NTI-230L-LNT two axis inclinometer

General description

NTI-230L-LNT two axis inclinometer is researched and produced as two axis structure, horizontal mount, measuring X and Y axis.The measuring range is ±30 degree. It outputs analog voltage.Entirely industrial parts of device, stable and credible performance.

Features

Silicon 3D MEMS sensor
Shock resistance>20000g
Resolution < 0.001 °

Applications

Platform tilt measurement
Equipment and instrument condition monitoring
Rotational orientation measurement

Electrical characteristics

Parameter	Condition	Min	Type	Max	Units
Supply voltage		8		36	V（DC）
Static operating current	Without load		5.7	6.5	mA
Output load	Resistive	10			KΩ
	Capacitive			20	nF
Operating temperature		－40		+85	□

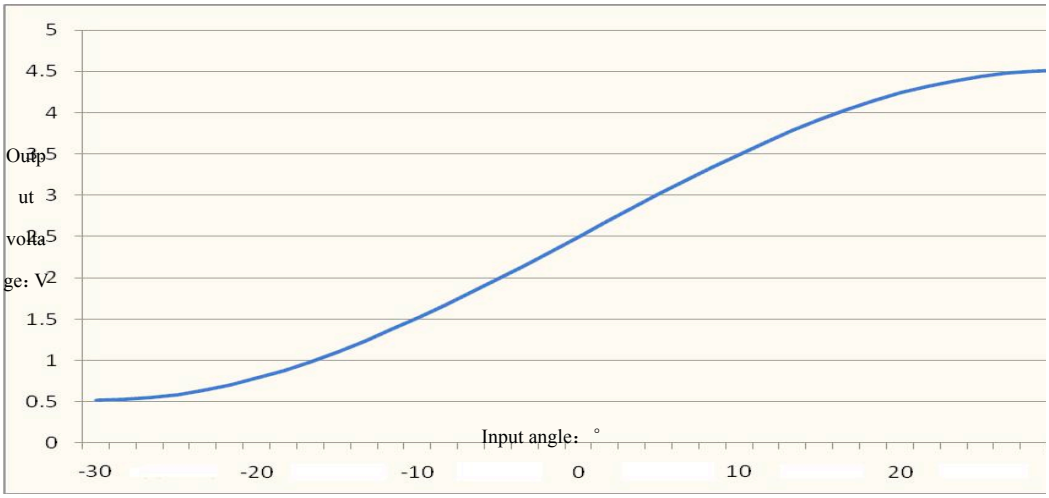
Performance characteristics

Parameter	Condition	Min	Type	Max	Units
Measuring range	X axis, Y axis		±30		°
Zero output voltage		2.43	2.5	2.57	V
Offset zero point error				1	°
Offset temperature error	0～+70□		±0.2	±0.3	°
	-25～+85□		±0.4	±0.6	°

Als Odde, DK9560 Hadsund Denmark – Fax +45 98581866 E-mail: ntt@inclinometer.eu

Sensitivity			2		V/g
	0～1°		70		mV/°
Sensitivity temperature error	0～+70□		-0.8…0.3		%
	-25～+85□		-1.5…0.5		%
Cross axis sensitivity			3		%

Input-output characteristics



Voltage- angle conversion

$$\text{Inclination angle} = \arcsin\left(\frac{\text{Vout-offset}}{\text{Sensitivity}}\right)$$

Vout：analog output volatge

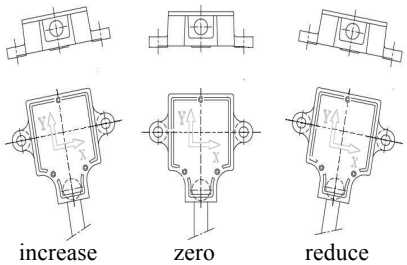
offset：2.5V，output voltage at zero point.

Measuring direction

Y axis

Mount horizontal

Mount vertical

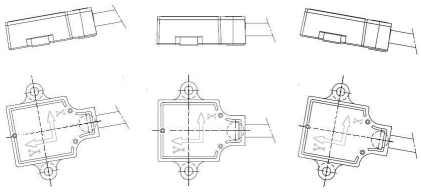


increase zero reduce

X axis

Mount horizontal

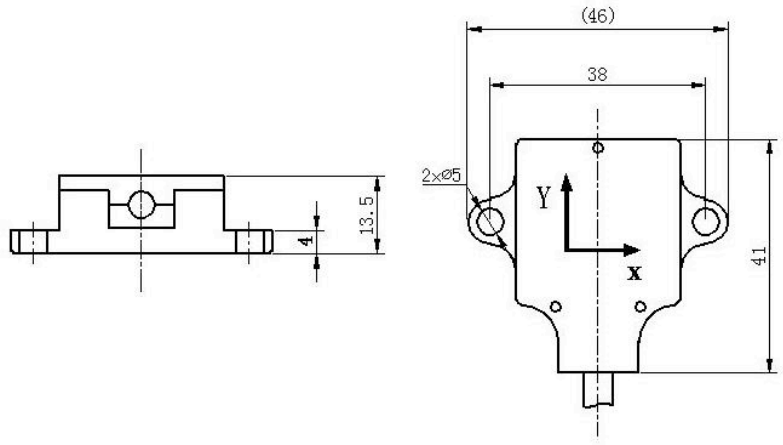
Mount vertical



increase zero reduce

Sensor dimensions

Dimensions in mm



Electrical connection

Wire color	Name	Function
Red	Vcc	Power supply 8 – 36VDC
Black	GND	Ground
Yellow	Out X	X axis output
Blue	Out Y	Y axis output

Ordering information: NTI-230L-LNT (Aluminium housing) NTI230-LNT (PCB version)

Specification subject to change without notice

Als Odde, DK9560 Hadsund Denmark – Fax +45 98581866 E-mail: ntt@inclinometer.eu