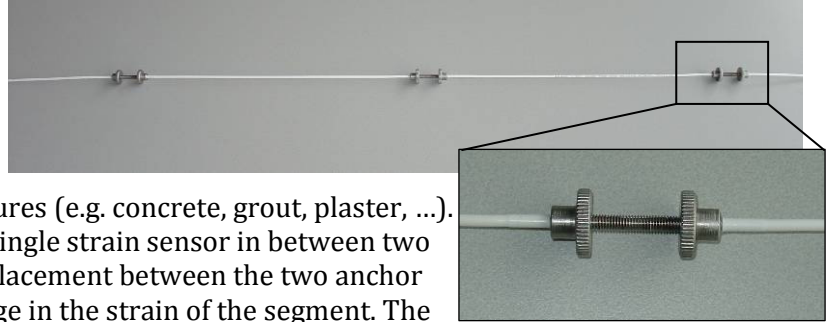


## Anchor Strain Chain ASC-01

### Description

The fibre optic Anchor Strain Chain ASC-01 contains different strain segments in series. The sensor chain has a small diameter and is designed to become embedded inside structures (e.g. concrete, grout, plaster, ...). Each strain segment contains a single strain sensor in between two anchoring points. A relative displacement between the two anchoring points is transferred into a change in the strain of the segment. The Anchor Strain Chain ASC-01 can be customized to the needs of the application i.e. the number of segments and the segment length can be chosen. The standard length of a segment ranges from 0.5 m to 5 meters. The sensor has a connector at both ends in order to make series configurations possible.



### Features

- Chain of strain sensors that can be directly embedded in grout or concrete.
- Measurement of complex strain distributions with a single optical cable.
- Detection of strain changes over base lengths up to 5 meters.
- Monitoring compression as well as tension.
- The displacement can be derived from the distance between the anchoring points.

### Applications

Monitoring of strain distributions in reinforcement bars and anchors. Displacement monitoring in concrete walls, tunnels, boreholes, ... Crack and fissure detection in concrete structures. During mounting of the sensors, some pre-tension can be applied on the anchors in order to monitor besides elongation also compression. When large temperature variations are expected, a temperature sensor is recommended for compensation purposes.

## Standard specifications

Parameter	Value
Strain resolution <sup>1</sup>	0.85 $\mu\epsilon$
Strain precision <sup>1</sup>	1.7 $\mu\epsilon$
Strain range <sup>2</sup>	5000 $\mu\epsilon$
Temperature range <sup>3</sup>	-20 °C to +60 °C
Gage lengths	0.5 m to 5 m
Number of segments	up to 10
Cable diameter	3 mm
Cable material	polyamide
Fixation type	anchor embedding
Anchor material	SS316
Pigtail diameter	3 mm
Pigtail length <sup>3</sup>	1.5 m
Pigtail material	LDPE
Connector type	FC/APC

<sup>1</sup> Taking into account a depolarized measurement device with a 1 pm wavelength resolution and precision.

<sup>2</sup> When compression measurements are required, the sensor needs to be installed with some pre-strain.

<sup>3</sup> Extendable on request.

## Ordering information

Contact the FOS&S Sales department on [sales@fos-s.com](mailto:sales@fos-s.com)