The ERI is a telescopic extensometer used to measure longitudinal displacements and axial deformations over long base lengths.

Description

The fill extensometer Model ERI consists of a telescopic outer PVC pipe fitted with two end flanges and an inner stainless steel rod. One end of the rod is attached to a flange, while the other end of the rod is attached to a displacement sensor, which is attached to the other flange. A signal cable attached to the sensor links the sensor to a readout at the surface.

As displacement occurs, the telescoping outer pipe moves with the soil, causing the rod to compress or extend the displacement sensor.

These fill extensometers are generally installed horizontally in trenches, but sometimes vertically in boreholes.

The standard lengths of the fill extensometer Model ERI are between 3 meters and 6 meters. Extensometers can be assembled in series using threaded rods inserted in the holes on each end flange.

Key Features

- High resolution
- Wide measuring range
- Rugged: Materials resistant to shocks and vibrations caused by explosions and earthquakes
- Easy installation and maintenance
- Continuous and accurate measurement of displacements and axial deformations over long base lengths
- Frequency signal (from vibrating wire sensors) easy to process and transmit over long distances

Applications

- Monitoring the crest of earthfill dams to locate tension cracks
- Measuring lateral strains in earth structures
- Measuring heave in the base of deep excavations

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## Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td><strong>Range</strong></td>
<td>25, 100, 150, 200 and 300 mm</td>
</tr>
<tr>
<td><strong>Sensor type</strong></td>
<td>Vibrating wire</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>±0.25% F.S.</td>
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<tr>
<td><strong>Resolution</strong></td>
<td>0.02% F.S. (MB-3TL)</td>
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<tr>
<td><strong>Cable</strong></td>
<td>IRC-41A(P), IRC-390</td>
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<tr>
<td><strong>Thermistor (optional)</strong></td>
<td>3kΩ</td>
</tr>
<tr>
<td><strong>Operating temperature</strong></td>
<td>−20 to +80°C</td>
</tr>
<tr>
<td><strong>Base length</strong></td>
<td>3m (longer upon request)</td>
</tr>
</tbody>
</table>

### Outside diameter

- **Stainless steel extension rod**: 6.35 mm
- **End flange**: 150 mm
- **PVC telescoping coupling**: 42 mm
- **PVC sensor housing**: 48 mm
- **PVC casing**: 33 mm

### Readout unit

- **MB-3TL**

### Data acquisition system

- **SENSLOG**

## Ordering Information

Please specify:
- Base length and range
- Electrical cable length

## Optional Accessories

- 1m rod and tube Readout instruments
- Readout instruments