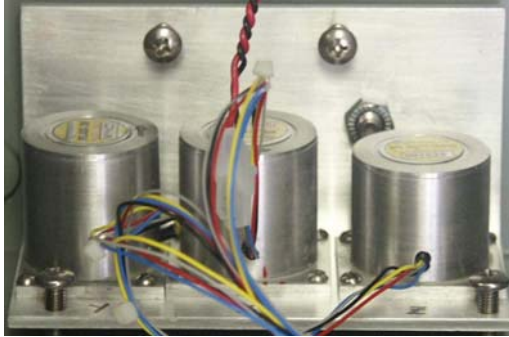




## Rugged Low-Noise Low Power Triaxial Force- Balanced Accelerometers **CLA300 & CLA300BH**



The **CLA300** is an improved triaxial (single-axis sensors are also available) force-balanced accelerometer that offers low noise, high dynamic range, in a frequency band of DC to 50 Hz (optional to 500Hz). It is well suited for most strong motion monitoring applications. The **CLA300** comes in three standard packaging:

- An open-ended ball-bearing mounted metal plate that can be mounted internally in the PMD **SMLA6501** or **SMLA6102** recorders.
- A freestanding field package in NEMA4X aluminum or optional stainless steel enclosure and MIL-spec circular connector.
- A customized narrow down hole unit that includes optional digital magnetic compass: **CLA300BH** package in hi-pressure stainless steel housing and underwater marine connectors for installation in boreholes up to several hundred meters deep.

Each sensor element is housed in an epoxy sealed aluminum case. All units are extremely rugged, and designed for long-term deployment in field or underground environments. Unlike solid-state type accelerometers, the **CLA300** 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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*Specifications subject to change without notice*

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## CLA300 Specifications

Parameter	CLA300	CLA300BH
Full Scale Standard Optional	±2g (±2000gal) ±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 DC – 100Hz up to DC – 500Hz	
Output Signal Swing	±5V; ±10V; ±20V differential; 0 to 5V; ±2.5V; ±5V; ±10V Single-ended;	
Resolution @ ±20V differential	0.4µg @ 1g Full Scale or 0.00004%FS 0.8µg @ 2g Full Scale or 0.00004%FS	
Noise	<12.5µg rms	
Zero g Bias	±0.005g electronic adjustment	
Linearity	±0.03% FS over temperature range;	
Cross Axis Sensitivity	0.003g/g;	
Calibration Constant:	1V/V	
Operating Temperature Range	-20 to +75C Optional to +85C	
Supply Voltage	12V nominal	
Supply Current (max. triaxial)	20-30mA	
Vibration (max.)	10g p-p in 2 – 2000Hz band	
Shock (max.)	1000g, 1ms; 100g, 11ms	
Humidity	95% R.H. Optional 100% R.H.	Hermetically sealed housing
Housing (stand alone units only):	Aluminum NEMA4X; Optional Stainless Steel	Stainless steel 77mm diameter operating pressure up to 1500psi.
Axis-to-Case Alignment	±1 °	
Connectors	MIL-spec circular	Marine underwater
Cable	Optional 6 twisted pairs; shielded	Shielded high-pressure, high-tension 9 twisted pair underwater cable 500 lbs. load; Optional: Kevlar-enforced cable 2000 lbs. load
Built-in units (into SMLA recorders):	Tilt-adjustable (ball-bearing) plate	n/a
Digital compass :	n/a	Built-in
Detectable range:		0-360°
Accuracy:		±0.5 °
Resolution:		0.1 °
Magnetic Dip Angle:		±85 °
Supply Voltage:		5VDC (generated internally)
Supply Current:		20mA active; 0.6mA sleep
Operating Temperature:		-40 to +85C

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