

Inclinometers

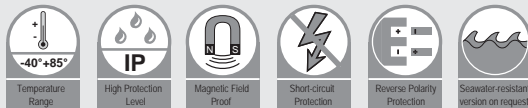
MEMS 2-Axis DeviceNet

91 -2 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: 80° (2-axis)
- DeviceNet 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

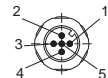
Weight	200 g
Protection Class	IP 68 / IP 69K
Work temperature	- 40 C° ... 80 C°
Storage temperature	- 40 C° ... 85 C°
Housing material	Aluminum or PBT
Shock Resistance(EN 60068-2-27)	100 g, 6ms
Vibration resistance	1,5 mm (10 Hz – 58 Hz) ≤ 20 g (58 Hz to 2000 Hz)
MTTF	300 year

DeviceNet interface

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

Terminal assignment

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



Electrical characteristics

Power supply	10 ... 30 VDC
Consumption(no load)	60 mA (at 24 V)
Measurement	2-axis (X/Y)
Measurement range	10°,20°,40°,60°,80°
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

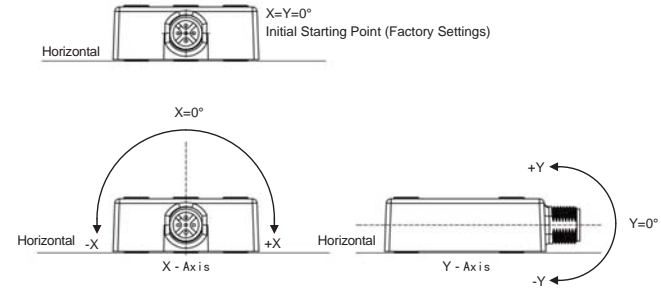
- Resolution
- Preset
- Baud Rate and Nude
- Moving average-Filter

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Measurement Axes



Order code

91 - 2 X X X X
Type a b c d

a Measuring range	b Output circuit / Power supply	d Type of connection
1 = ± 10°	4 = DeviceNet / 10 ... 30 VDC	1 = Cable
2 = ± 20°	c Housing Material	2 = M12 5 pin (without mating connector)
3 = ± 40°		3 = 2 x M12 5 pin (without mating connector)
4 = ± 60°		1 = PBT
5 = ± 80°		2 = Aluminum

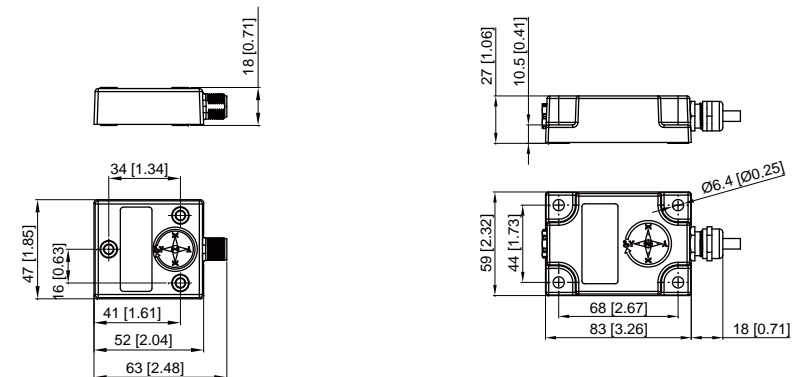
Accessories

Connector M12 Connectors, self-assembly (Female) E1-1205-0001

Dimensions

PBT, Type of Connection 2

Aluminum, Type of connection 1



HL-M001-07-16-CN