Tiltmeters OG307

Areas of application

Tiltmeters are used to measure the variations of inclination of a rock mass or a civil structures. It can be used in the following situations:

- Monitoring buildings damaged by landslides or earthquakes
- Turning control of berliner walls and diaphragms during excavations
- Retaining walls, bridges
- Towers, bell

Technical features

Surface inclinometers are used to monitor tilt of civil structures or retainment walls. They are also used to measure diaphragm rotations during excavating operations. The device needs to be attached to the measured structure by means of a clamp. The sensor is thereafter calibrated at its zero point, by moving its uniball joint. Measures can be read by a manual readout unit or by a datalogger. A full scale of only +/-5°, allows resolution and stability that are adequate to usual operating conditions. Thanks to the uniball joint, device positioning is precise and reliable over time. The integrated thermometer allows to evaluate the thermical effect on the structure and on the sensor so that a distinction between seasonal variations and actual rotations can be made. The electrolytic functioning principle ensures an excellent. MEMS principle of functioning guarantees a good thermal stability and an excellent linearity The case, suitable for outdoors positioning, can be requested at protection degree IP67. The sensor is compatible with Geotester.

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Tiltmeters

OTR srl
Geotechnical and structural
instrumentation & monitoring

Technical specifications

Code	OG307 MEMS - OINPARMX005 OINPARMX010	OG307-EL OINPARE2002
Description	Tiltmeter MEMS sensor Monoaxial and biaxial	Electrolytic biaxial Tiltmeter
Principle of functioning	MEMS	electrolytic
Range	+/- 5° +/- 10°	+/- 2°
Resolution	0.001°	0.001°
Power supply	12-18 Vcc	12-24 Vcc
No linearity	< 0.5% del F.S.	< 1% del F.S.
Temperature sensor	NTC3K termistor or PT100	NTC3K termistor
Termal drift	<0.002°/K	<0.001°/K
Operating temperature	From -20°C to +60°C	From -20°C to +55°C
Output signal	mV – 4-20 mA with converter (optional)	mV – 4-20 mA with converter (optional)
Cross axis	< 1%	
Sensor encloser	oxidized aluminum	
Degree of protection	IP 65 or more on request	
Support bracket	Stainless steel with ball joint for adjustment to zero	

Accessories

Code	
OINPARS0000	Support plate adjustment +/-2° +/-5°
OINPARS0001	Support plate adjustment +/-5° +/-10°
OCABLE00000	2x2x0.25 Cable, pur, shielded 5 mm
OCABLE00001	3x2x0.25 Cable, pur, shielded 8 mm

Details

Biaxial tiltmeter on the wall

Datalogger D800
(Code O0D800C0008)

Watertight connector
(Code OCONST00000)

All product technical specifications are subject to change without notice