

## 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

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

<sup>1)</sup> 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

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