Product Manual

INS100A

Dynamic inclination sensors

VOLBUFF

SENSORS

VOLBUFF ELECTRONIC | www.volbuff.com

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1 Product Description

The INS100 series is a solid and durable high-performance multi-functional inclination sensor.The 4-20mA output design industrial application,so it is particularly high-quality and durable.Excellent repetitiveness,high protection level,resistance impact and vibration,high electromagnetic compatibility,using this sensor is suitable for mobile hydraulic applications,such as cranes,remote control and air operating platforms.

Advantages are suitable for measuring inclination positions in harsh environmental conditions and outdoor environment,with high reliability and long service life.

The main features are as follows:

- MEMS technology
- Wide voltage input：9-35VDC
- 4-20mA output
- High resolution:0.01°
- High protection level:IP67
- Wide temperature range:-40℃～+85℃
- Anti-vibration and impact
- High reliability and long service life,suitable for outdoor applications

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2 Technical specification

Electrical parameters	
Voltage supply	DC9-35V
Consumption w/o load	＜50mA Max(24 VDC)
Initializing time	＜0.5s
Output signal	4-20mA
Measuring range	-45°～＋90°
Resolution	0.01°
Accuracy(RT)	<±0.5°
Temperature coefficient	0,008°/℃

Mechanical parameters	
Material	Aluminum alloy
Connection	Flange connector M12,5-pin

Environmental parameters	
Operating temperature	-40℃～+85℃
Protection level	IP67
Impact resistance	30g,11ms impact per shaft 100 times X-axis,Y axis,Z axis
Anti-vibration	10～500 Hz,10g per shaft 2 hours x axis,y-axis,Z axis
Electromagnetic compatibility	acc.toISO7637-3,ISO11452-2,ISO11452-3,ISO11452-4，ISO11452-5，GB/T 28554-2012，GB/T 17626.5-2008，EN 61000-6-4，GB/T 28554-2012
Environmental adaptability	acc.toQC/T413-2002,GB/T28046.4-2011,QC/T413-2002,GB/T28046.4-201,GB/T2423.10-200,GB/T2423.43-2008,IEC60068-2-27：2008

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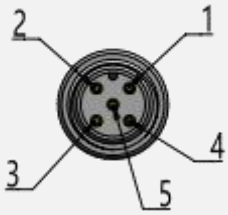
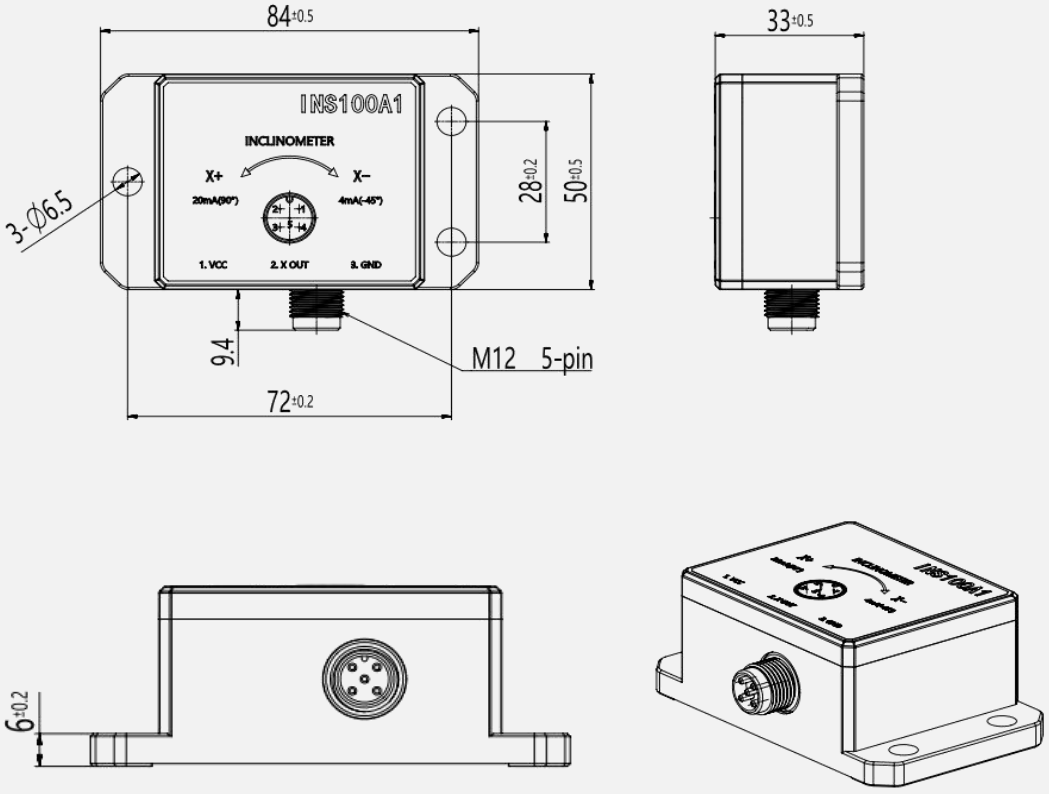
3 Interface definition



M12,5-pin

Pin	Definition
1	VCC
2	X-OUT
3	GND
4	N.C.
5	N.C.

4 Installation dimensions



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5 Precautions for use

(1) The power supply of this product uses an independent power supply. It is recommended not to connect with other loads. During use, the power supply does not allow serious safety hazards or instability, otherwise it will cause the product to fail!

(2) When using this product, please work strictly in accordance with the specified wiring method under the specified power supply voltage to prevent short circuits caused by error operation and damage the power and sensor.

(3) Do not disassemble the sensor privately without permission, so as not to cause the sensor to work properly.

(4) This sensor is a precision device, please take it lightly during use.

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