

## Wire extensometer

### Description

**Model 4750 wire extensometer** consists of high accuracy rotary potentiometer included the stainless wire. It can accurately measure 500~3000mm extensive displacement. Wire extensometer generates 500~3000mm measure range as 10 times rotation of potentiometer. When displacement is happened, wire of wire extensometer come loose or tighten. The changes by coming loose or tight of wire will be changed to resistance at rotary potentiometer and this value of resistance will be converted to voltage and it shows the volume of displacement. To install the wire extensometer, it is required min  $\varnothing 38\text{mm}$  borehole. (EX drill) and it is optimized soft ground. Also, it is easy to install and can save the installation charge. Wire extensometer provides function of rustproof and anti-corrosion for measuring correctly in extreme environment, so it has high reliability and endurance.

### Applications

Model 4750 wire extensimeter is used to measure displacement at fills ground, foundation ground, dam etc., It can be installed at construction of top part of sheet pile, slurry wall, tunnel or pillar

- Settlement and upheaval measure of fills or foundation ground
- Horizontal displacement measure of embankment
- Displacement measure of rock or railway slope
- Displacement measure of extensive displacement

### Features

- Useful to measure settlement and upheaval according to station of several layer
- Easy to use
- Possible to adjust the measure range according to use
- Possible to measure automatic
- No depth restrictions

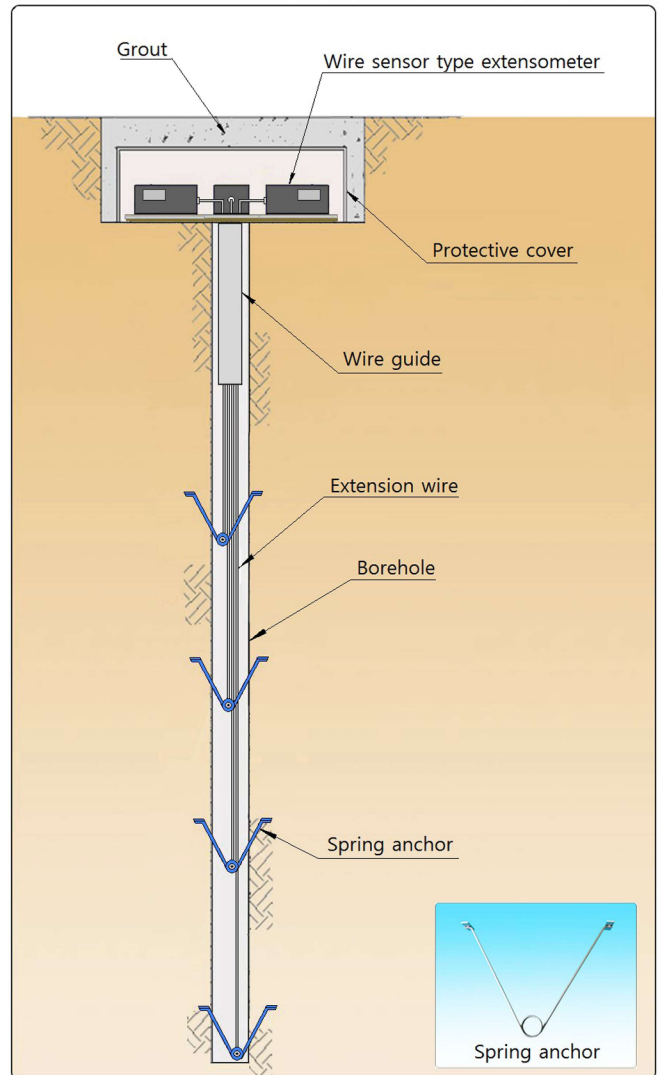
### The readout

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)
- AL Module (Smart LoRa system)

### Specification

Model	4750
Sensor element	Rotary potentiometer
Range	500mm 1000mm 2000mm 3000mm
Resolution	Infinite (depending on the readout)
Accuracy	$\pm 0.1\%$ FSR
Nonlinearity	$\pm 0.5\%$ FSR
Operating temperature	$-30\sim 80^{\circ}\text{C}$
Input voltage	3~12VDC
Wire tension	8N (8kg n/s <sup>2</sup> )
Measuring point	Max 15nos point
Extension wire	Stainless steel wire $\varnothing 2\text{mm}$
Material	Aluminum, nylon case, spring anchor
Signal cable	$\varnothing 6.4\text{mm}$ , $0.37\text{mm}^2 \times 4\text{C}$ shielded PVC cable



[Installation of wire extensometer]



[Head parts of multi array]