

JN2301

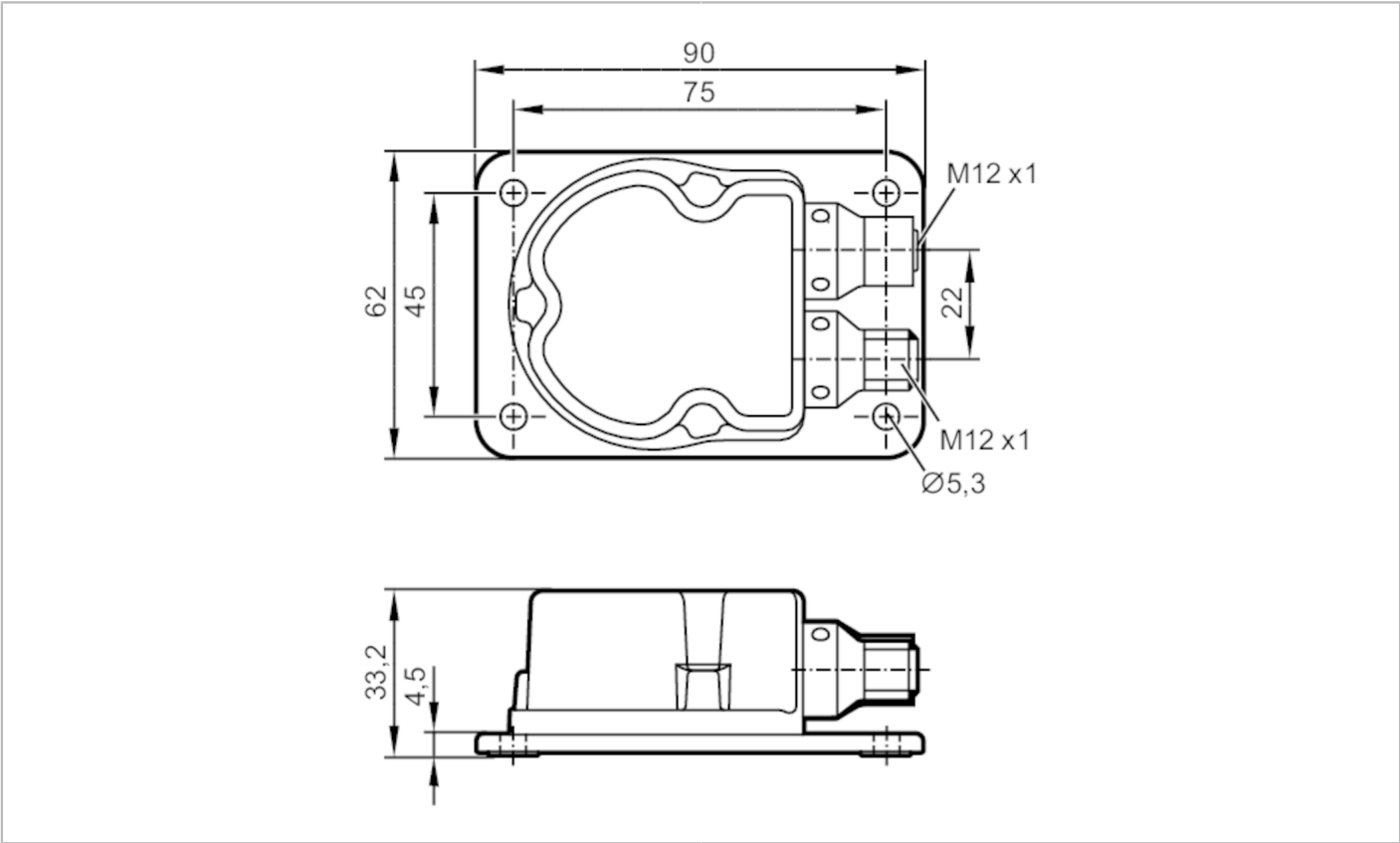


Inclination sensor

INC-M2M090J-KG/US

Article no longer available - archive entry

Alternative articles: JN2300
When selecting an alternative article and accessories please note that technical data may differ!



Product characteristics	
Measuring principle	MEMS capacitive
Communication interface	CAN
Inclination measurement	
Number of measurement axes	2
Angular range	[-45...45]
Application	
Function principle	static
Application	High-precision inclination measurement in 2 axes for mobile applications
Electrical data	
Operating voltage	[V] 9.2...30 DC
Current consumption	[mA] 70; (24 V DC, 25 °C)
Max. current consumption	[mA] 405; (9,2 V DC; -40 °C)
Min. insulation resistance	[MΩ] 100; (500 V DC)
Protection class	III
Reverse polarity protection	yes



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Reverse polarity protection		yes
Power-on delay time [s]	300; (warm-up time; Max. initialization time: 1000 ms)	
Measuring/setting range		
Measuring principle	MEMS capacitive	
Inclination measurement		
Number of measurement axes	2	
Angular range [°]	-45...45	
Limit frequency [Hz]	0.5...10; (configurable)	
Accuracy / deviations		
Accuracy [°]	≤ ± 0,01; (absolute)	
Hysteresis [°]	≤ ± 0,05	
Repeatability [°]	≤ ± 0,01	
Resolution [°]	0.01	
Temperature coefficient [1/K]	≤ ± 0,0008 °	
Interfaces		
Communication interface	CAN	
Number of CAN interfaces	1	
Terminating resistor	yes; (internal ; configurable)	
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 65; IP 67; IP 68; IP 69K	
Tests / approvals		
EMC	DIN EN 61000-4-2 ESD	4 kV CD / 8 kV AD
	DIN EN 61000-4-3 HF radiated	10 V/m
	DIN EN 61000-4-4 Burst	2 kV
	DIN EN 61000-4-6 HF conducted	10 V
	DIN EN 55022 class B / CISPR 16-2-3	30 - 1000 MHz
	CISPR 25 ECE R 10	30 - 1000 MHz narrowband and broadband
	ISO 11452-2 ECE R 10	20 - 2000 MHz / 30 V/m
	ISO 7637-2 ECE R 10	pulse 1, 2a, 2b, 3a, 3b, 4, and pulse emission during operation, switching-on, switching-off
	ISO 7637-3	- 80 V pulse a / + 80 V pulse b
Shock resistance	DIN EN 60068-2-27	100 g 1 ms / 10000 Impacts per axis (X/Y)
	DIN EN 60068-2-29	30 g 6 ms / 24000 shock (bump)
Vibration resistance	DIN EN 60068-2-64	10...2000 Hz Test VII / random, mounting place car body
	DIN EN 60068-2-6	10...500 Hz / 10 g 10 cycles/axis, sine
Salt spray test	DIN EN 60068-2-52	severity level 5 (motor vehicle)
Damp heat	DIN EN 60068-2-30	55 °C cyclic upper temperature / 95 % rh 2 cycles of 24 h

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Standard	Compliant with ECE R 10, rev. 5; ISO 7637-3: 2007-07
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Mechanical data

Weight	[g]	414.5
Dimensions	[mm]	90 x 62 x 33.2
Material		housing: diecast zinc nickel-plated
Mounting orientation		Horizontal

Displays / operating elements

Display	Run mode	1 x LED, green
	fault	1 x LED, red

Accessories

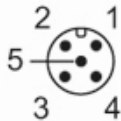
Items supplied	Protective cover: 1
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Remarks

Pack quantity	1 pcs.
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Electrical connection - CAN-In

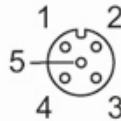
Connector: 1 x M12; coding: A



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

Electrical connection - CAN-Out

Connector: 1 x M12; coding: A



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