

MEMS (CAPACITIVE) INCLINOMETER SELECTOR GUIDE



ANALOG SENSORS

	AML Series	AMS Series	AMH Series	AMI Series	DML Series	DMS Series	DMH Series	DMI Series	DMP Series
Features and Benefits	<ul style="list-style-type: none"> Single and Dual Axis Available Resolution <0.05° Bias Temp Coefficient ±0.01°/°C High Shock & Vibration Tolerance Analog 0-5V, & 4-20mA Output Options -40° to +85°C Temp Range 	<ul style="list-style-type: none"> Single and Dual Axis Available Resolution <0.01° Bias Temp Coefficient ±0.006°/°C High Shock & Vibration Tolerance Analog 0-5V, & 4-20mA Output Options Up to ±90° Full Range Output 	<ul style="list-style-type: none"> Single and Dual Axis Available Resolution <0.001° Bias Temp Coefficient ±0.002°/°C High Shock & Vibration Tolerance Analog 0-5V, ±5V & 4-20mA Output Options -40° to +85°C Temp Range 	<ul style="list-style-type: none"> Single and Dual Axis Available Resolution <0.001° Bias Temp Coefficient ±0.0008°/°C Excellent Performance over Temperature Analog 0-5V, ±5V & 4-20mA Output Options -40° to +85°C Temp Range 	<ul style="list-style-type: none"> Single and Dual Axis Available Resolution <0.05° Bias Temp Coefficient ±0.008°/°C -40° to +85°C Operation and Storage Digital RS232, RS485, or CAN Output 	<ul style="list-style-type: none"> Single and Dual Axis Available Resolution <0.01° Bias Temp Coefficient ±0.006°/°C Digital RS232, RS485, and CAN Output -40° to +85°C Operating Range 	<ul style="list-style-type: none"> Single and Dual Axis Available Resolution <0.001° Bias Temp Coefficient ±0.002°/°C Up to ±90° Angular Range -40° to +85°C Temperature Range 	<ul style="list-style-type: none"> Single and Dual Axis Available Resolution <0.001° Bias Temp Coefficient ±0.0008°/°C Analog 0-5V, ±5V & 4-20mA Output Options High Shock and Vibration Tolerance 	<ul style="list-style-type: none"> Dual Axis Resolution <0.0005° Minimal Thermal Drift (<0.0008°/°C Bias) Digital RS232, RS485, and CAN Output -40° to +85°C Operating Range High Shock & Vibration Tolerance
Applications	<ul style="list-style-type: none"> Solar Tracking & Panel Positioning Vehicle Wheel Alignment Industrial Automation & Control Radar/Antenna Mast Alignment Platform Leveling Railway Pitch/Roll Measurement 	<ul style="list-style-type: none"> Boom Position and Control Radar and Vehicle Platform Positioning Industrial Measurement & Control Drilling Equipment Navigation Pitch/Roll Measurement Railway Track Alignment & Maintenance 	<ul style="list-style-type: none"> Geotechnical Monitoring Radar & Vehicle Platform Leveling Drill Rig Alignment Offshore/Subsea Platform Pitch & Roll Industrial Measurement & Control Railway Track Alignment & Maintenance 	<ul style="list-style-type: none"> Geotechnical Monitoring Radar & Vehicle Platform Leveling Drill Rig Alignment Offshore/Subsea Platform Pitch & Roll Industrial Measurement & Control Railway Track Alignment & Maintenance 	<ul style="list-style-type: none"> Solar Tracking & Panel Positioning Vehicle Wheel Alignment Industrial Automation & Control Radar/Antenna Mast Alignment Platform Leveling Navigation Pitch/Roll Measurement 	<ul style="list-style-type: none"> Boom Position and Control Radar and Vehicle Platform Leveling Drilling Equipment Navigation Pitch/Roll Measurement Railway Track Alignment & Maintenance 	<ul style="list-style-type: none"> Antenna Deflection Measurement Radar and Vehicle Platform Positioning Drill Rig Alignment Offshore Platform Pitch/Roll Industrial Measurement & Control Antenna Position Control 	<ul style="list-style-type: none"> Geotechnical Monitoring Radar and Vehicle Platform Leveling Drill Rig Alignment Offshore/Subsea Platform Pitch/Roll Industrial Measurement & Control Antenna Position Control 	<ul style="list-style-type: none"> Geotechnical Monitoring Radar and Vehicle Platform Leveling Drill Rig Alignment Offshore/Subsea Platform Pitch/Roll Industrial Measurement & Control Antenna Position Control

