

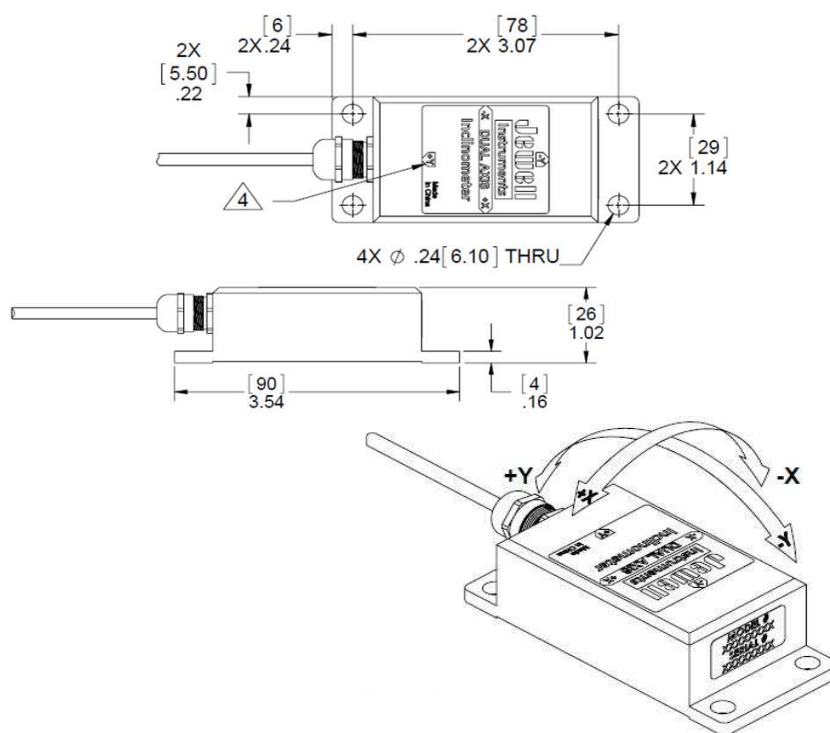
DMS Series - Digital MEMS Inclinometer

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° 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
White or Yellow	RS232 (Rx), RS485 (D+)
Green	RS232 (Tx), RS485 (D-)
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

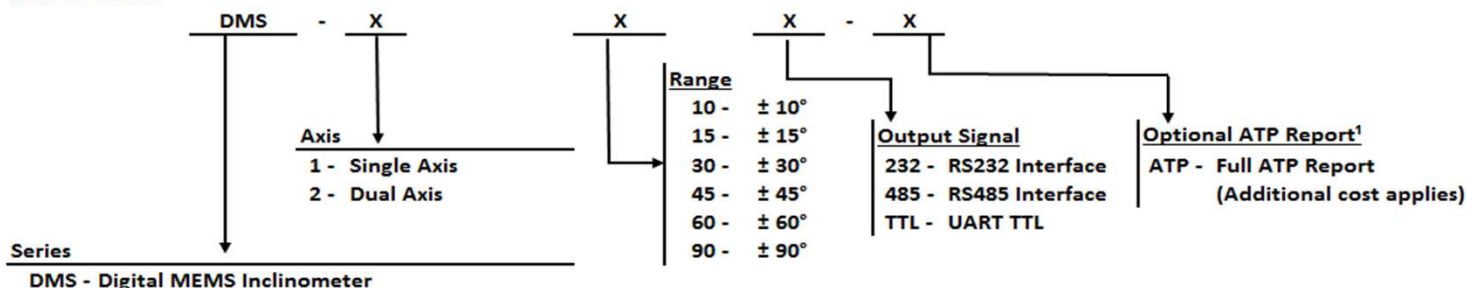
ELECTRICAL AND ENVIRONMENTAL

Output 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	150g
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:

DMS - 1 - 30 - 232 - 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.

Part Numbers

	Single-axis		Dual-axis	
	Model #	Part #	Model #	Part #
RS232 Interface	DMS-1-10-232	02550321-0111	DMS-2-10-232	02550321-0211
	DMS-1-15-232	02550321-0121	DMS-2-15-232	02550321-0221
	DMS-1-30-232	02550321-0131	DMS-2-30-232	02550321-0231
	DMS-1-45-232	02550321-0141	DMS-2-45-232	02550321-0241
	DMS-1-60-232	02550321-0151	DMS-2-60-232	02550321-0251
	DMS-1-90-232	02550321-0161	DMS-2-90-232	02550321-0261
RS485 Interface	DMS-1-10-485	02550321-0113	DMS-2-10-485	02550321-0213
	DMS-1-15-485	02550321-0123	DMS-2-15-485	02550321-0223
	DMS-1-30-485	02550321-0133	DMS-2-30-485	02550321-0233
	DMS-1-45-485	02550321-0143	DMS-2-45-485	02550321-0243
	DMS-1-60-485	02550321-0153	DMS-2-60-485	02550321-0253
	DMS-1-90-485	02550321-0163	DMS-2-90-485	02550321-0263
UART TTL Interface	DMS-1-10-TTL	02550321-0114	DMS-2-10-TTL	02550321-0214
	DMS-1-15-TTL	02550321-0124	DMS-2-15-TTL	02550321-0224
	DMS-1-30-TTL	02550321-0134	DMS-2-30-TTL	02550321-0234
	DMS-1-45-TTL	02550321-0144	DMS-2-45-TTL	02550321-0244
	DMS-1-60-TTL	02550321-0154	DMS-2-60-TTL	02550321-0254
	DMS-1-90-TTL	02550321-0164	DMS-2-90-TTL	02550321-0264

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