

3D MEASUREMENT SYSTEM



3-Dimension displacement measurement system : 3DS is high performance MEMS based inclinometer system that innovatively improved from current displacement measurement system by enhanced technologies and reliabilities of DAS. 3DS is applied the new automatic temperature compensated technology to improve temperature drift that the weakness of MEMS inclinometer. 3DS provides efficient and perfectly suitable measurement under any measuring circumstances.

Technical Specifications



Items	Specifications
Segment Length	0.5 meters or 1 meters
System Length	Up to 200 meters (200 segments)
Power	DC 10...30V
Current Drain	4.2mA per segment @12Vdc
Resolution	0.63 mm per 30 meters
Accuracy	1.50 mm per 30 meters
Measuring Range	360 deg (2D or 3D)
Operating Temp.	-30...+70 celsius
Waterproof	20ATM
Joint Flexibility	Up to 90 deg

Applications

- Monitoring ground uplift and subsidence around railway
- Monitoring ground, incline plane deformation and movement
- Convergence measurement of tunnel
- Measuring and monitoring all of angular and distance displacement of all of constructions and civil engineering



Technical Features

- **ERMSA** (Error Reduction Method for Sensor Array : Innovatively improving accumulating error)
- Linked with **Campbell Scientific's** such as CR1000, CR1000X
- **Complete waterproof** applying high-pressure thread sealing
- **Enhanced electric protection** (Insulation resistive power supplier+electrical noise filter+isolation converter)
- Able to powered by **12VDC, 50W solar panel**
- Real-time sites monitoring and database on **wireless cloud server by LTE**
- **Weight lightening of 30%** from current DAS measurement system
- Various patent technologies applied

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DAS DEMONSTRATIONS



Convergence measurement of tunnel



Monitoring for railways | Ballasted track



Monitoring for railways | Ballasted track



Monitoring for railways | Concrete roadbed



Monitoring for railways | Concrete roadbed



Mounting brackets for railway