



Dynamic Monitoring Station Overview

PRODUCT INFORMATION SHEET IS103 – DMS - OVERVIEW



Imetrum's measurement systems are the perfect solution to precision measurement of large structures and geotechnical engineering projects.

Imetrum's Dynamic Monitoring Station (DMS) can be used to monitor the dynamic movement of civil and geotechnical structures. The DMS system is able to measure position (displacement, distance), strain (expansion, contraction, crack opening) and rotation (twist, tilt and bending) of a structure. One of the key advantages of using DMS is that there is no need to access a structure directly to measure it. This eliminates many project delays related to access such as arranging possessions or traffic management, and also delivers safer working practices by keeping staff and vehicles apart as well as eliminating the need to work at height or over water.

Key features

- ✓ Multi-point dynamic monitoring
- ✓ Real-time measurement of displacement, strain and rotation
- ✓ Genuinely non-contact
- ✓ Monitor from a point of safety
- ✓ Reduce overall monitoring costs
- ✓ Up to 0.01mm resolution
- ✓ Real time operation (up to 1kHz)
- ✓ Supports multiple synchronised cameras
- ✓ Record Videos for off-line analysis
- ✓ Synchronise with other measurements
- ✓ Mains or battery power

The benefits

The DMS is a multi-point dynamic monitoring system that can take measurements similar to those generated by a strain gauge, LVDT, tilt meter or Robotic/Automated Total Station. The system is easily scalable, and has been used for testing individual structures from less than 1 m to over 1 km long.

Imetrum's DMS has been independently benchmarked by many companies, including the UK's National Physical Laboratory. Measurement capability is often described as being "the benefits of a non-contact device, with the resolution of a contacting one".

**“When I showed our client the video”
his jaw dropped**

Surveyor, Amey

Adaptable and easy to use

The Imetrum Video Gauge™ technology can measure multiple points on any structure, without complicated installation or re-siting of sensors or delicate machinery.

Quick and safe to set up

One hour's set up is generally all that is required, which compares well to conventional technology. Possessions, lane closures and working at height or in confined spaces can usually be avoided as our system can be used from tens or even hundreds of metres away from the areas of interest.

Immediate results

Measurements can be taken in real time to provide instant answers to engineering and safety questions and can capture a considerable amount of usable data. This information can either be processed off-site, or worked with live to improve the quality and accuracy of reporting.