Performance Specifications Static/Dynamic

	±10° ±30° ±60° ±90°				±10° ±30° ±60° ±90°				±10° ±30° ±60° ±90°				±10° ±30° ±60° ±90°				±10° ±30° ±60° ±90°				±10° ±30° ±60° ±90°				±3° ±10° ±15°										
Angular Range ¹ , °																																			
Resolution, °	0.05				0.01				0.001				0.001				0.05				0.01				0.001				0.0005						
Hysteresis	0.1	0.1	0.2	0.2	0.02	0.05	0.08	0.1	0.01	0.02	0.03	0.05	0.003	0.01	0.02	0.03	0.1	0.1	0.2	0.2	0.02	0.05	0.08	0.1	0.01	0.02	0.03	0.05	0.003	0.01	0.02	0.03	0.003	0.005	0.006
Bias Temp Coefficient, °/°C	±0.01				±0.006				±0.002				±0.0008				±0.008				±0.006				±0.002				±0.0008			±0.0008			
Scale Factor Temp Coefficient, ppm/°C	≤150				≤100				≤50				≤50				≤150				≤100				≤50				≤50				≤50		
Warm Up, s	0.5				0.5				0.05				0.5				0.5				0.5				0.5				0.5			0.5			
Time Constant, s	0.05				0.05				0.05				0.02				0.05				0.05				0.05				0.02			0.05			

Electrical & Environmental

Output	0-5V or 4-20mA	0-5V or 4-20mA	0-5V, ±5V or 4-20mA	0-5V, ±5V or 4-20mA	5Hz, 15Hz, 35Hz, 50Hz	5Hz, 15Hz, 35Hz, 50Hz	5Hz, 15Hz, 35Hz, 50Hz	5Hz, 15Hz, 35Hz, 50Hz	5Hz, 15Hz, 35Hz, 50Hz
Output Type ²					RS232, RS485, RS422, CAN, TTL, MODBUS	RS232, RS485, RS422, CAN, TTL, MODBUS	RS232, RS485, CAN	RS232, RS485, CAN	RS232, RS485, CAN Open
Electromagnetic Compatibility	EN61000 and GBT17626	EN61000 and GBT17626	EN61000 and GBT17626	EN61000 and GBT17626	EN61000 and GBT17626	EN61000 and GBT17626	EN61000 and GBT17626	EN61000 and GBT17626	EN61000 and GBT17626
Impact Resistance	100g@11ms, 3 times/axis (½ sinusoid)	100g@11ms, 3 times/axis (½ sinusoid)	100g@11ms, 3 times/axis (½ sinusoid)	100g@11ms, 3 times/axis (½ sinusoid)	100g@11ms, 3 times/axis (½ sinusoid)	100g@11ms, 3 times/axis (½ sinusoid)	100g@11ms, 3 times/axis (½ sinusoid)	100g@11ms, 3 times/axis (½ sinusoid)	100g@11ms, 3 times/axis (½ sinusoid)
Vibration Resistance	10grms @ 10-1000Hz	10grms @ 10-1000Hz	10grms @ 10-1000Hz	10grms @ 10-1000Hz	10grms @ 10-1000Hz	10grms @ 10-1000Hz	10grms @ 10-1000Hz	10grms @ 10-1000Hz	10grms @ 10-1000Hz
Temperature Rating, Operation	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C
Temperature Rating, Storage	-55 to +100°C	-55 to +125°C	-55 to +100°C	-55 to +100°C	-55 to +100°C	-55 to +125°C	-55 to +100°C	-55 to +100°C	-55 to +100°C
Enclosure			Anodized Aluminum	Anodized Aluminum			Anodized Aluminum	Anodized Aluminum	
Seal	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67
Cables	1m Cable (standard)	1m Cable (standard)	1m Cable (standard)	1m Cable (standard)	1m Cable (standard)	1m Cable (standard)	1m Cable (standard)	1m Cable (standard)	1m Cable (standard)
Weight	90g (without cable)	120g (without cable)	150g (without cable)	150g (without cable)	90g (without cable)	120g (without cable)	150g (without cable)	150g (without cable)	150g (without cable)
Power Requirements	9-36 VDC @ 40mA	9-36 VDC @ 50mA	9-36 VDC @ 40mA	9-36 VDC @ 30mA	9-36 VDC @ 50mA	9-36 VDC @ 50mA	9-36 VDC @ 50mA	9-36 VDC @ 50mA	9-36 VDC @ 50mA