MULTIPOINT BOREHOLE ROD EXTENSOMETER

FIBERGLASS ROD TECHNICAL FEATURES

- ✓ Material: fiberglass reinforced plastic;
- ✓ Diameter: 7 mm;
- ✓ Thermal dilation coefficient: $5x10^{-6}$ mm/°C;
- ✓ Protective jacket: polyethylene 12 mm diameter.

FIBERGLASS ROD TECHNICAL FEATURES

- ✓ Material: stainless steel;
- ✓ Diameter: 8 mm;
- ✓ Thermal expansion coefficient: $1,7x10^{-5}$ mm/°C;
- ✓ Protective sheath: PVC tube, 1/2'' diameter.

ANCHORING DEPTH TECHNICAL FEATURES

- ✓ Diameter: 16 mm;
- ✓ Length: 400 mm.
- ✓ Material: galvanized steel with improved adhesion.

Potentiometric displacement transducer

Vibrating wire displacement transducer

The multipoint rod extensometer consists of one or more rods in fiberglass with anchoring point at one end. Anchoring is made up of a plate in improved bond stainless steel fastened at depth inside the borehole that sends the movement to the surface at the head level by free sliding of fiberglass housed inside a polyethylene protective sheath. The displacement can be measured with a simple caliper, or by linear displacement electrical transducers, which can be operated remotely.
The transducers may be potentiometers or vibrating wire and can have various full scale ranges (25-50-100-150-200 mm).
This instrument can measure displacements at various depths along the axis of the borehole inlet. There can be up to 7 reference bases within the same borehole.

The multipoint extensometer is widely used to check failures of foundation structures, of pillars and overpasses, to measure the area of deformation in tunnels, to monitor subsidence caused by caving embankments or tunnel excavation.

HEAD TECHNICAL FEATURES

measuring bases	*head diameter (mm)*	*measuring bases overall diameter (mm)*	*borehole minimum diameter (mm)*
1-2-3-4	160/114	80	101
5-6-7	160/114	90	110

TECHNICAL FEATURES OF THE DISPLACEMENT TRANSDUCER

Potentiometric displacement transducer	full scale (mm)	25, 50, 100, 150, 200
	accuracy	+/- 0.1% F.S.
	resolution	virtually infinite
	temperature range	from -30 to +100°C
	power supply VDC	12 60
	Output signal	mV/V
	Protection level	IP 67
	diameter mm	18
	material	stainless steel
Vibrating wire displacement transducer	full scale (mm)	25, 50, 100, 150, 200.
	accuracy	+/- 0.1% F.S.
	resolution	+/- 0.025% F.S.
	temperature range	from -20 to +80°C
	Output signal	Hz
	Protection level	IP 67
	diameter mm	12
	material	stainless steel

CE product compliant with European directives

Earth System srl - Via Artigianato 5/a
43022 Montechiarugolo - Parma
tel. +39 0521 394595
e-mail: info@earthsystem.it