

VW Soil Extensometer GEO-XS

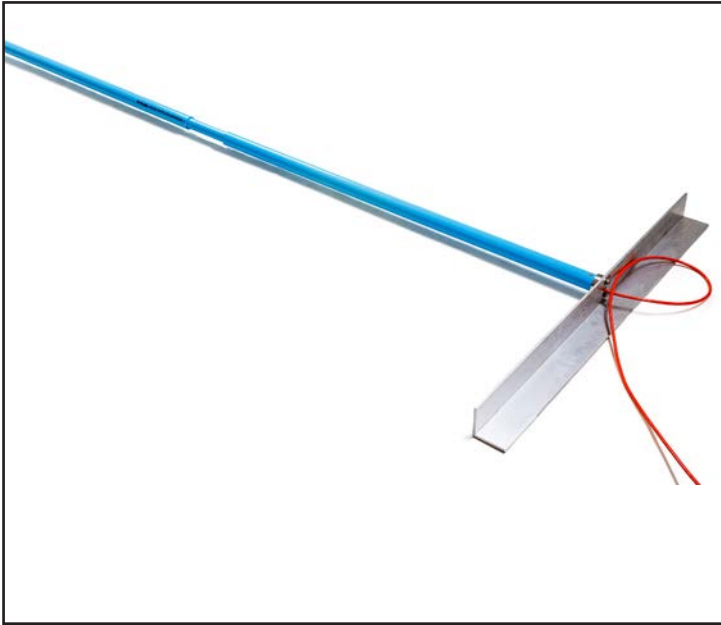
The Geosense® GEO-XS VW Soil Extensometer monitors lateral and longitudinal deformation of soil and different types of embankments and embankment dams



VW Soil Extensometer GEO-XS



Overview



The Geosense® GEO-XS VW Soil Extensometer monitors lateral and longitudinal deformation of soil and different types of embankments and embankment dams.

It comprises a displacement transducer connected to an extension rod and fixed between a pair of anchor beams.

The assembly is housed in and protected by an external telescopic sleeve. To form a 'Chain Extensometer', Soil Extensometers are linked together, in series, using the anchor beams as connectors.

The internal sensing element is housed within an outer PVC sleeve which is sealed by O-rings at each end. The sleeve, with telescopic sections with O-ring seals, is extended along the whole length of the rod to the next anchor.

As structural movement occurs, the rod is moved within the housing. The shaft movement changes the tension in the sensor spring which, in turn, changes the tension in the Vibrating Wire.

Different combinations of anchor spacing (Gauge Length) and sensor range can be used to provide an optimum sensing accuracy and range. i.e. for maximum strain resolution, a shorter transducer length will provide the best results. For maximum deformation, use a longer transducer or a shorter gauge length.

APPLICATIONS

The measurement of soil and rock movements including:

Horizontal and vertical displacements within embankment fill material

Displacements of retaining walls and abutments

Foundation spreading

Control of natural and cut slopes, quarry and mining excavations

Rock Formations

Foundations

FEATURES

Accurate, robust with good long-term stability

Heavy duty, suitable for burial in rock-fill

Easy installation

Suitable for remote reading

Over-voltage surge arrestor fitted to protect against electrical damage

Wide measuring range

IP68 (18 bar) rated

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Specifications

DISPLACEMENT GAUGE

Range	100, 150, 200, 300, 500mm
Resolution	0.025% FS
Accuracy	±0.1%
Nonlinearity	0.5% FS
Frequency range	1650 - 2700Hz
Nominal zero value	1850Hz
Body material	Stainless steel
Inner rod	Stainless steel
O-ring	Viton
Waterproof casing	18 bar
Cable Type	900 - VW Sensor with Foil Screen & Drain Wire; Type 710 - Heavy Duty

EXTENSOMETER

GAUGE HEAD

Material	Stainless steel
Diameter	50mm

ANCHOR

Material	Aluminium, Stainless steel
Dimensions	L 100 x W 57 x H 75mm

OUTER TELESCOPIC SLEEVE

Material	PVC
Outside Diameter	42mm
Inside Diameter	35mm
Length	1200mm
Anchor Material	Aluminium, Stainless steel

INNER SLEEVE

Material	PVC
Outside Diameter	33mm
Inside Diameter	25mm
Length	1 metre

INNER ROD

Material	Stainless Steel
Outside Diameter	6.4mm (1/4")
Spacers	Acetyl
Length	1 metre



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V1.4 06/2023