

ER-AS-96 Digital Triaxial Acceleration Sensor

Introductions

The ER-AS-96 Digital Triaxial [Acceleration Sensor](#) is suitable for vibration tests, shock tests and other fields. The product adopts digital output interfaces, RS232/RS485/TTL/RS422/MODBUS (optional), and different address codes can be set. The multi-sensor series are suitable for multi-point measurement of data and data analysis.

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 RS232/RS485/TTL/RS422/MODBUS (optional)

Range $\pm 1g/\pm 2g/\pm 4g/\pm 8g/\pm 16g/\pm 32g/\pm 40g$ 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-96-02	ER-AS-96-08	ER-AS-96-40	Unit
Range	/	±2	±8	±40	g
Deviation calibration	/	<2	<5	<10	mg
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
Rate	5Hz output, 15Hz, 35Hz and 50Hz can be set (RS485 does not have this function)				
Output signal	RS232/RS485/RS422/TTL can be ordered				
Reliability	MIL-HDBK-217, Shaped Tin Bar				
Impact resistant	20000g, 2ms, 1/2sine				
Shock resistant	10grms 10~1000Hz				
Waterproof level	IP67				
Cable	Standard 1.5m length, wear resistance, oil proof, wide temperature, shielding cable 6*0.2mm ²				
Weight	180g (excluding boxes)				
Connector	6 pins aviation plug				
Capacitive load	1000				

Electrical parameters

Parameters	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	°C
Storage temperature	/	-55	/	125	°C