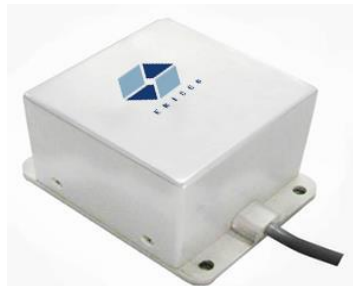


Product introduction

ER-D-08 series dip Angle is a small-volume MEMS dual-axis dip Angle sensor developed by reffen. With the latest micro-electro-mechanical manufacturing process dip Angle unit built in, the product volume is small, the long-distance transmission can reach more than 2000 meters, strong anti-external electromagnetic interference ability, and it can adapt to long-term work in the harsh industrial environment.

This product adopts the non-contact measuring principle, which can output the current attitude dip Angle in real time. Is the industrial automation control, platform measurement posture ideal choice.



Main features

- Dual - axis inclination measurement
- Range of plus or minus 0 ° ~ + 90 ° is optional
- Accuracy: refer to performance table
- DC9~36Vpower supply
- Output way 4~20mA
- Wide working temperature-40~+85℃
- IP67 Protection grade
- High vibration resistance>3500g
- High resolution 0.1°
- Small volume 55×37×24mm (Can be customized)

Product application

- Electric blind chair leveling
- Yuntai operation monitorin
- Satellite antenna positioning
- Leveling of medical equipment
- Chassis measurement
- Four-wheel positioning system
- Various engineering machinery Angle control

Product performance index

Parameter	Co ndit ion s	ER-E-08 -10	ER-E-08 -30	ER-E-08 -60	ER-E-08 -90	U nit
Range of measurement		±10	±30	±60	±90	°
Measurement axis		X Y	X Y	X Y	X Y	
Zero output	0°out put	12	12	12	12	mA
Resolution ratio		0.1	0.1	0.1	0.1	°
Absolute accuracy		0.1	0.2	0.3	0.4	°
Long-time stability		<0.5	<0.5	<0.5	<0.5	
Zero temperature coefficient	-40~ 85°C	±0.02	±0.02	±0.02	±0.02	°/°C
Temperature coefficient of sensitivity	-40~ 85°C	≤150	≤150	≤150	≤150	ppm/ °C
Power on start time		0.5	0.5	0.5	0.5	S
The response time		0.05	0.05	0.05	0.05	s
Response frequency		1~20	1~20	1~20	1~20	Hz
Electromagnetic compatibility	According to EN61000 and GBT17626					
MTBF	≥4500 0 h/t					
Insulation resistance	≥100 m					
Impact resistant	100g@11ms、Three axis and with(A half sine wave)					
Anti-Vibration	10gr ms、 10~					

	1000 Hz
Waterproof level	IP67
Cable	Standard 1 m length, wear - resistant, oil - proof, wide temperature, shielded cable 4*0.4mm ²
Weight	90g(not include cable)

Electrical parameters of products

Parameter	Conditions	Minimum	Typical values	maximum	Unit
The power supply voltage	Standard	9	12、24	36	V
	Options		5		V
Working current			50		mA
Output load	Resistive	400		1000	kΩ
Working temperature		-40		+85	°C
Storage temperature		-55		+125	°C

Product mechanical parameters

Connectors: 1m straight leads (customizable)

Protection class: IP67

Material: aluminum alloy grinding sand oxidation

Installation: three M4 screws

Operating principle

The core control unit imported from Europe is adopted. Using the principle of earth gravity, when the inclined Angle unit is tilted, the earth gravity will produce the component of gravity in the corresponding pendulum hammer, and the corresponding capacitance will change. Through amplification, filtering and transformation of the capacitance, the inclination can be obtained.