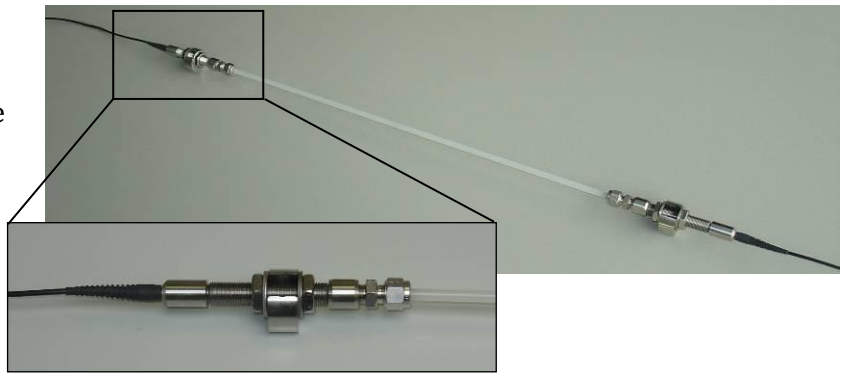
Strain Cable SC-01

Description

The fibre optic Strain Cable SC-01 is a long base strain gage which can be mounted on a structure by means of two anchoring points. The standard gage length can be chosen between 1 and 5 meters. The sensor has a connector at both ends in order to make series configurations possible.



Features

- Detection of strain changes over various base lengths.
- Sensors can be placed in series and hereby reducing the cabling to a minimum
- The displacement can be derived from the distance between the anchoring points.
- Monitoring compression as well as tension.
- Watertight and ruggedized housing, applicable in harsh environments.

Applications

Health monitoring of structures, crack and fissure formation in (concrete) walls, monitoring of mining sites, tunnels, boreholes, pipelines, … The anchoring points can be bolted or welded onto the structure. Then the sensor is attached to these anchoring points by means of nuts. During mounting, some pre-tension can be applied on the sensor by means of the nuts 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[1]	0.85 με
Strain precision[1]	1.7 με
Strain range[2]	5000 με
Temperature range[3]	-20 °C to +60 °C
Gage length[3]	1 m to 5 m
Cable diameter	6 mm
Cable material	PA
Fixation type	M12 x 1.25
Housing material	SS316
Pigtail diameter	3 mm
Pigtail length[3]	1.5 m
Pigtail material	LDPE
Connector type	FC/APC
Water tightness[4]	IP68

[1] *Taking into account a depolarized measurement device with a 1 pm wavelength resolution and precision.*
[2] *When compression measurements are required, the sensor needs to be installed with some pre-strain.*

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[3] *Extendable on request.*
[4] *Watertight at 10 bar for 12 hours.*

Ordering information

Example:

S	C	0	1	-	0	9	-	3	0	0	-	0	0	-	F	A	-	0	0	-	F	A

Product	
SC-01	Strain Cable

Nominal wavelength	
Standard	
01	1510 nm
02	1515 nm
03	1520 nm
04	1525 nm
05	1530 nm
06	1535 nm
07	1540 nm
08	1545 nm
09	1550 nm
10	1555 nm
11	1560 nm
12	1565 nm
13	1570 nm
14	1575 nm
15	1580 nm
16	1585 nm
Custom Contact sales department	

Gage length	
Standard:	
100	1 m
200	2 m
300	3 m
400	4 m
500	5 m
Custom:	length in XXX centimeter

Pigtail length left	
Standard:	
00	1.5 m
Custom:	length in XX meters

Connector type left	
Standard:	
FA	FC/APC
Custom: Contact sales department	

Pigtail length right	
Standard:	
00	1.5 m
Custom:	length in XX meters

Connector type right	
Standard:	
FA	FC/APC
Custom: Contact sales department	

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