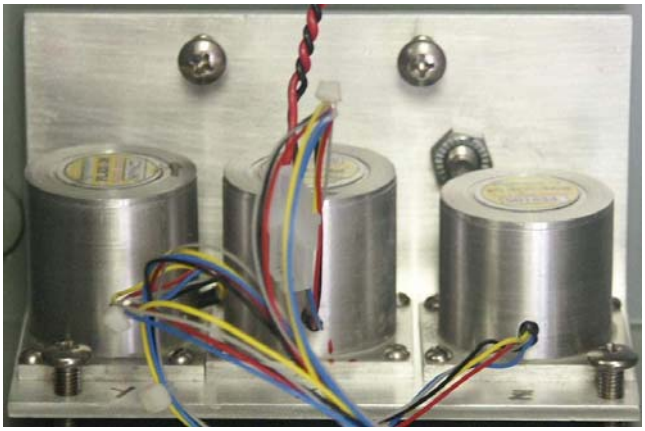
Rugged Low-Noise Low Power Triaxial Force-Balanced Accelerometers

CLA100



The **CLA100** occupies the medium range of the Force Balance Accelerometer line. It offers low noise, high dynamic range, in a frequency band of DC to 50 Hz. It is perfectly suited for most strong motion monitoring applications. The **CLA100** standard packaging is an open-ended ball-bearing mounted metal plate that can be mounted internally in the PMD **SMLA6501** or **SMLA6102** recorders or the **RSB20** Triaxial Rotational Sensor. Optional freestanding field or borehole packages are available. The sensor elements are housed in an epoxy sealed aluminum case. They are extremely rugged, and designed for long-term deployment in field environments. Unlike solid-state type accelerometers, the **CLA100** does not exhibit significant drifting with temperature changes. Options include a variety of full-scale "g" levels, user selectable full-scale "g" ranges, and extended frequency bands.

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CLA100 Specifications

Parameter	Specification
Full Scale Standard Optional	±2g ±0.5g to ±5g user selectable
Dynamic Range	128 dB @ ±10V differential 135 dB @ ±20V differential
Passband: standard	DC – 50Hz; +1, -3dB (damping 0.7 critical) Optional extended passbands available
Output Signal Swing	±5V; ±10V; ±20V differential; 0 to 5V; ±2.5; ±5V; ±10V Single-ended;
Resolution @ ±20V differential	0.4µg @ 1g; 0.8µg @ 2g
Zero g Bias	±0.005g electronic adjustment
Linearity	±0.2% FS over temperature range; Optional 0.1%
Cross Axis Sensitivity	0.02g/g; Optional 0.005g/g
Operating Temperature Range	-20 to +75C Optional to +85C
Supply Voltage	12V nominal
Supply Current (max.)	30mA
Vibration (max.)	10g p-p in 2 – 2000Hz band
Shock (max.)	1000g, 1ms; 100g, 11ms
Humidity	95% R.H. Optional 100% R.H.
Housing (stand alone units only): Std: Optional:	Aluminum NEMA6; Stainless Steel; Borehole; Customized.
Built-in units (into SMLA recorders):	Tilt-adjustable (ball-bearing) plate

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