Product Description

ER-D-04 is a CAN2.0B output single-axis tilt sensor for industrial field control. It adopts industrial standard isolated CAN transceiver and built-in high-precision A/D differential converter. Through the 5-order filtering algorithm, it CAN measure the sensor output tilt and pitch angle relative to the horizontal surface.

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 100Hz. 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

•Single-Axis Measurement

•Range±1~±90° for optional

•Accuracy: refer to performance table

•DC9～36V Wide voltage input input

•Wide working temperature-40～+85℃

•Resolution 0.01 °

•IP67 protection grade

•High vibration resistance >2000g

•Direct lead interface

•Size 66 x 44 x 24mm (customizable)

•Output mode:CAN2.0B

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-D-04-10	ER-D-04-30	ER-D-04-60	ER-D-04-90	Unit
Measurement Range		±10	±30	±60	±90	°
Measurement Axis		X	X	X	X	
Absolute Accuracy	@25℃	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	°/℃
Sensitivity Temperature Coefficient	-40~85°	≤100	≤100	≤100	≤100	Ppm/℃
Power on start time		0.5	0.5	0.5	0.5	S
Response Time		0.02	0.02	0.02	0.02	s
Output Rate	5Hz, 15Hz, 35Hz,50Hz and 100Hz can be set					
Output Signal	CAN2.0B bus					
Electromagnetic Compatibility	According To EN61000 And GBT17626					
Mean time to work without failure MTBF	≥50000hours/time					
Insulation 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	80g(No cable)					

Electrical parameters of products

Parameter	Condition	Minimum Value	Typical Value	Maximum Value	Unit
Supply Voltage	Standard	9	12、24	36	V

	Can be customized		5		V
Working Current	No load		40		mA
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 M3 screws