

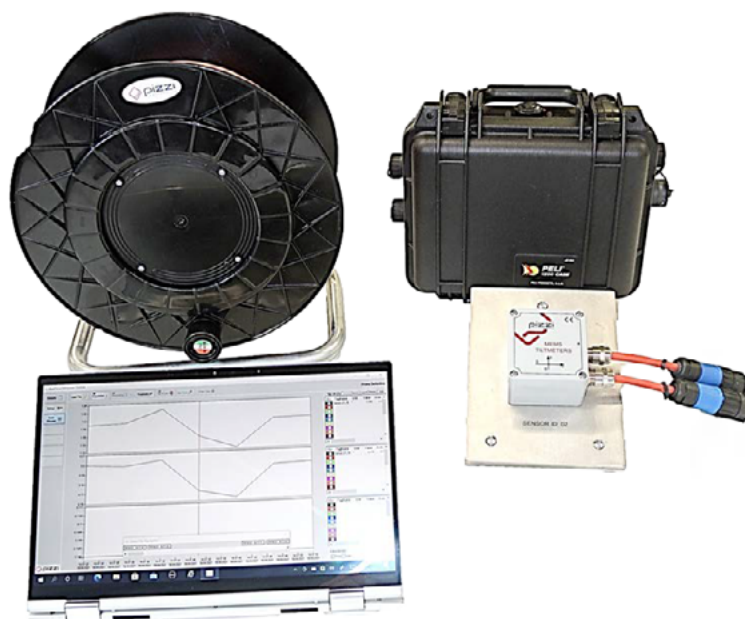
Real Time Tiltviewer



www.pizzi-instruments.it

Geotechnical and Structural Monitoring Instruments and Systems.

Real Time Tilt Viewer



Description

The Real-Time Tilt Viewer is an intuitive monitoring system that enables real-time visualization of a structure's tilt variations, with a data acquisition rate of 8 measurements per second. It also provides a live graphical representation of the data in progress. Developed with dedicated, custom-designed software, the system allows users to track structural movements in both graphical and numerical formats. Sensor data can be displayed as raw values or as processed (engineered) values, offering flexibility for different monitoring needs. This solution is particularly well-suited for the real-time monitoring of structures such as bell towers, bridges, buildings, piles, and diaphragm walls especially during testing or under specific conditions. It can also be applied to monitor inclination and torsion in moving objects, such as ships or large machinery, either during transit or during critical load or stability tests.

Applications

- Bell towers
- Bridges
- Buildings
- Piles
- Slurry wall
- Ships
- Large machinery during handling/movement
- Load or stability tests
- Others

Characteristics and benefits

The system is easy to install and operate, providing real-time monitoring of the structure during activities that could impact its stability. This enables operators to respond immediately if abnormal readings or deviations from design parameters are detected. When applied to moving machinery, the system allows operators to verify that maximum tilt angles remain within predefined safety limits. Thanks to its versatility, the system is suitable for a wide range of applications where real-time, continuous monitoring of tilt variations is essential.

The system consists of:

- 1) No. 'x' Dual-axis MEMS digital clinometers (up to a maximum of xxx units)
- 2) No. 'x' standard (or customised on request) support plates for inclinometer sensors
- 3) Connection cable for inclinometer sensors
- 4) Conversion unit with rechargeable battery
- 5) Power supply unit for conversion unit
- 6) PC/conversion unit connection cable
- 7) 'Real Time Tilt Viewer' software licence
- 8) PC (Optional)

Principle of measurement

The clinometer is equipped with two single-axis MEMS (Micro-Electro-Mechanical System) sensors. Thanks to their high sensitivity, long-term reliability, and robust design, these sensors provide an excellent, cost-effective solution for monitoring structural deformations, as well as general rotations and changes in inclination. With an RS485 (MODBUS) output, the sensors can be easily integrated with our CUM3000 data logger, as well as with a wide range of other data acquisition and monitoring systems available on both national and international markets. Each sensor is labeled to indicate the directions of the two measurement axes and its preset ModBUS channel, allowing for quick identification and configuration within the software.

