

# DMS Series - Digital MEMS Inclinometer

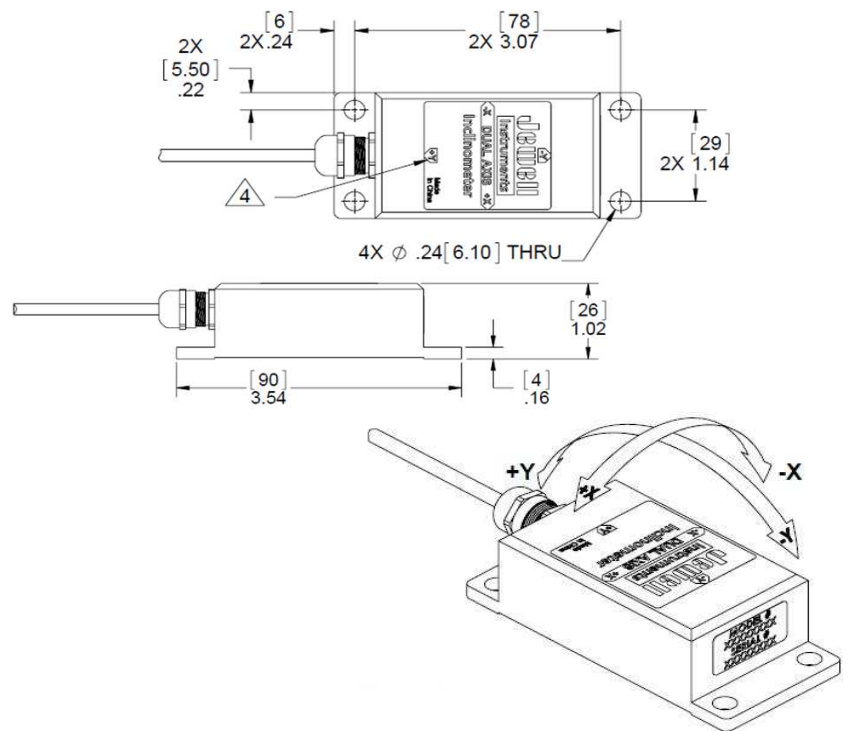


Making Sense out of Motion...

The model DMS is a mid-level performance digital MEMS inclinometer for industrial applications. Standard units are available in RS232, RS485 and UART TTL interface options. All DMS 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: 0.01°
- Zero Temperature Coefficient:  $\pm 0.01^\circ/\text{C}$
- $-40^\circ$  to  $+85^\circ\text{C}$  Operation and Storage
- RS232, RS485 & UART TTL Outputs
- 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

## Wiring Code

Wire	Function
Red	+VDC 9V~36V
Yellow	RS232 (Rx), RS485 (D+)
Green	RS232 (Tx), RS485 (D-)
Black	Ground

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Rev G

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## Performance Specifications

### STATIC/DYNAMIC

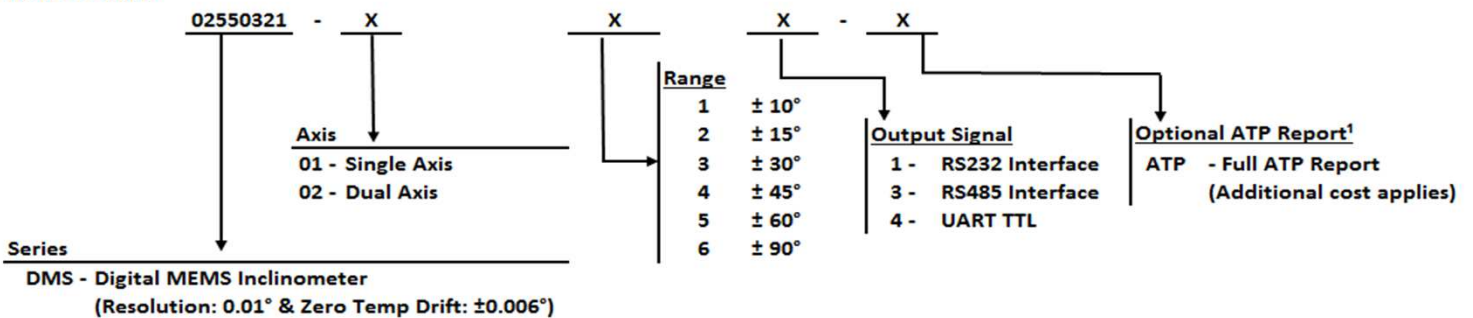
* Angular Range, °	±10°	±30°	±60°	±90°
Resolution, °	0.01	0.01	0.01	0.01
Hysteresis, °	0.02	0.05	0.08	0.1
Zero Offset Tolerance (°)	0.56	0.56	0.56	0.56
Zero Temperature Coefficient, (°/°C)	±0.01	±0.01	±0.01	±0.01
Scale Factor Tolerance (%)	0.7	1.4	2.8	3
Scale Factor Temperature Coefficient, (ppm/°C)	≤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 Rate	5Hz, 15Hz, 35Hz, 50Hz
* Output Type	RS232/RS485/TTL
Electromagnetic Compatibility	EN61000 and GBT17626
Impact Resistance	100g@11ms, 3 Times/Axis (1/2 sinusoid)
Vibration Resistance	10grms, 10~1000 Hz
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:

02550321-0131-ATP

DMS Single Axis, +/- 30 degrees, RS232 Interface, 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.