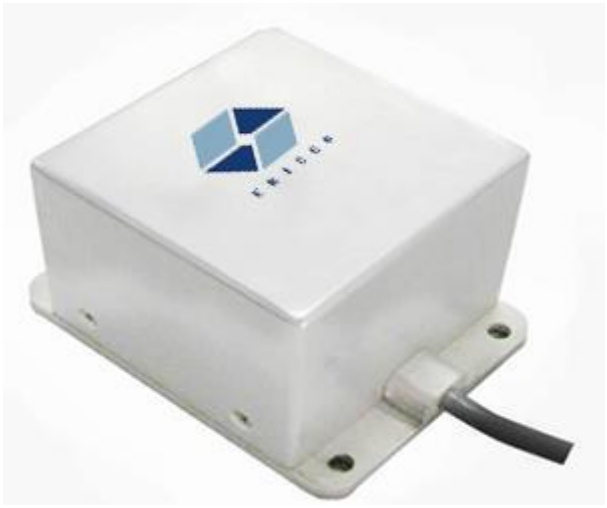
Product Description

ER-C-05 is designed for the field control of industry. MODBUS output dual-axis inclination sensor is introduced, and RS485 hardware differential bus is used to transmit data. A high-precision 12bit A/D differential converter is built in, which can measure the sensor output inclination and pitch angle relative to the horizontal surface through the third-order filter algorithm. Due to the inbuilt ADI's high-precision digital temperature sensor, the temperature drift of the sensor can be corrected according to the change of the inbuilt temperature sensor to guarantee the high repeatability of the product in the low temperature and high temperature environment. The output response frequency standard can reach 20Hz. If higher response frequency is needed, our company can customize it according to users. The product is a real industrial grade product with reliable and stable performance and good expansibility. Suitable for all kinds of harsh industrial control environment.



Main features

•Dual axis inclination measurement

•Measuring range±45°

•Accuracy±0.5°

•DC 9～36VWide voltage input

•Wide working temperature-40～+85℃

•Resolution ratio 0.1°

•IP66 Protection grade

•High vibration resistance>2000g

•Direct lead interface

•Size L61×W35×H21mm

•Output modeMODBUS

Product application

•Satellite dishes search the stars

•Railway locomotive monitoring

•All kinds of engineering machinery dip measurement

•Petroleum drilling equipment

•Radar vehicle platform detection

•Attitude navigation of underground drill

•Measurement of initial firing Angle of gun barrel

•Directional measurement based on dip Angle

•Satellite communication vehicle attitude detection

•Measurement of navigation posture of ships

•Shield pipe jacking application

•Slope monitoring of geological equipment

Product performance index

Parameter	Condition	ER-C-05	Unit
Measurement Range		±45	°
Measurement Axis		x-axis and y-axis	
Resolution Ratio		0.1	°
Measurement Accuracy	@25℃	±0.5	°
Zero Temperature Coefficient	-40~85°C	±0.01	°/℃
Sensitivity Temperature Coefficient	-40~85°C	≤100	Ppm/℃
Power On Start Time		1	S
Response Time		0.05	s
Output Signal	MODBUS		
Electromagnetic Compatibility	According To EN61000 And GBT17626		
Mean Time To Work Without Failure MTBF	≥50000hours/time		
Insulation Resistance	≥100Ω		
Shock Resistance	100g@11ms、Triaxial harmony (half normal)		
Anti-Vibration	10grms、10~1000HZ		
Waterproofing Grade	IP66		
Cable	Standard: 1 meter length, wear resistance, oil proof, wide temperature, shielding cable 4*0.3mm2		
Weight	120g(No cable)		

Electrical parameters of products

Parameter	Condition	Minimum Value	Typical Value	Maximum Value	Unit
Supply Voltage	Standard	9	12、24	36	V
	Customizable		5		V
Working Current	Non-loaded		40		mA
Operating Temperature		-40		+85	℃
Storage Temperature		-40		+85	℃

Product mechanical parameters

•Connector: 1m straight leads (customizable)

•Protection class: IP66

•Material: aluminum alloy grinding sand oxidation

•Installation: three M4 screws

Operating principle

The core control unit imported from Europe is adopted. Using the earth's gravity principle, when the tilt Angle unit tilts. The gravity of the earth will produce the component of gravity in the corresponding pendulum, and the corresponding capacitance will change, which will be measured at the corresponding capacitance. Zoom in, filter, transform and get the dip.