

SOIL SETTLEMENT GAUGE

Model SSG

APPLICATIONS

The SSG soil settlement gauge is used to measure settlement or heave at a discrete location in soils. Applications include:

- Measuring consolidation of foundation soils
- Measuring settlement of soil within an embankment
- Determining the effectiveness of soil improvement techniques such as wick drains, dynamic compaction and preloading
- Measuring settlement of tank bases
- Monitoring mine induced subsidence

DESCRIPTION

The SSG consists of a vibrating wire or fiber optic pressure transducer housed in a corrosion-resistant stainless steel body. The housing can be attached to a base plate and connected to a reference station by a twin tubing filled with water (or anti-freeze solution) and fitted with stainless steel connectors. The reference station consists of a sealed liquid-filled reservoir open to atmospheric pressure and located at a known elevation. The settlement or heave is measured relative to the elevation of the reservoir.

The SSG is robust and stable. It can be installed in boreholes, standpipes, soil or concrete. The settlement gauge can also be attached to structures for monitoring settlement.

To ensure maximum performance, the twin tubing should be flushed at regular intervals to remove air bubbles, and data should be compensated for temperature changes and changes in atmospheric pressure.

For best results, de-aired water or antifreeze solution is recommended.



FEATURES

- Easy to read
- Wide range
- Robust design for long-term monitoring applications
- Manufactured with corrosion-resistant materials
- Frequency signal easy to process and transmit over long distances
- Fiber optic transducer available that offers immunity to EMI/RFI/lightning and higher accuracy and resolution

SPECIFICATIONS

Measuring range	5', 10', 20', 35', 50', 70' m
Transducer type	Vibrating wire or fiber optic
Maximum overpressure	1.5 \times range
Accuracy ²	$\pm 0.5\%$ F.S. ($\pm 0.1\%$ F.S. optional ³)
Resolution	0.025% F.S. (min.)
Thermal drift	$\pm 0.1\%$ F.S. / °C
Reservoir	PVC and ABS
Transducer housing	Stainless steel
Fluid type	Water (optional antifreeze solution)
Terminator	3k Ω (see model TH-T) – with vibrating wire transducers only
Cable	IRC-41A05, IRC-390, CFO-08F

¹ With IRC-41 A cable for VW transducers, and CFO-08F for FO transducers.

² Calibrated accuracy of the pressure transducers.

³ Note: Please refer to JDP data sheet for specifications of FO pressure transducers.

ORDERING INFORMATION

Please specify:

- Model
- Cable type and length
- Twin tubing length
- Fluid type: water or antifreeze solution
- If length of cable >300 m, contact Ruckst Telemac for adequate tubing
- Readout instruments: MB-5T(0), SENSLOG



PRODUCT RESELLER

Environmental Systems & Services | 8 River Street, Richmond VIC 3121 Australia |
T + 61 3 8420 8999 | F + 61 3 8420 8900 | geotechnical@esands.com | www.esands.com