

/S-Liquid Level System



Profound /S-Liquid Level System

The digital /S-Liquid Level System is an effective tool for precision monitoring of settlements. Typical application areas include monitoring of tunnelling and excavation activities, as well as compensation grouting near structures.

For each project sensors are selected with the appropriate measuring range to ensure accurate settlement measurements: the elevation differences need to be within range, even after the expected settlements. During installation the sensors are interconnected by means of a pressure and an air compensation line and a digital /S-data cable.

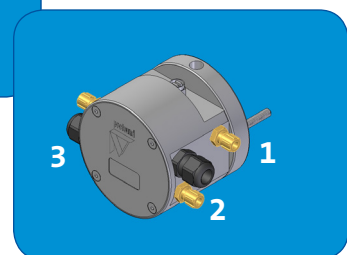
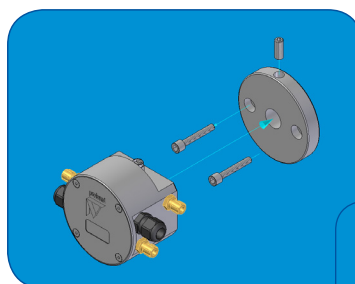
Real-time precision monitoring of settlements

The elevation changes of the individual sensors in the system are derived from the liquid pressure. This is done by comparing the liquid pressure at each sensor with the pressure at the reference sensor. The system responds immediately to settlements, as there is no liquid flow between the sensors. The sensor also directly digitises the measurement data and performs an automatic temperature compensation.

The wireless, built-in GPRS-connection in the accompanying /S-module allows remote monitoring of the project. This Internet Solar /S-module is a combined power supply, data logger, GPRS modem and provides a data backup for the system. Data can be uploaded at preset intervals for online monitoring. You can also choose to receive the data via e-mail on your PC, when and where you want.

Technical specifications /S-Liquid Level System	
Measuring ranges	60 mbar, 160 mbar, 400 mbar
Typical max. error over full temperature and pressure range*	2‰
Sensor accuracy	± 0.25 mm (range 60 mbar) ± 0.67 mm (range 160 mbar)
Supply voltage	7 up to 15 Volt
Temperature range	-10 °C to +50 °C (liquid dependent)
Material mounting plate	Stainless steel
Material housing	Thermoplastic material (POM)
Material pressure lines	LDPE or PVC
Digital data cable	4-wire cable (4 x 1 mm ²)
Liquid tubing	6 mm (inner); 8 mm (outer)
Air tubing	4 mm (inner); 6 mm (outer)
Network hardware	CAN (digital)
Dimensions sensor (w x h x d)	120 x 90 x 77 mm
Weight sensor	464 grams
Mounting plate size	Ø 90 mm, 15 mm
Mounting plate weight	690 grams
Long term stability	≤ ± 0.1 % FSO/year

* Every sensor has been calibrated over the full temperature and pressure range during a 24-hour test cycle. Specific results are supplied on the calibration sheet.



[1] = Pressure line (filled with liquid)
[2] = Barometric pressure compensation
[3] = Digital /S-data cable

