



PRODUCT CATEGORY:  
EXTENSOMETERS

## 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 the other flange.

As deformation occurs, the telescopic pipe moves with the soil, causing the rod to operate the displacement sensor. Displacement is measured by a RST portable readout unit or 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 (50, 100 and 150 mm range) or 2 m (200 mm range), 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.

### > 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.
Very robust and accurate.	Accuracy not affected by cable length.
Wide measuring range.	Integral lightning protection provided.

Vibrating wire displacement sensor assures long term stability.

### > BENEFITS

✓ <b>Increase Safety</b>	✓ <b>High Accuracy</b>
✓ <b>Increase Productivity</b>	✓ <b>High Reliability</b>

### SPECIFICATIONS

ITEM	DESCRIPTION
Gauge Lengths	1 m and 2 m - with 0.5, 1, 2 and 3 m long extension kits
Sensor Range	50, 100, 150, 200 mm
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 - EL380004	Two twisted pair cable with polyurethane jacket

### ORDERING INFO

SENSOR RANGES	PART #
50 mm (1 m gauge)	EXSR-1050
100 mm (1 m gauge)	EXSR-1100
150 mm (1 m gauge)	EXSR-1150
200 mm (2 m gauge)	EXSR-1200
EXTENSION KIT LENGTHS	PART #
0.5 m	EXSR-0500
1.0 m	EXSR-1000
2.0 m	EXSR-2000
3.0 m	EXSR-3000
FLANGE	PART #
End Flange (1 required per chain)	EXSR-0000
ITEM	PART #
Signal Cable	EL380004



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