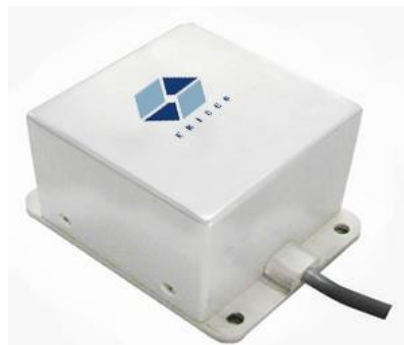


## Product Introduction

ER-D-08 is a dual-axis tilt sensor that simulates voltage output. It can output the inclination of two directional axis at the same time. Users only need to collect the voltage value of the sensor to calculate the inclination of the current object. The built-in (MEMS) micro solid pendulum hammer is converted into Angle change by measuring the change of static gravity field, which is output through voltage (0-5v). It is mainly used to measure the object's inclination to the horizontal plane.

This product adopts the non-contact method to measure the original quantity, which can output the current attitude inclination Angle in real time. The latest MEMS sensing production technology, high precision, small volume, strong ability to resist external electromagnetic interference, strong ability to withstand shock and vibration. Is the industrial equipment, platform measurement posture ideal.



## Main Features

Dual Axis Inclination Measurement

Range  $\pm 1 \sim \pm 90^\circ$  for optional

Accuracy: refer to performance table

Wide voltage input input 9~36V

Output mode 0 ~ 5mA

Wide working temperature -40~+85°C

IP67 protection grade

High vibration resistance >2000g

Resolution 0.01°

Small Size 90 x 40 x 26mm (customizable)

## Product application

Leveling of engineering vehicles

Bridge and dam monitoring

High altitude platform safety protection

Medical device Angle control

Attitude navigation of underground drill

Shield pipe jacking application

Directional measurement based on dip Angle

Slope monitoring of geological equipment

Measurement of pitch Angle of directional satellite communication antenna

Mining machinery, oil drilling equipment

Equipment level control

Alignment control, bending control

### Product performance index

Parameter	Condition	ER-D-08 -10	ER-D-08 -30	ER-D-08 -60	ER-D-08 -90	Unit
Measurement Range		±10	±30	±60	±90	°
Measurement Axis		X Y	X Y	X Y	X Y	
Zero Output	0° output	2.5	2.5	2.5	2.5	mA
Resolution ratio		0.01	0.01	0.01	0.01	°
Absolute Accuracy	@25°C	0.02	0.05	0.08	0.1	°
Long-term Stability		0.05	0.05	0.05	0.05	
Zero Temperature Coefficient	-40~85°	±0.006	±0.006	±0.006	±0.006	°/°C
Sensitivity Temperature Coefficient	-40~85°	≤100	≤100	≤100	≤100	Ppm/°C
Power on start time		0.5	0.5	0.5	0.5	S
Response Time		0.02	0.02	0.02	0.02	s
Response frequency		1~20	1~20	1~20	1~20	Hz
Electromagnetic Compatibility	According To EN61000 And GBT17626					
MTBF	≥50000hours/time					

Insolution resistance	≥100Ω
Impact Resistant	100g@11ms、Triaxial harmony (half normal)
Resistance To Vibration	10grms、10~1000HZ
Waterproof Level	IP67
Cable	Standard: 1 meter length, wear resistance, oil proof, wide temperature, shielding cable 4*0.4mm2
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
	options		5		V
Working Current			30		mA
Output Load	resistive	10			kΩ
	capacitive			20	nF
Operating Temperature		-40		+85	℃
Storage Temperature		-55		+125	℃

### **Product mechanical parameters**

Connector: 1m straight leads (customizable)

Protection class: IP67

Material: aluminum alloy grinding sand oxidation

Installation: four M6 screws