ER-AS-98 Current Type Triaxial Acceleration Sensor

Introductions

ER-AS-98 Current Type Triaxial Acceleration Sensor is a series of accelerometer products with a wide range of applications, which can be used in vibration tests, shock tests and other fields. Output interface: 4~20mA, MK928. It is a capacitive single crystal silicon sensor, which is composed of a microcomputer-processed silicon chip, a low-power ASIC for signal conditioning, a microprocessor with a memory compensation value, and a temperature sensor.

It is characterized by small size, low power consumption, calibrated, fixed structure, and stable output. The new electronic configuration provides solid-state reset power, comprehensive over-power protection, long-term stability and less than the typical value of the following scale factor deviation of 0.1% of the full scale. This series of products have the characteristics of fixed structure, low power consumption, and good deviation stability, ensuring stable output reliability.

Features

Three axes (X, Y, Z) are optional
Accuracy: 0.01g, resolution: 0.001g
Impact resistance: 2000g
Wide voltage input DC: 9~36V
Wide temperature working: -40~+85℃
Industrial grade design
Excellent deviation stability, anti-vibration
Protection level IP67
Low volume (90*40*27 mm)
Output 4~20mA (optional)
Range ±1g/±2g/±4g/±8g/±16g/±32g/±40g optional

Applications

Crash recording, fatigue monitoring and prediction
Satellite solar antenna positioning
Tractor, deep tillage machinery
Mining machinery, oil logging equipment
Medical equipment
Cloud roadbed analysis
Fault detection of high-speed railway
Tilt based monitoring
Various construction machinery angle control
Inspection of bridges and dams

Specifications

Parameters	Condition	ER-AS-98-02	ER-AS-98-08	ER-AS-98-40	Unit
Range	/	±2	±8	±40	g
Deviation calibration	/	<10	<50	<150	mg
To measure the axial	/	X、Y、Z	X、Y、Z	X、Y、Z	Axis
Annual deviation stability	/	1.5(<5)	7.5(<25)	22(<75)	mg
Resolution threshold	@HZ	<1	<5	<15	Mg
Deviation temperature coefficient	-55～+100℃	0.1	0.5	1.5	mg/℃
Bandwidth	/	0~≥400	0~≥400	0~≥400	HZ
Resonance frequency	/	1.6	6.7	6.7	KHZ
Scaling factor temperature coefficient	/	100	100	100	ppm/℃
		-0.2	-0.2	-0.2	max/min
Output signal	4~20mA				
Reliability	MIL-HDBK-217, Shaped Tin Bar				
Impact resistant	20000g, 2ms, 1/2sine				
Shock resistant	10grms、10～1000Hz				
Waterproof level	IP67				
Cable	Standard 1.5 m length, wear resistance, oil proof, wide temperature, shielding cable 4*0.2mm2				
Weight	180g (excluding boxes)				
Connector	6 pins aviation plug				
Capacitive load	1000				

Electrical parameters

Parameter	Condition	Min	Typical value	Max	Unit
Power supply voltage	/	9	12	36	V
Working current	/	/	40	/	mA
Output load	resistivity	10	/	/	kΩ
Capacitive character	/	/	20	nF	/
Working temperature	/	-40	/	85	℃
Storage temperature	/	-55	/	125	℃