



High Sensitivity Settlement System

Technical Features



The system consists of a set of measuring vessels, each housed inside a box of hermetic protection of stainless steel; are housed inside the tank for the liquid, a hydraulic circuit and the internal electric transducer for measuring the liquid level inside the vessel. An optional temperature sensor allows you to evaluate the thermal effect on the structure and on the sensor. The vessels are connected by an hydraulic circuit composed of a polyethylene pipe and an external pipe insulation. The hydraulic and electrical cable instrumental that realizes the connection of the instrument to the readout unit complete tool. The measurements are recorded by the readout unit or by datalogger (recommended). With the management of the measures automatically OTR has a specific software that allows the data recorded in real time with management thresholds alert.

Applications

The automatic High sensitivity settlement system consists of a series of measuring vessels filled in part of liquid connected by a hydraulic line. The measuring principle is communicating vessels, the failure of a measuring vessels determines the redistribution of the liquid in the tanks, measuring sensors detect changes that correspond to failure.

It is used in the following structures:

- Civil and monumental
- Bridges and Viaducts
- Diaphragms and retaining walls
- Dams and Tunnels



Uses

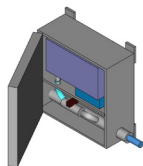
- Control of subsidence of civil and monumental structures
- Monitoring of subsidence of structures in the vicinity of underground excavations and earthworks
- Monitoring of subsidence in concrete dams, bridges and viaducts
- Monitoring of differential settlement of foundations

Related Instrumentation

- 3x2x0.25 PUR cable, LSZH
- 2x2x0.25 PUR cable LSZH
- NTC
- Steel rope
- Hydraulic pipe
- Insulating cover for hydraulic pipe
- Datalogger D200-D800-D1600-D3200
- OtrMonitoring



Technical Specifications



Type of sensor	Load cell
Range	+/- 40 mm
Sensibility	0.01 mm
Sensor accuracy	+/- 0.1 mm (excluding thermal effects)
Power supply	12-24 Vc.c
Output signal	mV/V o 4-20 mA (on request)
Temperature sensor (optional)	Termistor NTC3K or PT100
Dimension encloser	360x340x165 mm
Material	Stainless steel Container seal, aluminum tank and hydraulic hose with fittings



Codes & Part Numbers

P/N 2014000	LEVEL GAUGE, 0-75 mm 4-20 mA Output
P/N 2014001	LEVEL GAUGE, 0-75 mm mV/V Output
P/N 2014002	TUBE 10/12 mm + insulation + wire + tensioners
P/N 2014003	Stauration device for hydraulic circuit
P/N 2014004	Mix 50/50 % H2O Glicerine