V2	02550318-0112	AMH-2-10-V2	02550318-0212
	AMH-1-15-V2	02550318-0122	AMH-2-15-V2	02550318-0222
	AMH-1-30-V2	02550318-0132	AMH-2-30-V2	02550318-0232
	AMH-1-45-V2	02550318-0142	AMH-2-45-V2	02550318-0242
	AMH-1-60-V2	02550318-0152	AMH-2-60-V2	02550318-0252
Current output (4-20mA)	AMH-1-10-A1	02550318-0116	AMH-2-10-A1	02550318-0216
	AMH-1-15-A1	02550318-0126	AMH-2-15-A1	02550318-0226
	AMH-1-30-A1	02550318-0136	AMH-2-30-A1	02550318-0236
	AMH-1-45-A1	02550318-0146	AMH-2-45-A1	02550318-0246
	AMH-1-60-A1	02550318-0156	AMH-2-60-A1	02550318-0256

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