

QJY01 TYPE Inclinometer

1. Brief Introduction

This product is equipped with high accuracy MEMS accelerometer, by detecting acceleration component on its sensitive axis, using the filtering technique and system compensation algorithm, calculates inclination angle of the measuring carrier relative to the horizontal angle. Especially suitable for machinery manufacturing, equipment installation, road and bridge monitoring, automatic control and other static measurement applications.

Aimed to the application scenarios of industrial complex, this product is specially designed for protection, the protection level of IP67, which is effective against moisture, salt fog/mist and electromagnetic interference and other complex environment, with good environmental adaptability and reliability.



2. Features

- (1) Using high accuracy MEMS accelerometer to measure the biaxial inclination variation, which taking the horizontal as reference surface, output angle is taking the measuring datum plane as a reference.
- (2) The users can reset the output position of relative zero position again by sending an instruction.
- (3) Waterproof IP55, strong electromagnetic resistance
- (4) High accuracy, small size and weight, low dissipation
- (5) Strong shock and vibration resistance

3. Performances

Sr. No.	Item	Grade	Remark
System			
1	Measurement range	$\pm 30^\circ$	
2	Measurement accuracy	0.01° ($\pm 30^\circ$ range)	Bias
3	Resolution	0.001°	
Environmental Suitability			
4	Shock	40g	
5	Working Temperature	$-40^\circ\text{C} \sim 65^\circ\text{C}$	$-40^\circ\text{C} \sim 65^\circ\text{C}$
6	Storage Temperature	$-45^\circ\text{C} \sim 75^\circ\text{C}$	$-45^\circ\text{C} \sim 75^\circ\text{C}$
7	Vibration	Meet the vehicle vibration requirement of GJB150.16A-2009	
Physics characteristics			
8	Size	63*44*19mm	
9	Weight	50g	
10	Power supply	18VDC ~ 36VDC	
11	Power dissipation	1W	
Interface characteristics			
12	Interface	RS232、RS422、CAN	Selectable
13	MTBF	$\geq 1500\text{h}$	
15	Data refresh rate	100Hz	
15	Band rate	115200bps	

4. Application

High accuracy positioning navigation of various vehicle carrier or land-based platform. Widely used in unmanned driving, mission vehicle navigation, mapping, underwater, underground positioning navigation and other fields.

- (1) Measuring angle of departure of artillery.
- (2) Radar antenna angle alignment.
- (3) Attitude detection and antenna angle measurement of satellite communication vehicle.
- (4) Special vehicle leveling
- (5) Dam detection.
- (6) High-altitude platform safety detection.
- (7) Application of shield pipe jacking.
- (8) Detection of highway bridge.