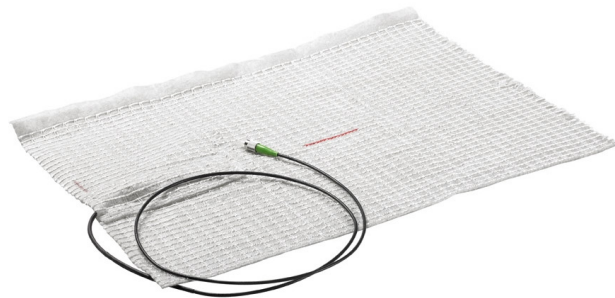


Description

Geodetect is an intelligent, innovative geotextile-based monitoring system. It consists of Tencate Rock PEC high strength geotextiles, equipped with optical fibres and Fibre Bragg gratings to measure the strain. The system is designed to increase the safety of civil-engineering infrastructure through cost-effective predictive maintenance, especially in sensitive areas.



Geodetect is a system developed for the measurement of strain, allowing monitoring of earthworks structures reinforced with geosynthetics. Possible application areas are roads & railways, retaining walls, tunnels and other underground structures, pipes (for gas, water, oil...) etc. Geodetect offers an economic solution to ensure the safety of earth-work structures, and to prevent them from damage and consequent risks. It is especially applicable to geotechnical sensitive areas such as carstic zones, mining areas, areas with highly compressive soils, etc.

Features

- Combines reinforcement, strain measurement and warning system
- High reliability (insensitive to the environment)
- Very high sensitivity (measuring deformations of < 0.001%)
- High strength and durability in soils
- Survey and monitoring of very large areas possible
- Applicable to a wide range of geosynthetics for soil reinforcement

Standard Specifications

Parameter	Unit	Value
Strain accuracy	-	1% FS
Strain gage factor (S_e)	$\mu\epsilon^{-1}$	7.77×10^{-7} (typical)
Strain range	%	1 (long term) 3 (short term)
Temperature range	$^{\circ}\text{C}$	-20 to +60
Temperature cross sensitivity	$\text{pm}/^{\circ}\text{C}$	10 (typical)
Sensor spacing	m	To be specified
FBG central wavelength ¹	nm	1510 to 1590
Dimensions	WxDxH	To be specified
Pigtail length	m	1.5
Pigtail material	-	LDPE
Connection	-	FC/APC inside watertight protection cap PN

¹ The FBG is in fact a Draw Tower Grating (DTG) i.e. written in the fibre while drawing it, see www.fbgs-technologies.com for further information.

Ordering information

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