

Inclinometers

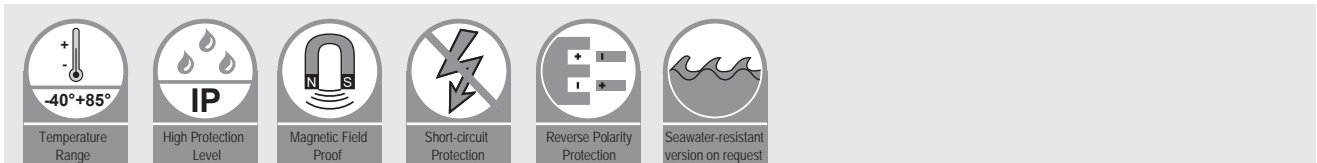
MEMS 1-Axis DeviceNet

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)
- DevicNet interface



Highlight:

- Small design, minimal space requirement
- DeviceNet 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

DeviceNet interface

Interface	Devicenet
Code	Binary
Transmission rate	125KBaud, 250KBaud, 500KBaud(default 125 K)
Node	default 63 (1 ... 64)
Termination resistors	Default off

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

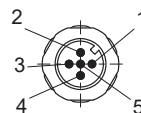
DeviceNet interface

The following parameters can be programmable

- Resolution
- Preset
- Baud Rate and Nude
- 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

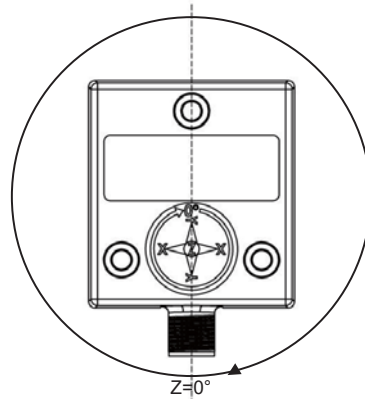


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Measurement Axes



Initial Starting Point (Factory Settings)

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°	4 = DeviceNet / 10 ... 30 VDC	1 = Cable			
2 = 120°		2 = M12 5 pin (without mating connector)			
3 = 180°	c Housing Material	3 = 2 x M12 5 pin (without mating connector)			
4 = 270°	1 = PBT				
6 = 360°	2 = Aluminum				

Accessories

Connector

M12 Connectors, self-assembly (Female)

E1-1205-0001

Dimensions

PBT, Type of Connection 2

Aluminum, Type of connection 1

