

Model 4650 Settlement System



● Model 4650 Settlement System.

Applications

The Model 4650 is designed for remote measurement of the settlement of a point in or below fills, surcharges, embankments, etc. Systems with tube lengths of up to 300 m have been used successfully to measure settlements in earth dam embankments.

Operating Principle

A vibrating wire pressure sensor is attached to a settlement plate located at the point of settlement. The sensor is connected via two liquid-filled tubes, extending laterally, to a reservoir located on stable ground. The sensor measures the hydraulic head

of liquid between the sensor and reservoir locations.

Advantages and Limitations

A vented cable runs from the sensor to the remote readout location and connects to the reservoir so that barometric pressure fluctuations do not affect the readings.

The liquid-filled tubes can be flushed to remove any air bubbles that might form.

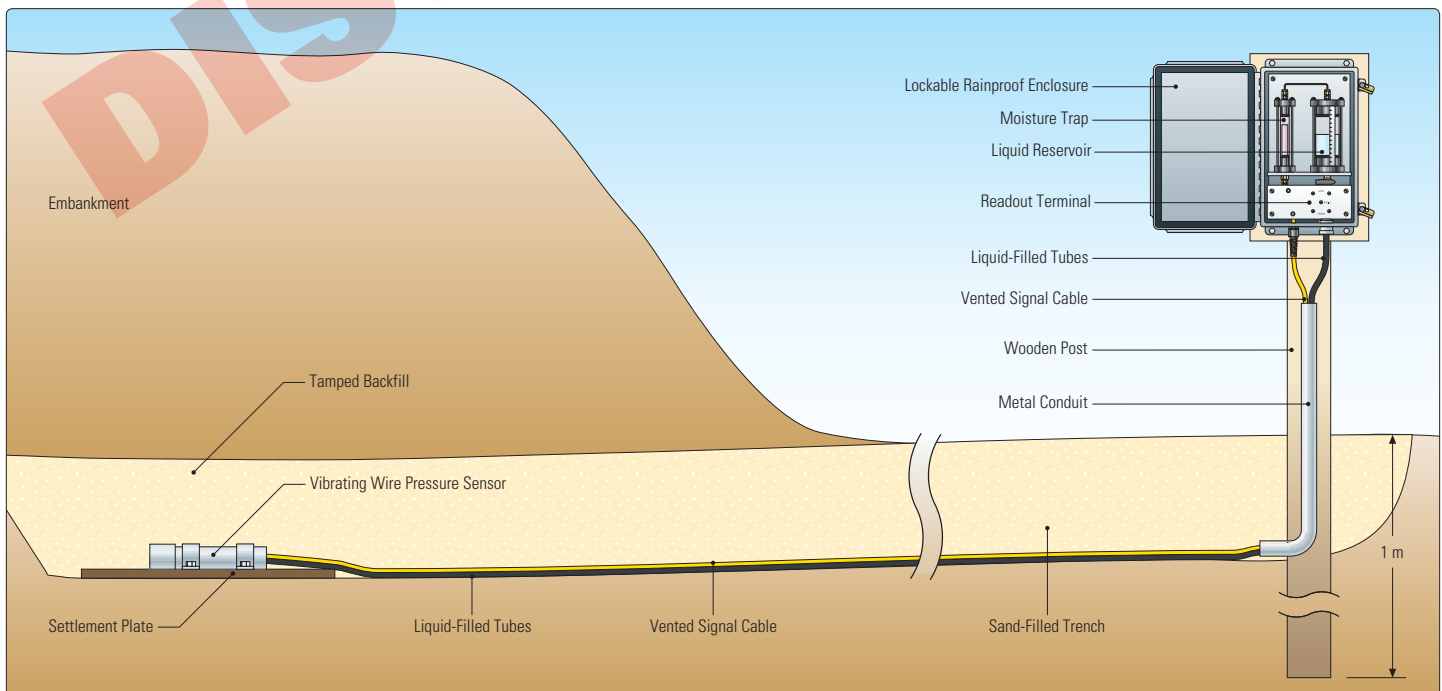
It is possible to perform in-situ checks at any time on both the calibration and zero stability.

Technical Specifications

Standard Ranges ¹	7, 17 m
Resolution	0.025% F.S.
Sensor Accuracy ²	±0.1% F.S.
Temperature Range ¹	-20°C to +80°C
Length × Diameter	(reservoir) 152 × 51 mm, (sensor) 191 × 35 mm

¹Other ranges available on request.

²Laboratory accuracy. Total system accuracy is subject to site-specific variables.



● Model 4650 installation for the remote measurement of subsurface settlement beneath a large embankment.

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