Characteristics and benefits

The system is equipped with R.T.V. software, which allows continuous display of the measured data; multiple functions are allowed, including:

- Possibility of customisation with insertion of proprietary LOGO.
- Project setup.
- Setup for configuration of connected sensors and measurement and data storage modes.
- Real-time data display in graphical and/or numerical form.
- Recall of archived graphs.
- Setting of alarm thresholds (2 thresholds per sensor).
- Addition of annotated text to each graph at the desired time during the test.
- Graph display in polar coordinates - Data export in CSV format.
- Data printing.

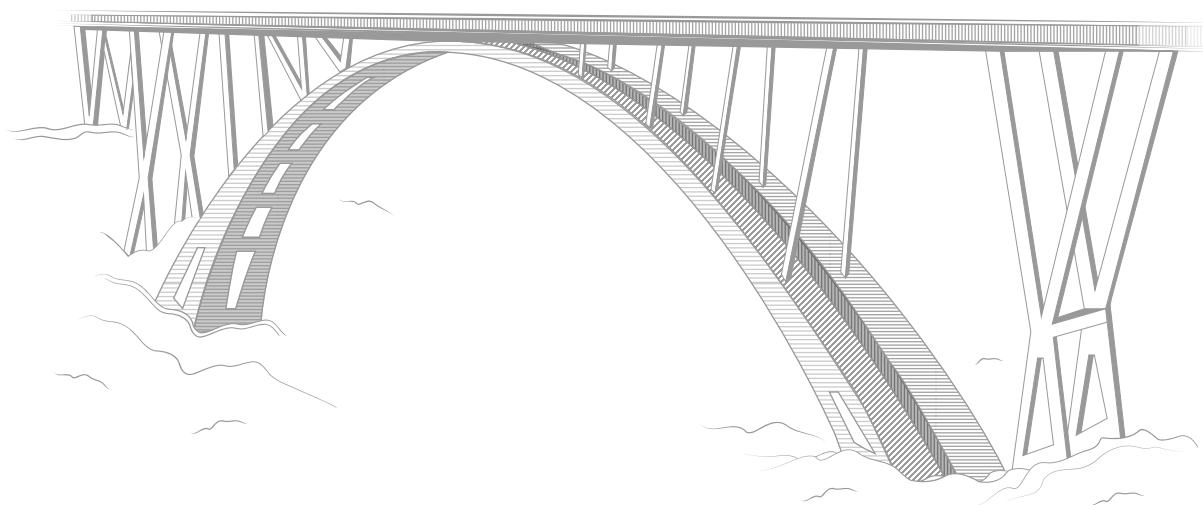
Technical characteristics

Sensors	
Type	Monoassiale o biassiale
Measuring range	$\pm 2,5^\circ$, $\pm 5^\circ$, $\pm 10^\circ$, $\pm 15^\circ$ (altri a richiesta)
Resolution 0,001°	Risoluzione 0,001°
Sensor linearity	$\pm 0,1\%$ f.s.
Thermal drift	0.01%/°C
Thermal drift offset	-25...85°C (typical) $\pm 0,002$ °/°C
	-40...125°C (max) -2,5 +1
Long-term stability	<0,004°
Output	Angolo in 0,001° Temperatura in 0,1°
Digitaliser	
Type	2 channels, 24 Bit
Sampling frequency	100 SPS per channel
Power supply	220VAC or with battery back-up (duration 10 hours)

The company

For over 40 years, we have been manufacturing precision instruments for the monitoring of large structures, sold and trusted worldwide.

Accuracy in design, efficiency in implementation, and reliability in operation, these are the essential qualities that every major structure must possess, and that structural monitoring systems must consistently deliver.



Tutti i dati presenti nelle schede potrebbero variare senza alcun preavviso.

Si prega di controllare accuratamente la release e per maggiori dettagli contattare Pizzi Instruments.

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