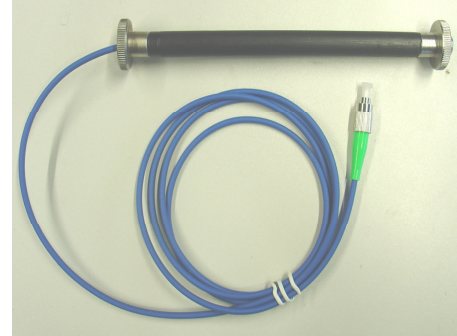


Embeddable Strain Sensor ES-02

Description

The embeddable strain sensor ES-02 is a strain sensor that is intended to become embedded into concrete structures in order to measure the strain variations between its anchoring points. The fiber is fixed inside a housing and can be connected at both ends in order to make series configurations possible.



Features

- Sensors can be placed in series and hereby reducing the cabling to a minimum
- The housing can be directly embedded into a concrete structure
- Direct measurement of the strain, both tension as well as compression
- The displacement can be derived from the distance between the anchoring points.

Applications

The Embeddable Strain sensor ES-02 can be applied for the detection of strain changes in concrete structures due to e.g. varying load conditions or crack and fissure formation. The sensor contains a certain amount of pre-tension in order to monitor besides elongation also compression.

When temperature variations are expected, a temperature sensor is recommended for compensation purposes.

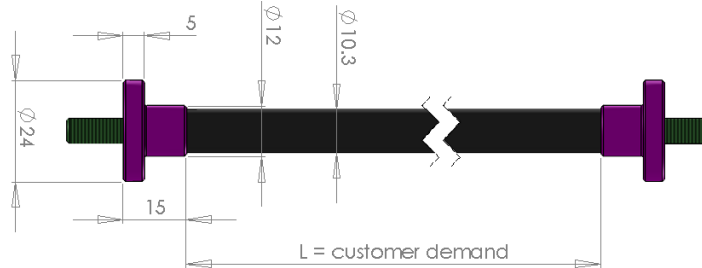
Standard specifications

Parameter	Value
Strain resolution ¹	0.85 $\mu\epsilon$
Strain precision ¹	1.7 $\mu\epsilon$
Strain range ²	5000 $\mu\epsilon$
Temperature range ²	-20 °C to +60 °C
Housing material	SS304 / PE10
Housing diameter	Ø24 mm
Gage length ²	1m-5m
Pigtail diameter	3 mm
Pigtail length ²	1.5 m
Pigtail material	LDPE
Connector type	FC/APC
Water tightness ³	IP68

¹ Taking into account a depolarized measurement device with a 1 pm wavelength resolution and precision.

² Extendable on request.

³ Watertight at 10 bar for 12 hours.



Ordering information

Example:

E	S	0	2	-	0	9	-	3	0	0	-	0	0	-	F	A	-	0	0	-	F	A
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Product		Nominal wavelength		Connector type left		Connector type right	
ES-02	Embeddable strain sensor	Standard		Standard:		Standard:	
		01	1510 nm	FA	FC/APC	FA	FC/APC
		02	1515 nm	Custom:		Custom:	
		03	1520 nm	Contact sales department		Contact sales department	
		04	1525 nm	Pigtail length left		Pigtail length right	
		05	1530 nm	Standard:		Standard:	
		06	1535 nm	00	1.5 m	00	1.5 m
		07	1540 nm	Custom: length in XX meters		Custom: length in XX meters	
		08	1545 nm	Gage length			
		09	1550 nm	Standard:			
		10	1555 nm	100	1 m		
		11	1560 nm	200	2 m		
		12	1565 nm	300	3 m		
		13	1570 nm	400	4 m		
		14	1575 nm	500	5 m		
		15	1580 nm	Custom: length in XXX centimeter			
		16	1585 nm				
Custom Contact sales department							

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