

## Electrical soil strainmeter



### Description

Model 4360 **electrical soil strainmeter** is designed to measure volume of underground displacement, rate, and tendency operating in the slope by pressure of freshwater by laying in multi measurement point of filling dam by stations.

Sensor part is built with stainless steel rod treated waterproof and rustproof to absorb anchor displacement in high precision of linear potentiometer of which measurement range is 150mm or 300mm, and composes anchor in which 5m is made up 1 kit.

Cross anchor made L-shaped steel is set by 5m unit, flange part of sensor housing is fastened by bolt to cross anchor and it approach anchor load, for smooth deliver of displacement, in the exterior of anchor load, rigid PVC pipe is set to make it possible for shrinkage or expansion. For anchor load, screw-fastening system is adopted.

When deformation happens in the ground around, anchor load can push and pull the sensor, sensor of linear potentiometer transfers length displacement converting in electric signal to output device. This output signal can be converted in length displacement easily applying converting factor. Linear potentiometer is highly sensitive near to infiniteness that it can detect displacement of anchor load by maximum 300mm.

Sensor part is manufactured for 50m H<sub>2</sub>O waterproof and has arrester to protect sensor from electric noise controlling circuit to overcome severe construction site.

### Ancillary equipments

- Universal terminal box (model 7012/7024)
- PE sheath cable for heavy duty

### Ordering information

- Keeping readout unit
- Application field
- Cable length and
- Installation distance

### Applications

- Measurement of ground displacement in the body of dam or earth, rock filling dam
- Measurement of horizontal displacement of filling levee
- Measurement of crack made from tension of surface structure.

### Features

- Adoption of linear potentiometer of high precision
- Including electric noise control circuit
- Possible to automatic measurement

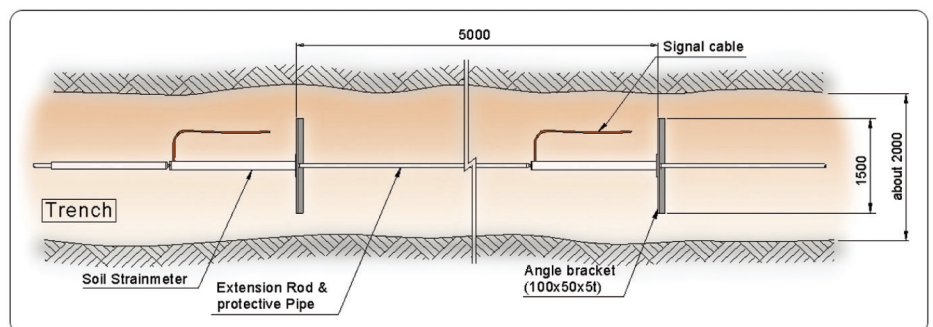
### Specification

Model	4360	
Sensor element	Linear potentiometer	
Range	150mm	300mm
Resolution	Infinite	
Accuracy	±0.1% FSR	
Nonlinearity	±0.5% FSR	
Insulation resistance	More than 100MΩ / 500V	
Operating temperature	-30~80°C	
Waterproof	50m H <sub>2</sub> O	
Material	Sensor housing : stainless pipe, Functional element : MC nylon	
Weight	① Sensor 2.0kg ② Angle bracket 13.0kg ③ Extension rod 1.70kg/ 5 m	
Signal cable	Ø6.4mm, 0.37mm <sup>2</sup> × 4C shielded PVC cable	
Accessories	① Angle bracket ② Anchor ③ Protect extension pipe kit ④ Extension rod	

### The readout

It is connected to the system such as the voltage readout units, or data logger as it is the electrical sensor that output mV.

- ACE-1500 (MEMS readout)
- ACE-900 series (MEMS mini logger)
- ADL-200A (Smart logger)



[Installation of electrical soil strainmeter]