



Vibrating Wire Soil Extensometer



The RST Vibrating Wire Soil Extensometer is developed to monitor lateral and longitudinal deformation of soil and different types of embankments and embankment dams.

The instrument consists of a vibrating wire displacement sensor encased in a sealed body. The body contains a telescopic outer PVC pipe fitted with two flanges and an inner stainless steel rod. One end of the rod is attached to the flange, while its other end is connected to a displacement sensor attached to other flange.

As deformation occurs, the telescopic pipe moves with the soil causing the rod to operate the displacement sensor. Displacement is measured by RST portable readout unit or a data logger. The initial reading of the instrument is used as a datum. Subsequent readings are compared to the datum to calculate the magnitude, rate, and acceleration of movement.

The standard length of the instrument is 1 m, and it can be extended to accommodate project requirements. The flexible design allows implementation of different configurations with various stroke and gauge lengths. The instrument can be chained together in series to monitor the incremental deformation across of structure to be monitored.

A stainless steel option is also available.

specifications

ITEM	DESCRIPTION
Gauge Length	1m, with 0.5, 1, 2 and 3 m long extension kits
Sensor Range	25, 50, 75, 100, 150mm (other ranges available)
Accuracy	+/- 0.25 % FSR
Resolution	0.02% FSR
Linearity	0.25% FSR
Thermal Zero Shift	<0.05% FSR/°C
Operating Temperature	-20°C to 80 °C
Instrument Body / Flange Diameter	28 mm / 280 mm
Signal Cable	Two twisted pair cable with polyurethane jacket

Vibrating Wire Soil Extensometer - Stainless Steel Option



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applications

Monitor lateral and longitudinal deformation of soil and different types of embankments and embankment dams.

features

Easy installation and maintenance.

Suitable for remote reading and data logging.

Vibrating wire displacement sensor assures long term stability.

Very robust and accurate.

Accuracy not affected by cable length.

Wide measuring range.

Integral lightning protection provided.

ordering info

SENSOR RANGES	PART #
25 mm	EXSR-1025
50 mm	EXSR-1050
75 mm	EXSR-1075
100 mm	EXSR-1100
150 mm	EXSR-1150

EXTENSION KIT LENGTHS	PART #
0.5 m	EXSR-0500
1.0 m	EXSR-1000
2.0 m	EXSR-2000
3.0 m	EXSR-3000

ITEM	PART #
Signal Cable	EL380004

OPTIONS	
Stainless Steel Option	Please contact RST for more info.