

# AFB - FORCE BALANCE ACCELEROMETER

**Accelerometer Force Balance AFB is a high sensitivity sensor for long-term monitoring of dams and buildings, ideal for studying seismic events at low frequencies of motion.**



Solgeo Models AFB Force Balance Accelerometers are high sensitivity, low noise sensors designed for use in seismic and low level, low frequency motion studies.

The accelerometers are self-contained and provide a high level, low impedance output.

No signal conditioning is required in most applications.

These sensors utilize low noise electronics in conjunction with the force balance principle to make possible measurements in the low frequency micro-G range. Aside from the traditional DC-coupled zero output, the AFB-3C & 2C & 1C also provides AC coupled zero output which eliminates tilt induced or offset errors facilitating high amplification of the basic output.

## APPLICATIONS

- Long-term monitoring on dams, buildings and heritage structures
- Monitoring that requires higher sensitivity

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## TECHNICAL CHARACTERISTICS

Number of channels	1, 2, 3 orthogonally oriented
Full scale acceleration	$\pm 0.25\text{ G}$ ; $\pm 0.5\text{ G}$ ; $\pm 1\text{ G}$ ; $\pm 2\text{ G}$ ; $\pm 4\text{ G}$
Output voltage	$\pm 10\text{ Volts differential}$
Sensitivity	$\pm 40\text{V/g}$ ; $\pm 20\text{V/g}$ ; $\pm 10\text{V/g}$ ; $\pm 5\text{V/g}$ ; $\pm 2,5\text{V/g}$
Frequency response	0-200 Hz
Operating voltage	10-15Vdc (80mA for 3 axis unit)
Output impedance	100 Ohm
Dynamic range	1g version >135dB (USGS CPSD method) >165dB (per bin with respect to full scale)
Non-linearity	<0.1
Cross axis sensitivity	<0.5%
Offset drift	0.5 mg/°C
Full scale drift	200 ppm/°C
Sensor test	1/8 FS
Orthogonality error	<0.05%
Damping	0.707

## ENVIRONMENTAL CHARACTERISTICS

Temperature operating	-20 to +55° C;
Temperature storage	-40 to +70° C;
Humidity	100% R.H.

## PHYSICAL CHARACTERISTICS

Weight	3 kg triaxial model, 1,5 kg mono and bi-axial model
Dimension (LxWxH)	140 x 155 x 85 mm (without connectors) triaxial model 169 x 53 x 81 mm (without connectors) mono and bi-axial model
Case material	Aluminium with anti-corrosive treatment
Protection rating	IP67 with connector or IP68 with cable gland
Electrical Interface	10 terminal pins connector / cable gland

Contact now your  
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