



Inclination sensor

INC-M1M360J-1-KG/US-V



Product characteristics		
Measuring principle		MEMS capacitive; (Acceleration sensor ; gyroscope)
Number of measurement axes		1; (Z)
Communication interface		CAN
Inclination measurement		
Angular range	[°]	0...360
Application		
Function principle		dynamic
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
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Measuring/setting range		
Measuring principle		MEMS capacitive; (Acceleration sensor ; gyroscope)
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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
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 ; parameterisable)	
CAN		
Protocol	SAE J1939	
Factory settings	Baud rate: 250 kBit/s	
	device address (ECU): 25	
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]	198.7
Dimensions	[mm]	27 x 59 x 105.3
Materials	housing: diecast aluminium black; potting compound: polyurethane resin	
Installation position	vertical	
Displays / operating elements		
Display	operational mode	1 x LED, green
	fault	1 x LED, red
Accessories		
Items supplied	Protective cover: 1	
Remarks		
Pack quantity	1 pcs.	

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Electrical connection - CAN-In

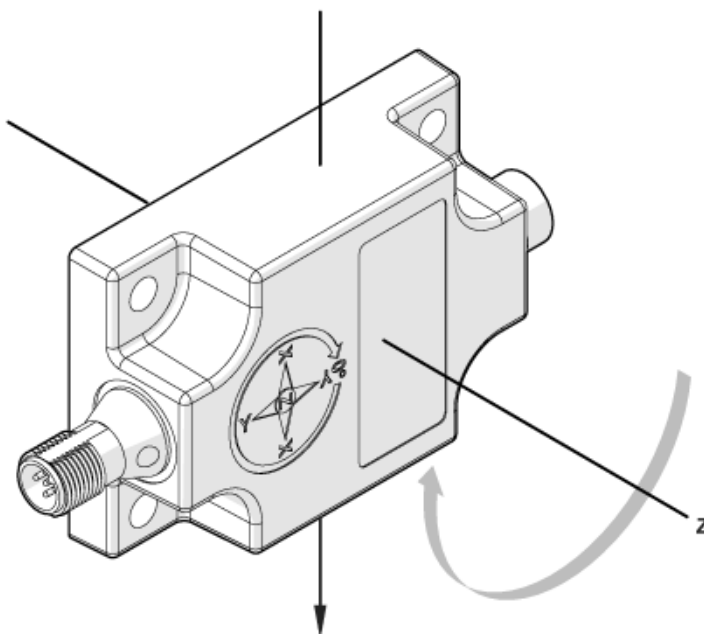
Connector: 1 x M12; coding: A



1	CAN Screen
2	+ UB
3	CAN_GND
4	CAN_H
5	CAN_L

Diagrams and graphs

measuring and installation direction



vertical installation position / rotation about z-axis