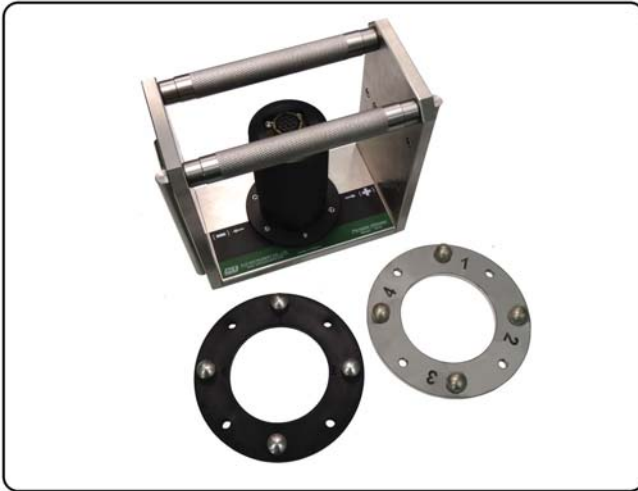


Portable tiltmeter



Description

Model **5410, portable tiltmeter** consists of a portable tiltmeter with an accelerometer and tilt plates mounted on the structure.

Model 5410, portable tiltmeter has built in 1axis accelerometer. Model 5410 is not affected by the impulse or the vibration because it is consisted of the accelerometer, and provides the superior resolution and the highest precision. Model 5410 is designed as highly elegant and waterproof product to measure the surface displacement by installing together the tilt plate horizontally or vertically on the place that the angle displacement is expected. As stainless steel of basic material is precisely processed, and aluminum case is anodized, so semi-permanent measurement is possible.

The portable tiltmeter is connected to the readout unit and is positioned on the tilt plate. Tilt reading is recorded and then the portable tiltmeter is rotated 180 degrees to take a second reading. The two readings are averaged to eliminate sensor offset.

The portable tiltmeter outputs 0 to direct current ± 5 voltages corresponding to a tilt reading.

Applications

- The portable tiltmeter is used to monitor stability in structures.
- Monitoring stability in retaining wall and adjacent structures under tunnel excavation and construction for buildings.
- Monitoring rotation in embankments and concrete dams.

Features

- Measurable many positions using one tiltmeter
- Easy to install and to use
- Lightweight and waterproof
- Built-in 1-accelerometer of a high reliability and accuracy

The readout

- **ACE-3000** (Inclinometer data logger)
- **ACE-2000** (Tiltmeter readout unit)

Ordering information

- Keeping readout unit
- Installation field and location

Ancillary equipments

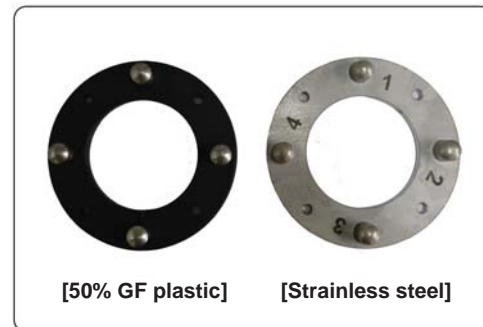
- Protective case for tilt plates
- Rapid epoxy
- Tilt plates (manufactured by injection molding)



[Model 5410 tiltmeter]

[Tilt plate]

Brass casting tilt plate is not proper for using in the region with big temperature range because of its big linear coefficient, 25 ppm/°C. To solve this matter, we have developed new tilt plate making use high-hardened plastic with 50% of glass fiber. Its linear coefficient is less than 20 ~ 25 ppm/°C.



[Tilt Plate]

Specification

Model	5410	
Applied sensor	1-accelerometer	
Range	$\pm 30^\circ$	
Resolution	0.0001 VDC	
Rating output	± 5.0 VDC	
Nonlinearity	0.02% FSR	
Thermal zero shift	Less than 0.0002% FSR / °C	
Input voltage	$\pm 9 \sim 18$ VDC	
Temperature range	$-20 \sim 70^\circ\text{C}$	
Connector	6 pin connector (Lemo's)	
Dimensions	150 × 178 × 188(H)mm	
Weigh	4.3kg	
Materials	Stainless steel, anodizing aluminum	
Accessories	Jumper cable, ABS case	
Tilt plate	Mounting	Epoxy bonding or anchor bolt 4 positions
	Dimensions	$\varnothing 140 \times 70\text{mm}$
	Weight	0.13kg 0.31kg
	Material	Nylon #66+GF 50% STS304