



# Tunnel Monitoring

**GEOKON instrumentation:  
measurements you can trust**

[www.geokon.com/tunnel](http://www.geokon.com/tunnel)

**GEOKON**

**TRUSTED MEASUREMENTS™**

# Key Monitoring Applications

## Deformation in the Tunnel

- Convergence
- Displacements around the excavation
- Displacement across cracks and joints
- Differential settlement
- Heave

## Deformation of the Ground Surface and Adjacent Structures

- Subsurface settlement
- Settlement of utilities
- Subsurface lateral deformation
- Measurement of groundwater levels
- Measurement of cracks and tilt in buildings

## Stress in the Tunnel Support and Liner

- Measurement of structural stresses
- Loads in and between liner segments
- Measurement of loads in rockbolts
- Measurement of NATM tangential and radial stresses
- Rotation and tilting of liner segments





### Deformation in the Tunnel

- Tape extensometers
- Extensometers
- Crackmeters
- Settlement sensors
- Tiltmeters
- Convergence meters



### Deformation of the Ground Surface and Adjacent Structures

- Inclinometers
- In-place inclinometers
- Extensometers
- Crackmeters
- Tiltmeters
- Wireless networks



### Stress in the Tunnel Support and Liner

- Strain gauges
- Load cells
- Instrumented rockbolts
- Pressure cells
- Piezometers
- Dataloggers



# About GEOKON

GEOKON, founded in 1979, is a recognized world leader in the manufacture of geotechnical and structural instrumentation.

GEOKON sensors provide excellent long-term stability and proven reliability for protracted measurements in adverse environments.

GEOKON has been awarded ISO 9001:2015 registration from both ANSI•ANAB, USA and UKAS of Great Britain.

GEOKON products are supported by an experienced team of factory-trained associates ready to assist with instrument design, selection and installation.

GEOKON is committed to providing exceptional customer service to meet the needs of our clients.

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## GEOKON

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