WTS Series 4-20mA current output inclinometer

Product introduction

Woosens WTS series current output inclinomete module which made by high-accuracy acclerometer MEMS device and standard MCU, built-in advanced anti-vibrtion filtering algorithms. The product has undergone trict production alibration, factory inspection, to ensure excellent product consistency and reliability.

WOOSENS WTS series current output inclinomete module adopts 4~20mA standard interface, which can be directly connected to various industrial control hosts. Housing in a fineness aluminium alloy case, the WTS series inclinometer provides IP67 rated waterproof, It has excellent load capacity and anti-interference ability.

Features

- · High precision, high stability
- · Anti vibration
- · Anti-interference
- · IP67 Protection
- · 3D MEMS sensor
- · RoHS

Application

Angle measurement

Construction vehicle

Engineering machinery

Equipment and Instrument Status Monitoring

Product specification

Electrical Specification

Parameter	Condition	Minimum	Typical	Maximum	Unit
Power supply	Wide voltage	9	12	35	V
Operating current		20		30	mA
Operating temperature		-40		+85	℃
Store temperature		-40		+100	℃

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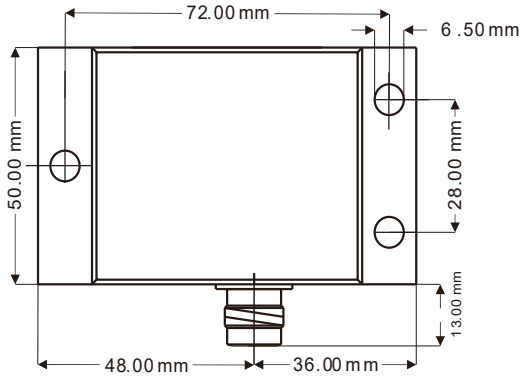
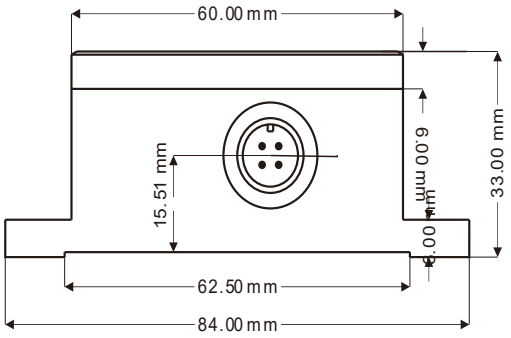
Performance Specification

Parameter	Condition	Specification
Measuring axis		X-Y
Measuring range		±15°/±30°/±90°/0-360°
Output current @ 0°		12mA
Output current range		4-20mA
Frequency response		10Hz
Temperature drift	-40~85℃	0.008°/℃
Sensitivity	±15°Range	0.53mA/°
	±30°Range	0.27mA/°
	±90°Range	0.089mA/°
	0-360°Range	0.045mA/°
Weight		240g

Note: All patameters are measured at room temperature 25°C.

Mechanical Characteristic

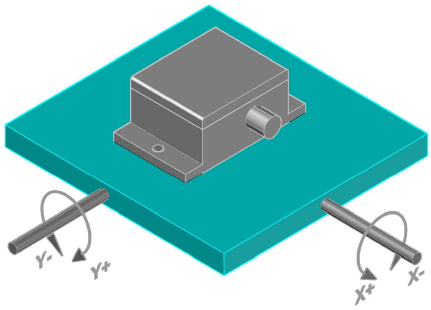




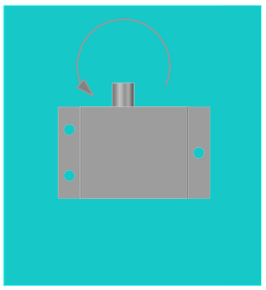
Interface Definition

Interface	Red	Yellow	Green	Black
Single-Axis	VIN	X-OUT	NC	GND
Dual-Axis	VIN	X-OUT	Y-OUT	GND

Installation direction



Dual-Axis



Single-Axis

Formula: Transform Current Into Angle

Angle(°)=(Iout(@Angle)-Iout(@0°) /Isensitivity

Example:

Measuring range is ±90°, Sensitivity is 0.089mA/°, the actual measurment X axis output current is 16mA, the actual measurment Output current @ 0° is 12mA, so X axis Angle(°)=(16-12)/0.089 = 45°

Ordering information

Measuring range	Measuring axis	Part number
±15°	Single-Axis/Dual-Axis	WTS114-N15A/WTS124-N15A
±30°	Single-Axis/Dual-Axis	WTS114-N30A/WTS124-N30A
±90°	Single-Axis/Dual-Axis	WTS114-N90A/WTS124-N90A
0-360°	Single-Axis	WTS114-N36A

Note: All Specifications are subjected to change without notice.