

VW inclinometer



Description

Model 1410 **VW Inclinometer** is designed to measure inclination in structures such as buildings, dams and embankments. The merit of VW inclinometer is using frequency signal so that it is possible to measure precise throughout high responsibility, resolution and reproducibility. For these reasons, model 1410 inclinometer provide reliable measurement.

Model 1410 need to install the sensor bracket first at place which is expected slope and building structure. While installation, it is required to check initial value and attach the VW inclinometer according to slope direction.

VW inclinometer is able to express the displacement of meter unit (settlement or heave, concentration or horizontal displacement) making with VW beam sensor after being attached to the aluminum square pipe of gage with 1m or 2m as like ELS beam sensor, also is sufficiently used to know the outline of settlement and the size of absolute amount of the displacement in case of connecting to the end bracket of beam sensor. The VW Inclinometer incorporates a circular level on its top to aid adjustment and installation. It is equipped with a temperature device for compensating for temperature variations.

Features

- Not affected by cable length, so reproducibility and responsibility is very excellent
- Easy installation by sticking circular level
- Automated measurement is possible
- Selection of anticorrosive and rustproof material

The readout

It is connected to the system such as the VW readout units, data loggers to be data logging and data acquisition system to monitor readings. It is compatible with other company's readout unit.

- ACE-800 (VW readout)
- ACE-1000 (VW data recorder)
- ACE-1100 series (VW mini logger)
- ADL-16V (VW data logger)
- ADL-200A (Smart logger)
- VL Module (Smart LoRa system)

Specification

Model	1410	1410B(Beam)
Sensor element	Vibrating wire sensor	
Range	$\pm 5^\circ / \pm 10^\circ$	
Resolution	5 / 10 arc seconds	
Accuracy	$\pm 0.1\%$ FSR	
Nonlinearly	$\pm 0.5\%$ FSR	
Thermal zero shift	Less than $\pm 0.01\%$ FSR / $^\circ\text{C}$	
Gage length	-	1m / 2m / 3m
Operating temperature	-40~80 $^\circ\text{C}$	
Built-in temperature device	Thermistor (3k Ω)	
Temperature device accuracy	$\pm 0.5^\circ\text{C}$	
Temperature device range	-40~105 $^\circ\text{C}$	
Waterproof	105m H $_2$ O	
Material	Stainless steel, O-ring sealing, high grade epoxy potting	
Weight	VW Inclinometer 0.7kg Mounting bracket 0.2kg	Al beam 40X40X1000mm 1.2kg
Signal cable	$\varnothing 4.5\text{mm}$, 0.24mm 2 \times 4C shielded PVC cable	
Accessories	① Mounting bracket ② 3/8" anchor bolt	

Applications

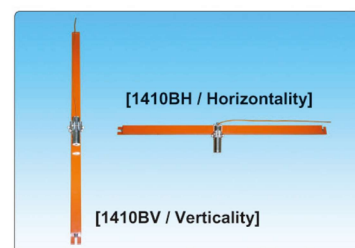
- Measurement of inclination followed by the effect of open cut or excavation.
- Measurement of inclination of beam and abutment.
- Measurement of deformation or inclination of retaining wall
- Measurement of movement or convergent of tunnel

Ancillary equipments

- Universal terminal box (model 7012/7024)
- Protective cover



[Installation of VW inclinometer]



[VW beam sensor]