

## SST250 Inclinometer

### Feature

High accuracy, High resolution, High stability, Small size, Light weight, Easy to integrate, IP67 protection,  $-40\sim 85^{\circ}\text{C}$  operating temperature, Single-axis, 0.5~4.5V DC voltage output RS232/4~20mA output

SST250 series of inclinometers that Vigor company developed against low-cost applications of construction machinery industry are high-performance, firm angle measuring devices. The models not only satisfy the application requirements of the general, but also improve the reliability and stability by taking a variety of measures, including the use of automotive application-level MCU, a special protective handling PCB board, carefully selected cables, comprehensive automated testing before delivery and precision machining of aluminum alloy shell and so on.

Through the RS232, SST250 series inclinometer can work in single send or continuous send mode, you can also change the address, baud rate and others of the sensor.

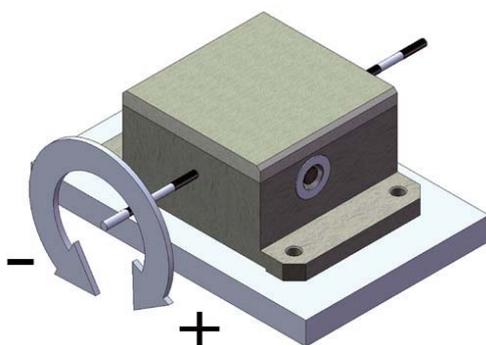


### Application field

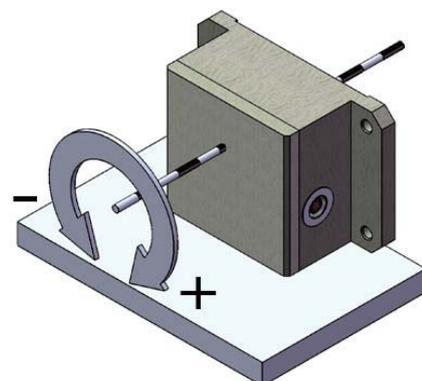
Factory automation, Instrumentation, shipping, Agriculture machinery, Construction machinery, Civil engineer, War industry, Aviation, others

### Installation and Using

Mounting place should be chosen in the center of the measured target so as to reduce the dynamic acceleration disturbance. For the range  $\leq \pm 60^{\circ}$ , it adopt the horizontal installation, select the bottom surface of the sensor as a reference plane, the top surface of the sensor is towards the top of the roof, shown as the below Figure 1); for the range  $> \pm 60^{\circ}$ , it adopt vertical installation or wall-installed, choose the side of the sensor as the installation reference plane, the sensor cap on the side which is facing the user, shown as the below Figure 2).



1) Range  $\leq \pm 60^{\circ}$

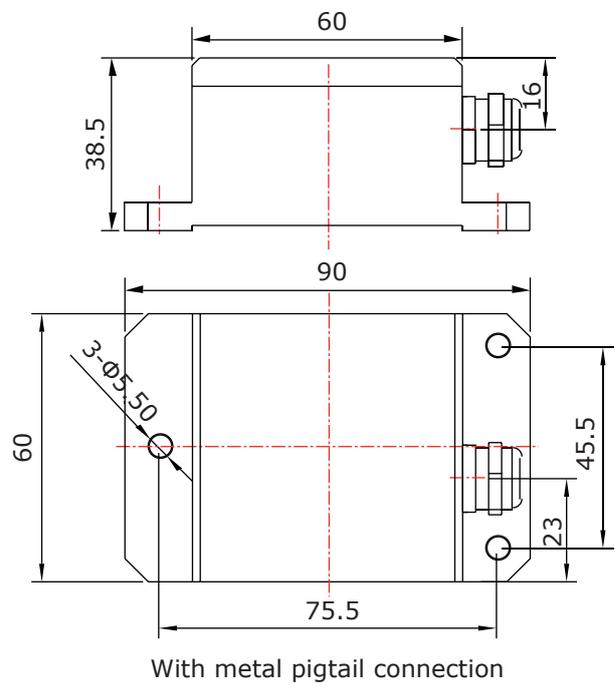
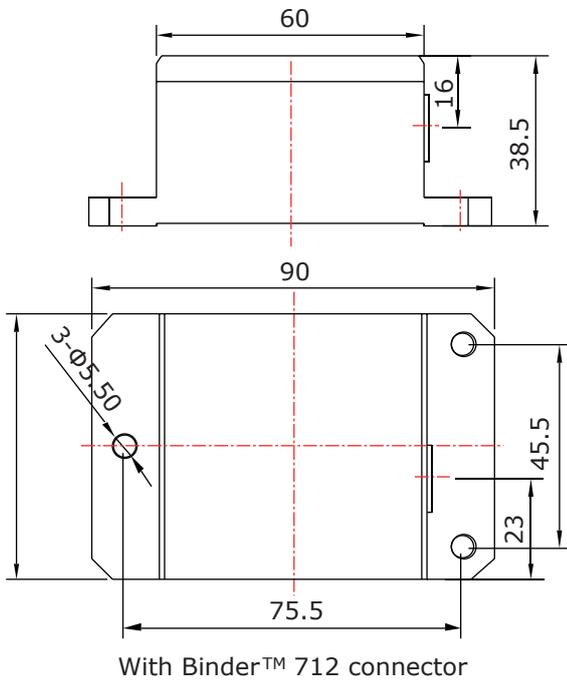


