WTS series CAN Bus inclinometer module

Product introduction



Woosens WTS series CAN Bus inclinometer module is a low power consumption and high-performance inclinometer module. it made by the high-accuracy accelerometer MEMS device and standard MCU, built-in automatic compensation and advanced filtering algorithms. The product has undergone strict production calibration, factory inspection, to ensure excellent product consistency and reliability.

WOOSENS WTS series CAN Bus inclinometer module with two interface modes: SAE J1939 standard protocol and CANopen standard protocol, Customers can choose the appropriate output interface according to the actual situation of your system, which is convenient for customers who use Bus communication and is compatible with other standard protocol modules.

Features

- High accuracy, high stability
- CANopen / SAE J1939 interface
- Power supply: 9~35V
- IP67 protection
- Operating temperature -40-85℃
- RoHS

Application

Inclination measurement | Horizontal adjustment | Dam, bridge inspection | Surveying & mapping instrument

With many potential applications, the WTS series inclinometer modules provide flexible and convenient command Settings, and many parameters are user-programmable.

Product specification

Electrical Specification

Parameter	Condition	Minimum	Typical	Maximum	Unit
Power supply	Wide voltage	9	12	35	V
Operating current		20		40	mA
Operating temperature		-40		+85	℃
Store temperature		-40		+100	℃

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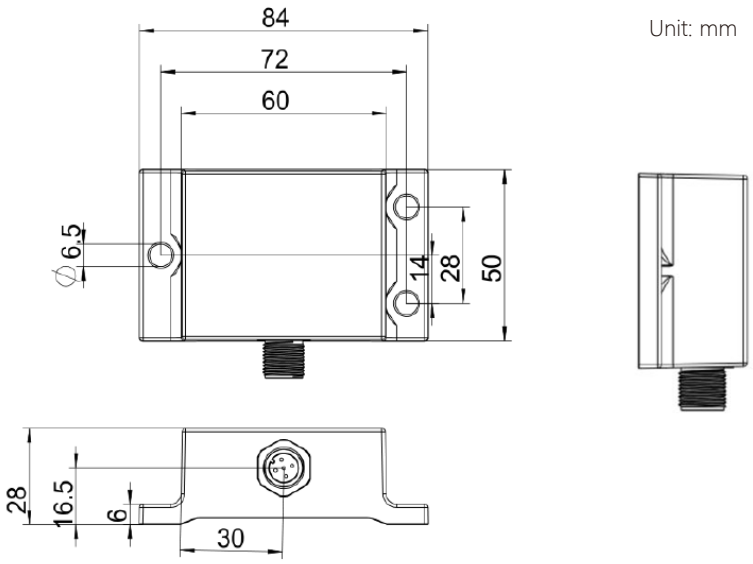
Performance Specification

Parameter	Condition	Specification
Measuring axis		X-Y(360°Measuring range is uniaxial only)
Measuring range		±15°/±30°/±90°/0-360°
Output resolution		0.01°
Repeatability		0.05°
Frequency response		5Hz
Relative accuracy	±15°measuring range	0.05°
	±30°measuring range	0.1°
	±90°measuring range(<±15°)	0.05°
	±90°measuring range(<±60°)	0.15°
	0-360°measuring range	0.10°
Temperature drift		0.008°/℃
Default communication baud rate		250K
Weight		200g

Note: The relative accuracy is measured at room temperature 25°C.

Mechanical Characteristic

Unit: mm



Interface Definition

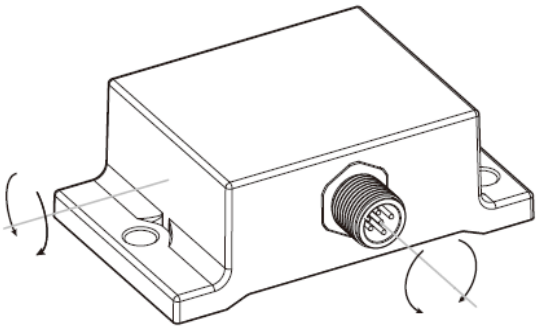
Interface	PIN1	PIN2	PIN3	PIN4	PIN5
	NC	VIN	GND	CANH	CANL



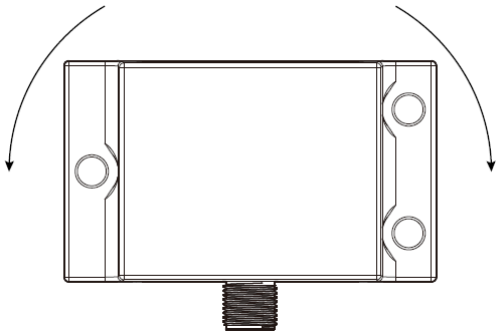
M12-5 Male Connector

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Installation direction



Horizontal installation(Dual-Axis)



Vertical installation(Single-Axis)

Ordering information

SAE J1939 Interface

measuring range	Measuring axis	Part number
±15°	Single-Axis/Dual-Axis	WTS116-L15A/WTS126-L15A
±30°	Single-Axis/Dual-Axis	WTS116-L30A/WTS126-L30A
±90°	Single-Axis/Dual-Axis	WTS116-L90A/WTS126-L90A
0-360°	Single-Axis	WTS116-L36A

CAN open Interface

measuring range	Measuring axis	Part number
±15°	Single-Axis/Dual-Axis	WTS117-L15A/WTS127-L15A
±30°	Single-Axis/Dual-Axis	WTS117-L30A/WTS127-L30A
±90°	Single-Axis/Dual-Axis	WTS117-L90A/WTS127-L90A
0-360°	Single-Axis	WTS117-L36A

Communication Protocol

For the WTS1x6 module communication protocol, please refer to <The SAE J1939 Inclinometer Module Communication Protocol Manual V2.0>

For the WTS1x7 module communication protocol, please refer to <The CAN open Inclinometer Module Communication Protocol Manual V2.2>

Note: All Specifications are subjected to change without notice.

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