



Description

The level measurement system ST140 has been designed by SIM STRUMENTI to monitor with high precision and continuously the altimetry variations between two or more points placed at great distance one from the other.

The system is used in all applications where high precision settlement monitoring is required and in particular: stages, foundations, bridges, dams, monuments, or structures in general subject to vertical settlement.

One of the greatest advantages of the ST140 settlement system is absence of moving parts, which allow a great reliability of the measurement.

The level system is based on the communicating vessels principle and consist of a PVC tank, completed of stainless steel mounting bracket, connected to one or more instruments of the same family by flexible nylon tubes, one for the hydraulic system and one for the pneumatic circuit.

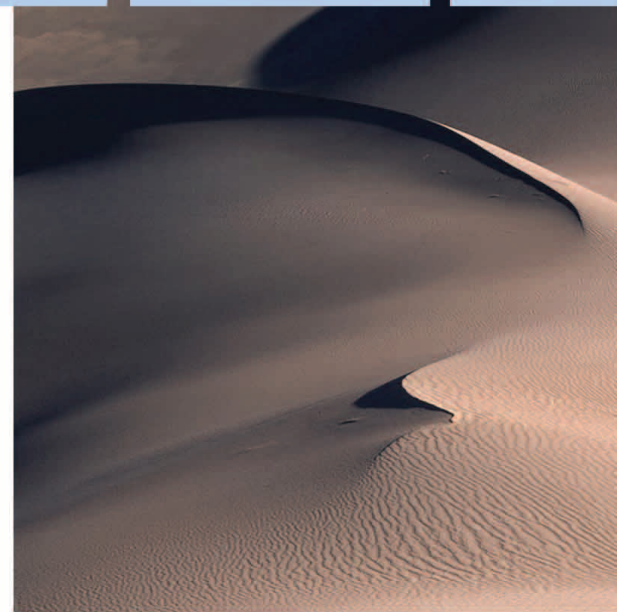
Every couple of measuring tanks is connected to a high precision differential pressure sensor, which is capable to monitor settlement variations up to 0.01 mm.

An important feature of the system is the possibility to control and set the zero value of the instruments even if already installed and operative.

Since the output of the instrument is electrical, the signal can be read with a manual read out unit like the DATAVIEW, automatically, with a data logger such as the MINILOG, MYLOG, NATUN system or any other data logger provided by SIM STRUMENTI. Every sensor is provided with a calibration certificate that attests the results of the test performed and all electromechanical features.

Applications

Measurement of vertical settlements in buildings, bridges, structures etc.

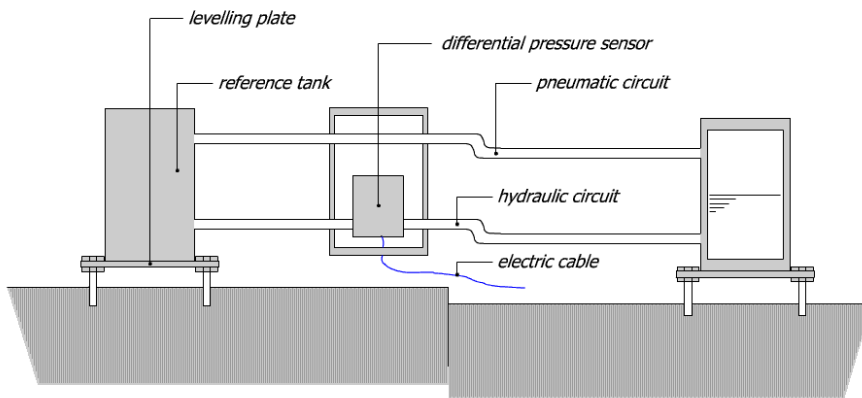


Differential settlement for buildings and structures

Reliability for long term monitoring



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Technical features

Differential Pressure Sensor	ST140-SL-FS*
Range Available	±50, ±70, ±100, ±250, ±500, ±1000mm
Supply	15 ÷ 45Vcc
Output	4 ÷ 20mA
Linearity	0.2%FS
Repeatability	0.01%FS
Overpressure	1bar
Protection	IP65
Operating temperature	-40 ÷ +85 °C
Material	
Membrane	AISI316
Sensor case	AISI316/ aluminum
Coupling	Stainless Steel
Case	Reinforced Polyester
Dimensions	200X300X160mm
Weight	5Kg.
Reference Tank	ST140-TZ
Material	PVC/Stainless steel
Dimensions	Ø120/150mm
Adjustable Bracket	ST140-SR
Material	Stainless Steel
Dimension	Ø20/300mm
Setting	±125mm
Accessori	
Hydraulic tube	ST140-LQ-XX**
Material	Rilsan
Dimensions	Ø12/10 transparent
Pneumatic tube	ST140-AR-XX**
Material	Rilsan
Dimensions	Ø12/10 blue
Corrugated tube	ST140-TU-XX**
Liquid	ST140-LI-LL***
Material	50% glycerine 98% e 50% water

*FS – Indicate the sensor range

**XX – Indicate the length tube

***LL - Indicare liquid quantity in LT.

ST140_EN ED01/14



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