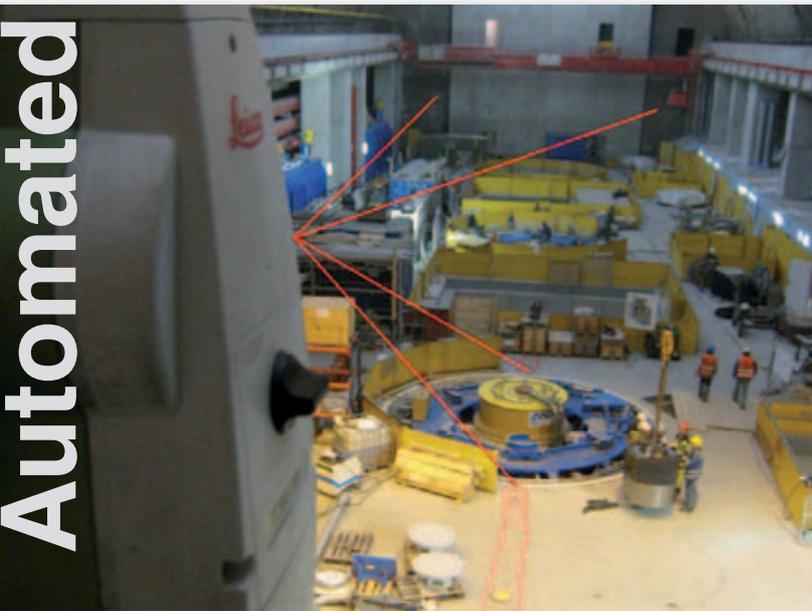


Axis3D AMO

Stand-alone trigonometric deformation measurements



Maximum security: Alarms and data transfer in real-time, 24/7.

Stand-alone operation: Data transfer via 2G/3G/4G, power supplied by solar panels or fuel cells.

Minimal equipment for fast set up: Up and running within one hour.

Automated measurements: Considers shifts in station positions and influence of refraction.

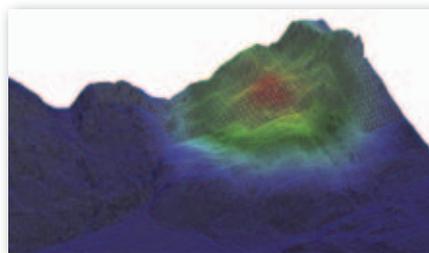
Configuration and Stand-alone Measurements



The **stand-alone trigonometric system** continuously measures object coordinates and checks for deformations. Shifts in station coordinates and the influence of refraction are calculated and corrected on-board in the field.

Measurement routines are **pre-configured**; there is no need for a permanent communication link to the office server. The field system runs without a computer, keeping **power consumption** to a **minimum**.

Data Transfer and Visualization



Deformation results are stored as ASCII files and **automatically transferred** to the office via 2G/3G/4G. The **field equipment** is permanently **monitored**. Remote maintenance from the office allows control settings to be adjusted and possible errors to be corrected.

Visualization (PC- and Web-based) for data analysis are carried out using Axis3D Deformation Graphics (DG) software, or other programs already in use.

System Information

Field Hardware

- Leica Geosystems TPS1000/2000/5000, TPS1100, TPS1200, TM/TS30, Viva and Nova total station
- AMO-Box: communication via 2G/3G/4G between office and up to two total stations; up to 200 m distance between total station and AMO-Box
- Optional: independent 24V power supply (solar panels/fuel cells)

Office Hardware

- Standard personal computer and optional server

All components may be purchased through **significant software**.

Field Software

- Axis3D AMO1.0 on-board software for Leica Geosystems TPS1200, TM/TS30, Viva and Nova total stations
- Axis3D AMO2.0 software (AMO-Box) allows additionally to use Leica Geosystems TPS1000/2000/5000 und TPS1100 total stations

Office PC/Server-Software

- Axis3D ADS: automatic alarms, data transfer, and system checks
- Axis3D ADC: manual configuration and remote maintenance
- Languages: German, English; French (coming soon)
- Operating systems: Windows XP, Windows Vista, Windows 7, Windows 8 (32/64-bit)

Axis3D AMO Functionality

General

- Optional integration of geotechnical sensors via RS485 or LAN
- Optional logging of all activities on the AMO-Box or on the total station

Automated Measurements

- Unlimited number of target points
- Continuous or single measurements
- Re-measure temporarily hidden points
- Point recognition of closely positioned targets
- Tracking of fast-moving targets
- Measurement data stored in ASCII files in Leica GSI16 format

Optional: Coordinate Calculations

- Individual refraction corrections for different deformation point groups
- Calculation of station position in 1D, 2D, 3D
- Meteorological and geometric distance reductions
- Coordinate output in ASCII files in Leica GSI16 format

Optional: Alarms

- Monitoring of shifts in X, Y, Z, 3D, and position
- Monitoring of absolute shifts
- Monitoring of shift velocity
- Multiple tolerance limits per point
- Multiple tolerance ranges per point
- Avoid false alarms: warning only after repeated exceeding of tolerance

Optional: Automatic Data Transfer and System Check (Axis3D ADS)

- Data download
- Total station and AmoBox system checks
- Reset total station and AMO-Box after errors
- Messaging of alarms and errors (email, text message)
- Logging of total station status

Optional: Manual Remote Maintenance (Axis3D ADC)

- Input and upload of control settings
- Up- and download of data
- Check total station status
- Reset total station after errors

Related Products

- Axis3D DGI - Deformation Graphics Import
- Axis3D DGB - Deformation Graphics Basic
- Axis3D DGP - Deformation Graphics Professional
- Axis3D DG3 - Deformation Graphics 3D
- Axis3D DGO - Deformation Graphics Online
- Axis3D DGR - Deformation Graphics Real-Time
- Axis3D GTM - Geotechnical Monitoring

Customers

ASFINAG

**Avalanche Protection and
Torrent Control (Austria)**

State of Vorarlberg - Road Dept.

Monterrey Metro (Mexiko)

Vorarlberger Illwerke AG

Wiener Linien

Applications



Stand-alone Monitoring

With 24V solar or fuel cell power supply and 2G/3G/4G data transfer, e.g. for slope monitoring, retaining walls, ground settlements.



Online Monitoring

With Web-based real-time deformation graphics for authorized users; e.g. for high-risk structures, rail tracks.



Standard Monitoring

With 230V/110V and 2G/3G/4G data transfer, e.g. for tunnels, building pits, dams, walls.

Contact Information

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