NTI-XXXK-LPS-155 series inclinometer specification

☐ General Description

NTI-XXXK-LPS-155 is the high accuracy electronic current inclinometer researched and produced by ZC Tech. Output 4~20mA analog current. It has anti-jamming Characteristic, adapt to long distance signal transmission.
It have 6 optional measuring range, ±5、±10、±15、±30、±45、±60.

Features

Robust aluminum case
Protection level: IP67
Standard three wires 4-20mA output
Standard M12 connector

Applications

Construction machine
Angle measurement
Security control, monitoring, alarm
Alignment control, warping control
Tilt position recorder
Mechanical arm Angle measurement

☐ Technical specification（Unless otherwise specified, the following parameters were measured at room temperature 25°C)

1. Electronic specification

Parameter	Test condition	Min.	Typ.	Max.	Unit
Supply voltage		10.5		32	V（DC）
Quiescent current	Vcc=24V,without load		20	25	mA
Load resistance	VCC=24V			600	Ω
Operating temperature		－40		+85	C
Waterproof				IP67	
Response frequency		3	6	10	Hz
Case size			90*58*30		mm

2. Performance specification:

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P/N	Measuring range	Resolution Degree	Non-linearity (sine)	Zero output current ②	Zero temperature drift
NTI-105K-LPS-155	Single axis ±5	0.01	±0.2	12	±0.008
NTI-110K-LPS-155	Single axis±10	0.01	±0.2	12	±0.008
NTI-115K-LPS-155	Single axis±15	0.01	±0.2	12	±0.008
NTI-130K-LPS-155	Single axis±30	0.05	±0.3	12	±0.008
NTI-145K-LPS-155	Single axis±45	0.05	±0.3	12	±0.008
NTI-160K-LPS-155	Single axis±60	0.05	±0.4	12	±0.008
NTI-205K-LPS-155	Dual axis ±5	0.01	±0.2	12	±0.008
NTI-210K-LPS-155	Dual axis ±10	0.01	±0.2	12	±0.008
NTI-215K-LPS-155	Dual axis ±15	0.01	±0.2	12	±0.008
NTI-230K-LPS-155	Dual axis ±30	0.05	±0.3	12	±0.008
NTI-245K-LPS-155	Dual axis ±45	0.05	±0.3	12	±0.008
NTI-260K-LPS-155	Dual axis ±60	0.05	±0.4	12	±0.008
Unit	°	°	°	mA	°/C

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Remark1: Resolution means the least variation of measured device, which can be detected by sensor during the measuring range.

Remark2: Zero angle deviation≤±1.5 degree.

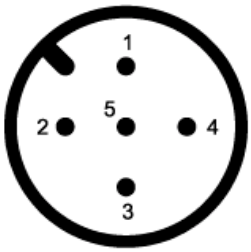
V Output current and angle:

Angle＝ACSIN(((I out-offset)*SIN(Measuring range/2))/8)

Remarks: I out：output current

offset：12mA，output current in zero angle

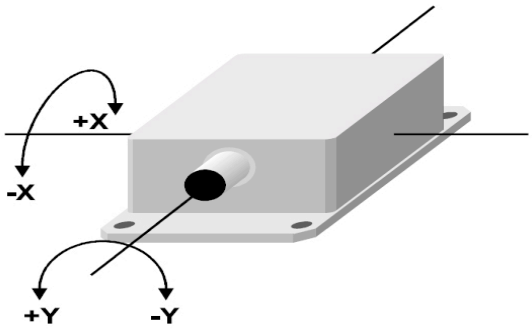
VI Diagram and Pin Definition



(View from the outside)

Pin	Allocation
1	VCC
2	Y axis current output I_Y
3	GND
4	X axis current output Ix
5	NC

VII Mounting and installation:（Unit：mm)



1. Aluminum Housing Size

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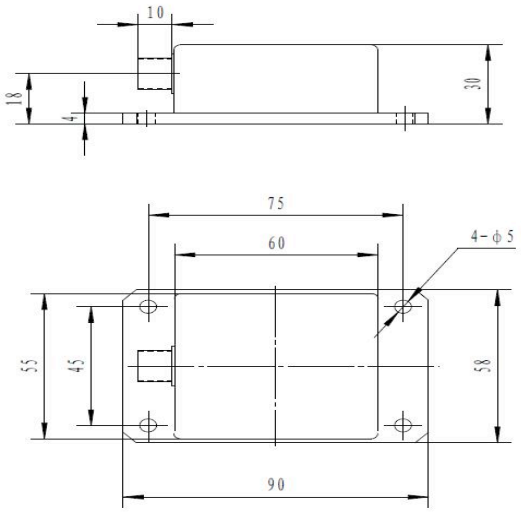
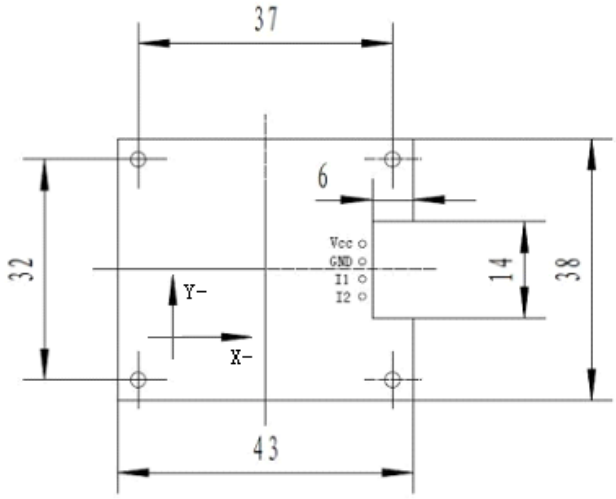


2. PCB Size



VIII Order information：Inclinometer is with M12 - 5 pin connector male part, female with 2m cable included.

The sensing axis of single tilt sensor is X axis.

Specifications subject to change without notice!

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