

FEATURES

- High sensitivity and $\pm 4g$ full scale
- Borehole and surface packages
- Rugged construction

The Models PA-23 Surface and PA-23BH Borehole Accelerometer Systems are three-component instruments utilizing orthogonally mounted Geotech Model S-230 sensors. Model PA-23/1 contains only one component.

The S-230 accelerometer modules are force balance devices. The low noise characteristics, internal calibration, and a standard sensitivity of 2.5 volts per g qualify the S-230 for a wide assortment of seismic studies.

The PA-23BH Borehole System is a rugged three-component package that is easily installed in a borehole and may be submerged to depths of 100 meters.

THREE-COMPONENT ACCELEROMETER SYSTEMS

MODEL PA-23, PA-23/1, PA-23BH



PA-23 (above), PA-23BH (below)



SURFACE AND BOREHOLE ACCELEROMETER SYSTEMS MODEL PA-23, PA-23/1, PA-23BH, S-230 SPECIFICATIONS

S-230 ACCELEROMETER

Mode of Operation	Vertical or horizontal, force balance type
Response	DC to 100 Hz
Full Scale	± 4.0 g (or ± 2.0 g, ± 1.0 g, ± 0.5 g)
Sensitivity	2.5 volts per g
Linearity	Better than 1% of full scale ¹⁾
Dynamic Range	Total 148 dB
Noise Level	< 1 μ g rms (non-coherent)
Clipping Level	± 4.2 g
Cross axis sensitivity	0.01 g/g nominally

Calibration/Feedback Transducer

Type	Electromagnetic
Sensitivity	1 g/V

Power Requirements

Voltage	+12 VDC (9...36 V from external source)
Current	19 mA
Power	Less than 0.23 watts

Physical Characteristics (S-230)

Diameter	4.45 cm (1.75 in.)
Length	6.0 cm (2.36 in.)
Weight	0.39 kg (0.8 lbs.)
Construction	Weather resistant

PA-23BH BOREHOLE PACKAGE

Sensors

Type	Geotech Model S-230
Quantity	Three
Orientation	Orthogonal

¹⁾ defined as the maximum deviation of the sensor's transfer function from a straight line through the end points at full scale, expressed as a percentage of the full scale.

Power Requirements

Voltage	+9...36 VDC
Current	57 mA @ 12VDC
Power	Less than 0.69 watts

Physical Characteristics (nominal)

Diameter	8.9 cm (3.5 in.)
Height	51 cm (20 in.)
Net Weight	4.82 kg (10.6 lbs.)
Construction	Submersible to 100 meters
Mating Connectors	None, 12 ft. water-proof cable furnished

PA-23 and PA-23/1 SURFACE PACKAGE

Sensors

Type	Geotech Model S-230
Quantity	Three (or one)
Orientation	Orthogonal (or single component)

Power Requirements

Voltage	+9...36 VDC
Current	57 mA @ 12VDC (or 19 mA)
Power	Less than 1 W

Physical Characteristics (nominal)

Diameter	15 cm (6 in.)
Height	10 cm (4 in., with connector)
Construction	Weather resistant IP67
Mating Connector	Bendix PT06W-14-12S (furnished)

ENVIRONMENTAL CHARACTERISTICS

Models PA-23, PA-23/1, PA-23BH

Operating Temperature	-20° to +65°C (-4° to +150°F)
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Storage Temperature	-20° to +70°C (-4° to +160°F)
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