



Inclination sensor

INC-M1M360C-1-KG/US-V



Product characteristics		
Measuring principle		MEMS capacitive; (Accelerometer ; gyroscope)
Number of measurement axes		1; (Z)
Communication interface		CAN
Inclination measurement		
Angular range	[°]	0...360
Application		
Function principle		dynamic / IMU
Application		High-precision inclination measurement in dynamic applications
Electrical data		
Operating voltage	[V]	9...30 DC
Current consumption	[mA]	< 65; (9 ... 30 V DC)
Min. insulation resistance	[MΩ]	100; (500 V DC)
Protection class		III
Reverse polarity protection		yes
Reverse polarity protection		yes
Measuring/setting range		
Measuring principle		MEMS capacitive; (Accelerometer ; gyroscope)
Number of measurement axes		1; (Z)



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Inclination measurement		
Angular range	[°]	0...360
Measuring range acceleration	[g]	± 4
Measuring range vehicle yaw rate	[°/s]	± 500
Accuracy / deviations		
Hysteresis	[°]	≤ ± 0,05
Repeatability	[°]	± 0,05
Resolution	[°]	0.01; (configurable)
Temperature coefficient	[1/K]	≤ ± 0,008°
Dynamic measurement		
Accuracy	[°]	± 0,5
Static measurement		
Accuracy	[°]	± 0,3
Interfaces		
Communication interface	CAN	
Number of CAN interfaces	1	
Terminating resistor	yes; (internal ; configurable)	
CAN		
Protocol	CANopen	
Factory settings	Baud rate: 125 kBit/s	
	node ID: 10	
Version	CiA DS301 V4.2.0; DSP-410 V2.0.0; CiA 306 V1.3.0	
Operating conditions		
Ambient temperature	[°C]	-40...85
Storage temperature	[°C]	-40...85
Protection	IP 67; IP 68; IP 69K	
Tests / approvals		
EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-4	
Shock resistance	DIN EN 60068-2-27	
Vibration resistance	DIN EN 60068-2-6	
MTTF	[years]	260
Mechanical data		
Weight	[g]	197.5
Dimensions	[mm]	27 x 59 x 105.3
Material	housing: diecast aluminium black; potting compound: polyurethane resin	
Mounting orientation	vertical	
Displays / operating elements		
Display	preoperational mode	1 x LED, green
	operational mode	1 x LED, green flashing
	fault	1 x LED, red
Accessories		
Items supplied	Protective cover: 1	

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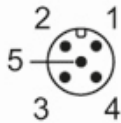
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Remarks

Pack quantity 1 pcs.

Electrical connection - CAN-In

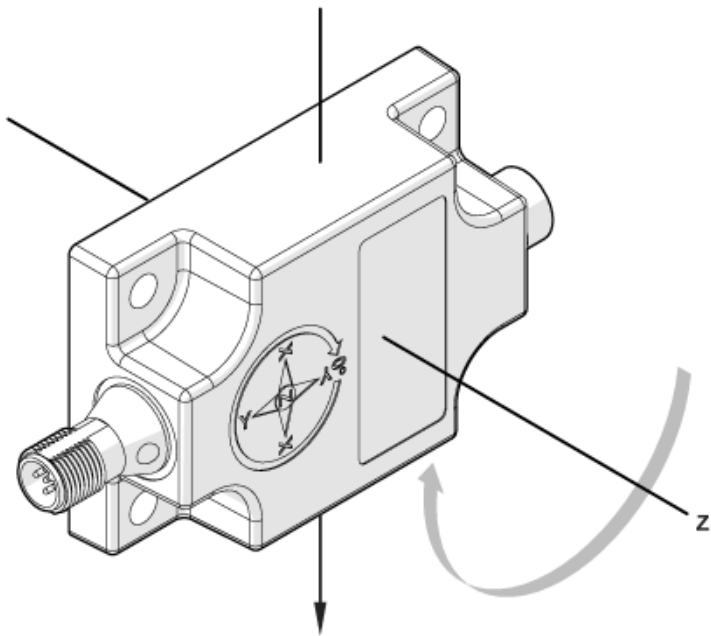
Connector: 1 x M12; coding: A



- 1 CAN_GND
- 2 voltage supply
- 3 GND
- 4 CAN_H
- 5 CAN_L

Diagrams and graphs

measuring and installation direction



vertical installation position / rotation about z-axis