

## NTI-1K0K-LPS-R-M12 tilt sensor specification



### I . General description

NTI-1K0K-LPS-R-M12 is a single axis, high accuracy sensor. Which is researched by ZCI Electronic & produced to NTT DK.

Standard 3 wire current analogue output 4~20mA.  
Have strong shock resistance.  
Suitable for long Distance signal transmit.

### II . Features

Devices in industrial assembly.  
Stable and reliable.  
Shock resistance is very high  
Vibration resistance also at high performance  
High performance/price level.  
Protection grade: IP68

### III. Application

Engineering machinery  
Construction vehicles  
Safe control system.  
Level monitoring.

### IV . Data parameter

	Item	Condition	min	type	max	unit
Operating Parameter	Supply voltage①		12	24	30	V
	Static working current	Supply voltage 24V		30	40	mA
	Operating temperature		-40		85	°C
Performance Parameter	Measure range②			0~180		°
	Resolution			0.01		°
	Non-linearity③			±0.2		%/FS
	Sensitivity		0.0871	0.0889	0.0907	mA/°
	Zero output current		3.995	4.000	4.005	mA
	Zero temperature drift			0.5	0.86	°
other	Housing size	Nylon		72*72*45		mm
	Cable length	As default!	0. 9	1	1.1	m

① Operating voltage should in the range to keep the sensor works normally.

Recommend operating voltage 24V.

② Sensor should be vertical installed.

③ Non-linearity means the drift degree between the output curve and best fit straight line within the measuring range.

**V. Output features:**

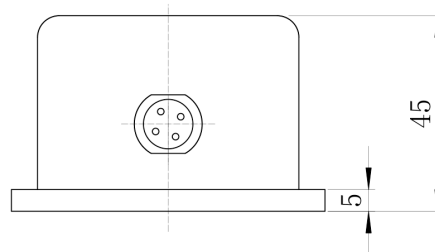
The relationship between current and angle:

Angle value = (present output current - zero point output current) /sensitivity;

Take NTI-1K0K-LPS-R-M12 as example(sensitivity 0.0889): If the current test out is 13.982MA, the angle value is:

$$\alpha=(13.982-4.000)/ 0.0889=112.28^{\circ}$$

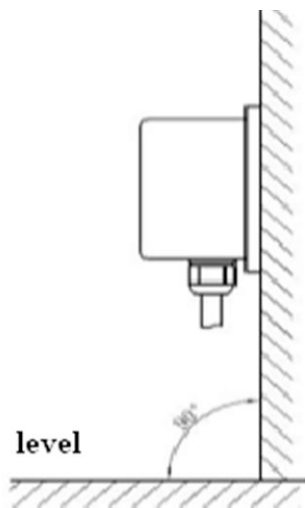
**IX. Sensor size and wire definition:**



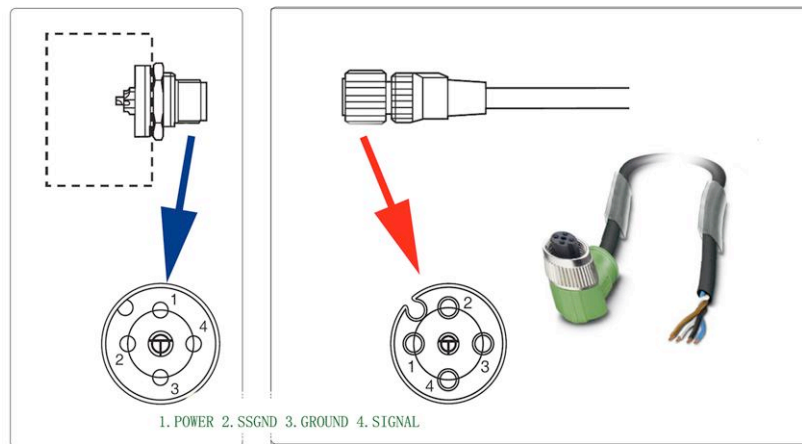
**X. Installation and wire connection sketch map.**

This product should be installed as the below sketch as wall mounting

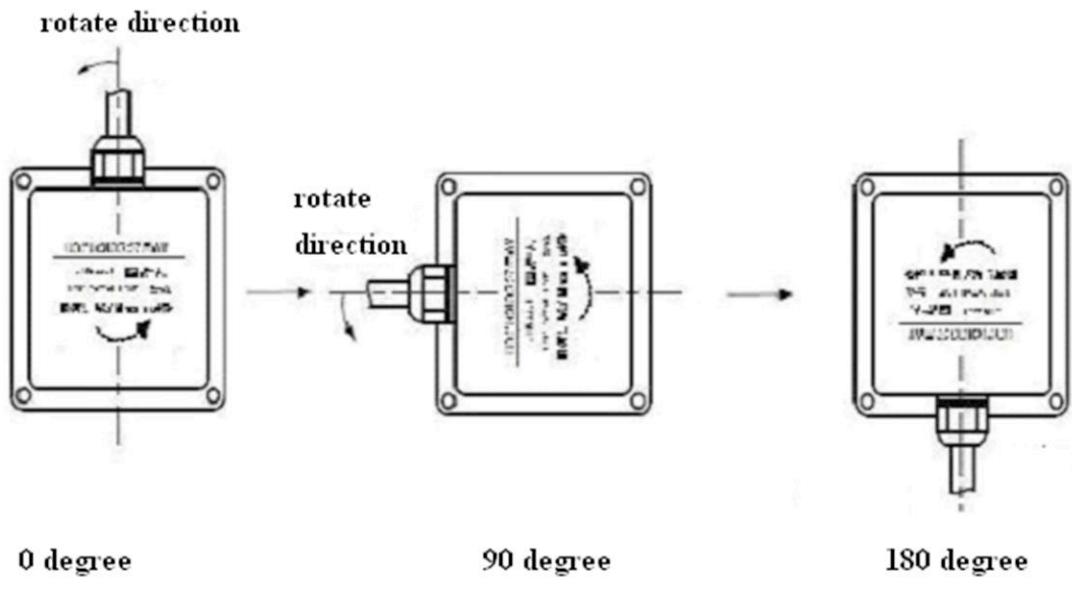
If the mounting level or working level tilt, the data measured will have deviation.



M12 wire connection definition:



**XI. Working position sketch map:**



Cable length as default: 1meter connected to female M12 connector  
 5m & 10 meter as standard option or separate M12 female with screw connection for longer cable.

**XII. Order information: NTI-1K0K-LPS-R-M12      Measuring range 0~180 degree;**

**Specifications subject to change without notice!**