

RSM-FBN(B) Bridge Deflection Tester



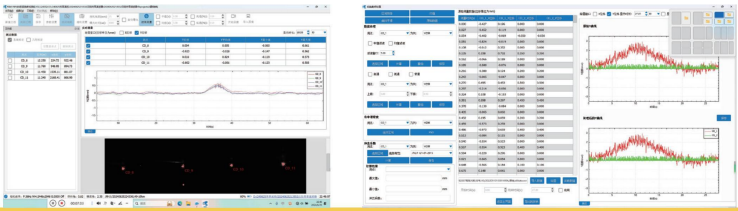
CE certificate

Accurately reflects the real-time status of the measured object through the integration of multiple parameters

Application

- 2D Deformation Measurement:**
For bridges, high towers, cranes, buildings, and other structures.
- Parameter Detection:**
Deflection, Inclination, Verticality, Angle, Geometric dimensions, Linear strain, Crack width.

The RSM-FBN(B) Bridge Deflection Tester uses an industrial camera to capture digital images of bridges, high towers, cranes, and other structures at various deformation stages. By employing image quality evaluation algorithms, image matching and tracking algorithms, rapid camera self-calibration techniques, and sub-pixel analysis, the instrument accurately identifies, matches, calibrates, and calculates multiple target points on the structure's surface. This process provides real-time deformation data for each target point. The instrument is characterized by its high efficiency, high accuracy, target-free operation, and cost-effectiveness.



Real-time Measuring Interface

Data Processing Software Interface

Technical Features



High Efficiency

The instrument does not require centering, leveling, or setting up artificial markers; Single setup enables real-time measurement of multiple target points within a 150-meter range, significantly improving detection efficiency.



High Measurement Accuracy

High-precision matching and tracking algorithms to quantify the deformation of target points at a sub-pixel level.



High Resistance

Highly integrated industrial camera and multi-parameter sensors. Integrated with multiple core algorithms including image evaluation, image matching, self-calibration, sub-pixel analysis, and anti-interference.



High Usability

Equipped with powerful intelligent data processing and analysis modules. Capable of comprehensive multi-parameter evaluation of the facility's safety status. Supports automatic generation of professional quantitative reports.

Specification

RSM-FBN(B)	
Working Distance	0~500m
Measurement Field of View Range	0~150m
Resolution	0.01pixel
Measurement Accuracy (Displacement)	±0.02 mm (at 10 meters distance) ±1 mm (at 100 meters distance) ±10 mm (at 500 meters distance)
Measurement Accuracy (Angle)	0.05°
Measurement Accuracy (Linear Strain)	≤20με
Measurement Frequency	Full amplitude 36 Hz, maximum frequency with amplitude adjustment 200 Hz
Number of Measurement Points	Dynamic Deflection: 4 points Static Deflection: Unlimited
Detection Modes	Real-time on-site measurement mode Record condition images first, then process and analyze mode
Analysis Functions	Median filtering, mean filtering, digital filtering, zero adjustment, curve smoothing, power spectral density
Special Features	Compatible with multiple report modes, over-limit warning, measurement field of view range analysis, intelligent focusing, data upload
Results Output	Impact coefficient, attenuation coefficient, damping ratio, interval extrema, interval frequency, interval mean, inclination, verticality, angle, convergence, distance, geometric dimension, linear strain, crack width
Operating Time	≥8 hours
Protection Level	IP65
Main Unit Weight	3kg