

Inclinometers

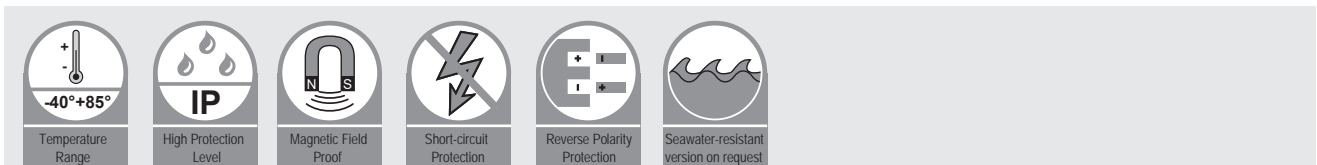
MEMS 1-Axis CANopen

91 -1 XXXX



Inclination sensors offer an easy and efficient way of monitoring spatial orientation without the need for mechanical linkages – a real advantage for design engineers.

- MEMS Micro Electro Mechanical Systems
- High Accuracy of 0.1° and Resolution of 0.01°
- Measurement range: 360° (1-axis)
- CANopen interface



Highlight:

- Small design, minimal space requirement
- CANopen interface
- IP69K Rated for Harsh Environments
- Optional metal housing or PBT housing
- Having a cable outlet and M12 plug connection

Mechanical characteristics

Weight	200 g
Protection Class	IP 68 / IP 69K
Work temperature	- 40 C° ... 80 C°
Storage temperature	- 40 C° ... 85 C°
Housing material	Aluminum or PBT
Shock Resistance(EN 60068-2-27)	100 g, 6ms
Vibration resistance	1,5 mm (10 Hz – 58 Hz) ≤ 20 g (58 Hz to 2000 Hz)
MTTF	300 year

CANopen Interface

Interface	CANopen Profil DS 410
Code	Binary
Transmission Rate	Max. 1 M(Default 125 K)
Node ID	Default 1h (1 ... 127) Can be programmed to set
Termination resistors	Default off,
Transmission cycle	≥ 1 ms

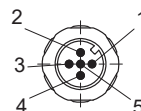
Electrical characteristics

Power supply	10 ... 30 VDC
Consumption(no load)	60 mA (at 24 V)
Measurement	1-axis (Z)
Measurement range	90°, 120°, 180°, 270°, 360° ,
Accuracy	0,1°
Resolution	0,01°
Temperature gradient	0,004°/ K
Reverse Polarity Protection	Yes
Short Circuit Protection	Yes
Electrical Lifetime	>100000h
Conforms to CE requirements	EN 61000-6-2: 2005; acc. to EN 61000-6-4: 2007-09
RoHS acc.to	2011/65/EU

- CANopen Profile according to DS-410
The following parameters can be programmable
- Resolution
 - Preset
 - Baud Rate and Node ID
 - Heart
 - Moving average-Filter

Terminal assignment

Signal	+V	0 V	CAN(GND)	CAN(Low)	CAN(High)
M12	2	3	1	5	4
Cable	RD	YE	GN	BN	WH

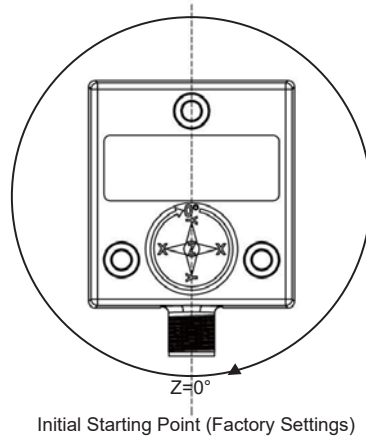


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Measurement Axes



Order code	91 - 1 X X X X Type a b c d		
a Measuring range	b Output circuit / Power supply	d Type of connection	
1 = 90° 2 = 120° 3 = 180° 4 = 270° 6 = 360°	4 = CANopen / 10 ... 30 VDC	1 = Cable 2 = M12 5 pin (without mating connector) 3 = 2 x M12 5 pin (without mating connector)	
	c Housing Material		
	1 = PBT 2 = Aluminum		

Accessories

Connector

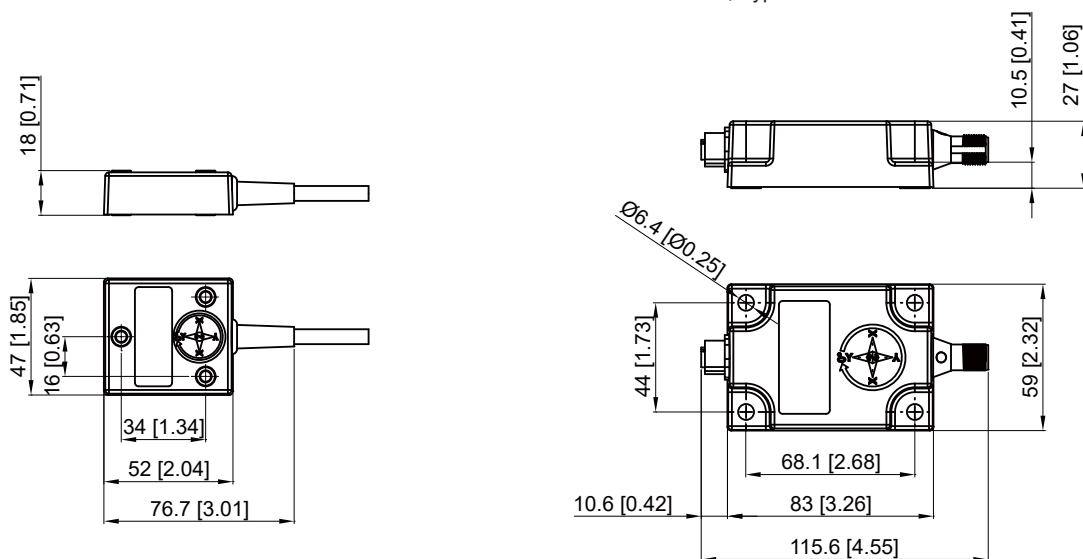
M12 Connectors, self-assembly (Female)

E1-1205-0001

Dimensions

PBT, Type of Connection 1

Aluminum, Type of connection 3



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