2) Range  $> \pm 60^{\circ}$

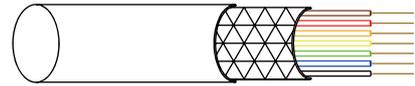
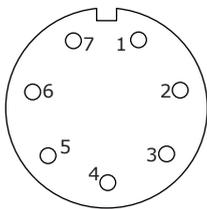
## Parameters

Product Type	SST250-5	SST250-10	SST250-15	SST250-30	SST250-45	SST250-60	SST250-90
Range	±5°	±10°	±15°	±30°	±45°	±60°	±90°
Accuracy@25°C	±0.03°	±0.03°	±0.03°	±0.03°	±0.03°	±0.03°	±0.05°
Zero Repeatability	0.02°	0.02°	0.02°	0.02°	0.02°	0.02°	0.03°
Non-Linearity	±0.25%FS	±0.15%FS	±0.1%FS	±0.05%FS	±0.03%FS	±0.025%FS	±0.025%FS
Resolution	0.001°	0.001°	0.001°	0.003°	0.005°	0.005°	0.001°
Zero Temperature Coefficient	<0.0005°/°C						
Sensitive Temperature Coefficient	<0.001°/°C						
Cross-Axis Error	0.3%FS@range of ± 30°						
Response time	0.3s						
Output Signal	RS232/4~20mA						
Output impedance	<1KΩ						
Power Rejection Ration	≥85dB						
Power supply	16~36V DC						
Consumption current	≤60mA@24V DC						
Operating temperature	-40~85°C						
Storage temperature	-40~125°C						
Connection	Binder 712 connector Metal Pigtail, Standard 2 meters cable						
Cable	Rvvp 7x0.12mm <sup>2</sup> Seven pin shield cable						
IP protection class	IP67						
Housing Material	Anodized Aluminum						
Dimension	90x60x38.5mm						
Shock	1000g, 0.5ms, 3 times / axis						
Vibration	10g rms, half of Sine, Frequency 20~2000Hz						
Weight	240 g( Except cable and connector)						

### Housing size (mm)



### Connection



The Pin definition	
Pin	Function
1	Power+
2	Power GND/ Signal GND
3	NC
4	Iout
5	NC
6	TXD
7	RXD

The pigtail connection definition	
Color	Function
Red	Power+
Black	Power GND/ Signal GND
Green	NC
Yellow	Iout
White	NC
Blue	TXD
Brown	RXD

## Order

Model	Range	Wiring	Axis	Output
SST250-5	±5°	Binder™ 712 connector	1	RS232/4~20mA
		Metal Pigtail		
SST250-10	±10°	Binder™ 712 connector	1	RS232/4~20mA
		Metal Pigtail		
SST250-15	±15°	Binder™ 712 connector	1	RS232/4~20mA
		Metal Pigtail		
SST250-30	±30°	Binder™ 712 connector	1	RS232/4~20mA
		Metal Pigtail		
SST250-45	±45°	Binder™ 712 connector	1	RS232/4~20mA
		Metal Pigtail		
SST250-60	±60°	Binder™ 712 connector	1	RS232/4~20mA
		Metal Pigtail		
SST250-90	±90°	Binder™ 712 connector	1	RS232/4~20mA
		Metal Pigtail		