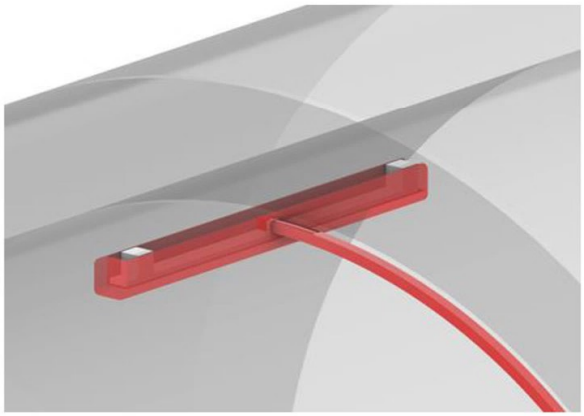
# SECTA SLS3D

FSI optical 3D shape sensors used to monitor cracks or relative displacements between two adjacent structural elements.



## Technical features

- Max Sampling Frequency: 205 kHz
- Accuracy: 0.1 % ( max error 1 mm on 1 m)
- Measuring range: 0 - 100 mm

- EMI Immunity

## SECTA SLS3D

SECTA SLS3D is a FSI – Fiber Segment Interferometry optical sensor dedicated to real-time dynamic monitoring of cracks and relative displacements between two adjacent structural elements.

For tunnel applications, it can be used to monitor the relative displacements between concrete tunnel lining segments and, if installed in series on many sectors, can give important information regarding longitudinal deflection of the tunnel.

SLS3D sensor is composed by a 1 mt flexible transducer made in composite material equipped with three FSI optical sensors arrays able to detect the relative movements of adjacent elements across X, Y and Z direction.

**Installation**

SLS3D sensor can be installed in proximity of the junction between two adjacent tunnel concrete segments or in proximity of the cracks of a structure.
It is fixed on the surfaces through epoxy glue and protected by a dedicated housing made in composite material.

SLS3D sensors are connected through APC/FC and dedicated junction box to the main optical fiber backbone which connects all the sensors to SECTA Control Unit PCU – GEN I.

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