Inertial sensors

Inertial Measurement Unit for Overhead Line Galloping

Model CS-IMU-09

Inertial measurement unit for monitoring galloping of overhead power lines, with three-axis gyroscope (± 250 ° / s) and accelerometer (± 15g) data over UART (TTL level).



Range
± 250 ° / s

Output
UART (TTL level)

Supply voltage
3.3VDC

Features

- Galloping frequency, acceleration and amplitude output
- Galloping track and attitude angle output
- Digital UART (TTL level), low power
- Self-calibrating, no strict installation requirements
- Size 59 × 40 × 17mm

Applications

Overhead power line galloping monitoring

Specifications

Electrical

Supply voltage	3.3VDC
Supply current	23mA
Output	UART (TTL level)
Communication baud rate	9600bps
Data output format	16-bit twos complement

Performance

Range (gyroscope, x/y/z)	± 250 ° / s
Range (accelerometer, x/y/z)	± 15g
Bandwidth	≥50 Hz
Nonlinear (gyroscope)	≤ 0.2% Fs
Nonlinear (accelerometer)	≤ 0.5% Fs

Start time	≤ 1 s

Environmental	
Operating temperature	-40 °C ~ + 70 °C
Storage temperature	-55 °C ~ + 100 °C
Impact resistance (0.5ms)	2000 g

Physical	
Weight	80g
Size	59 × 40 × 17mm

Ordering and support

Pricing, samples, lead time and custom versions: dwinsales@163.com, +86 181 0280 8901.

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