# WSK Series inclinometer Switch

## Product introduction



Woosens WSK series inclinometer switch is a cost-effective inclinometer module. it made by high-accuracy accelerometer MEMS device and standard MCU, built-in advanced anti-vibration filtering algorithms. The product has undergone strict production calibration, factory inspection, to ensure excellent product consistency and reliability.

WOOSENS WSK series inclinometer switch has switching signal output interface. The delay times of alarm and alarm-remove can be customized according to the actual situation. the modules is a high accuracy, high stability product, It is widely used in engineering machinery industry.

### Features

- Dual colour indicator light
- One key zero-setting function
- Dual axis measurement with switching signal output
- Delay times of alarm and alarm-remove can be customized
- IP65 protection with engineering plastics housing

### Application

Aerial work platform | Crane and lifts | Automatic positioning platform

## Product specification

### Electrical Specification

| Parameter | Condition | Minimum | Typical | Maximum | Unit |
|---|---|---|---|---|---|
| Power supply | Wide voltage | 9 | 12 | 35 | V |
| Operating current | | 30 | | 50 | mA |
| Operating temperature | | -40 | | +80 | ℃ |
| Store temperature | | -40 | | +100 | ℃ |

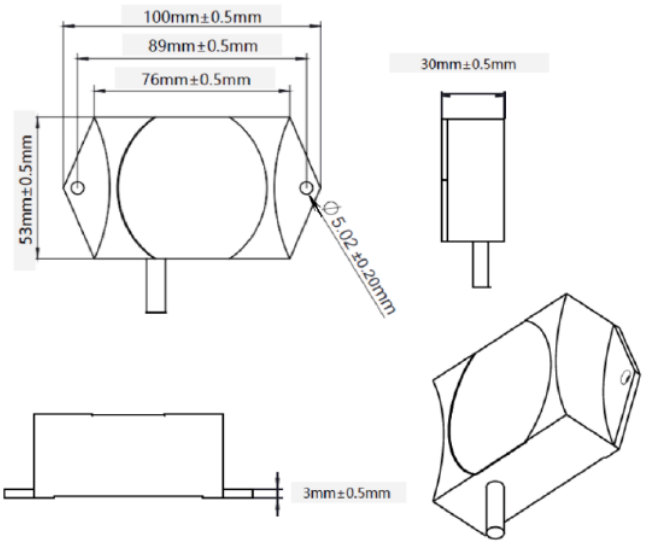
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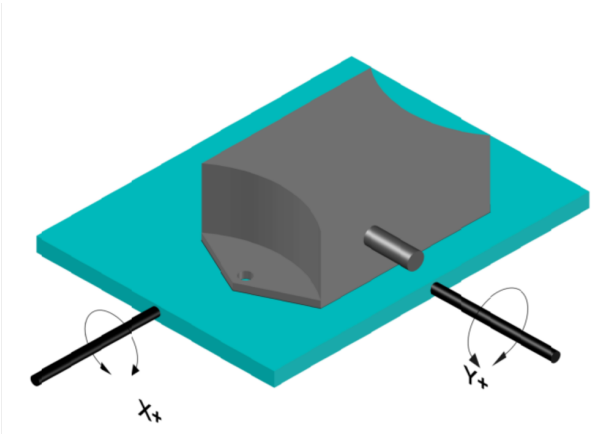
| Parameter | Condition | Specification |
|---|---|---|
| Measuring axis | | X-Y |
| Measuring range | | ± 30° |
| Output resolution | | 0.01° |
| Repeatability | | 0.02° |
| Frequency response | | 10Hz |
| Relative accuracy | ±30°Measuring range | 0.2° |
| Weight | | 160g |

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

## Mechanical Characteristic




## Installation direction



## Interface Definition

| Red | Blue | Brown | Black |
|---|---|---|---|
| VIN | RXD | TXD | GND |
| Yellow | | | |
| OUT | | | |

Note: RXD and TXD are the interfaces used for factory calibration, and users do not need to use them.

## Ordering information

| WSK | - | ① XXX | - | ② XXX | - | ③ XX | - | ④ 5X |
|---|---|---|---|---|---|---|---|---|

① X-axis alarm angle, if 2.5 degrees alarm is required, it is 025

② Y-axis alarm Angle, if 3.0 degrees alarm is required, it is 030

③ Alarm delay time, if 1 second alarm delay is required, it is 10

④ Level state when alarming, 5L is low level, 5H is high level

## Indicator light description

| Condition | Red light | Green light | Comments |
|---|---|---|---|
| Normal | Off | On | Indicates that the angle is within the alarm threshold |
| Normal turn to alarm | Off | Flashing | Indicates that the angle exceeds the threshold from within the alarm threshold |
| Alarm | On | Off | Indicates that the angle is outside the alarm threshold |
| Alarm turn to Normal | Flashing | Off | Indicates that the angle recovers from outside the alarm threshold to within the threshold |

## Zero Setting:

1. Find the zeroing hole to the left of the outlet direction.
2. Use the zeroing tool to insert the zeroing hole and hold down the button. You can see the red and green lights flashing alternately (at this time, the zeroing operation can be performed).
3. Keep the red and green lights flashing alternately, while observing the status changes of the indicator lights: from the red and green lights flash alternately and turn into steady red and green light on at the same time, and remove the zero-setting tool until the green light alone is always on;
4. Turn off the power.
5. Turn on the power again, and confirm that the green light is on, indicating that the zero setting operation is successful. If the red indicator is on, it means that the zero-setting operation has failed, and you need to go back to the first step to perform the zero-setting operation again.

**Recommend: Need Zero setting in following situation**

1. The sensor has just been installed
2. Compared with the last zero setting, the temperature increased or decreased by more than 15℃

Note: All Specifications are subjected to change without notice.