

breva

Biaxial Tiltmeter



Overview

GeoSIG's **breva** is a biaxial tiltmeter featuring a high resolution and a shock resistant-sensor with long term stability. It measures the angle, slope, or tilt in two orthogonal directions for use in various applications.

Applications

- ▶ Structural Health and Response Monitoring
- ▶ Geotechnical (slope stability)
- ▶ Platform / Rig / Track alignment

Specifications

Sensor Element

Measuring range:	$\pm 3^\circ$
Resolution (at 0° , $+20^\circ\text{C}$):	$< 0.001^\circ / \sqrt{\text{Hz}}$ $\mu\text{g} / \sqrt{\text{Hz}}$
Repeatability (at 0° , $+20^\circ\text{C}$):	$< 0.01^\circ (\text{mg})$
Noise:	0.0004°
Measuring direction:	X and Y Axes
Cross axis sensitivity:	4 %
Damping:	18 Hz
Shock resistance:	20'000 g
Output signal:	$\pm 10\text{ V}$
Offset = V_{out} in 0° :	0 V
Temperature dependency:	$< 0.003^\circ / ^\circ\text{C}$

Power

DC power supply:	9.7 - 15 VDC, protected by OVP
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Key Features

- ▶ Measures static and dynamic tilt
- ▶ Senses in positive and negative directions
- ▶ Large output span of - 10V to + 10V output over the measuring range
- ▶ Shock resistance more than 20'000 g
- ▶ High repeatability $< 0.01\%$ over range
- ▶ High resolution $< 0.001\%$ over range
- ▶ Built-in three-point leveling screws for easy installation

Environment / Housing

Housing type:	Cast aluminium, sealed access cover
Housing size:	195 x 112 x 95 mm
Index of protection:	IP65 optional IP68
Operational temperature:	- 30°C to $+85^\circ\text{C}$
Storage temperature:	- 30°C to $+85^\circ\text{C}$
Humidity:	0 % to 100 % (non-condensing)
Orientation:	Floor mounted
Mounting:	Single bolt, surface mount, adjustable within $\pm 3^\circ$

