

SB-01 SisterBar

Basic characteristic

- ▲ SB-01 is a directly embeddable strain sensor possible to be implemented inside an existing rebar cage. The sensor can be tied or welded to the existing structure.
- ▲ SB-01 offers measuring of strain changes in $\mu\epsilon$ within the length of the sensor.
- ▲ SB-01 can be manufactured for different rebar sizes and lengths. Individual sensors can be connected in a series configuration.



Benefits

- ▲ Directly embeddable strain sensor without requiring any further supportive elements.
- ▲ No pre-strain adjustment is required during installation and setup.

Applications

- ▲ Strain measurement inside concrete structures.
- ▲ Combined with the TP-03 temperature sensor the SB-01 offers temperature compensated strain monitoring.

Performance properties

Strain range ¹⁾	$\pm 1500\mu\epsilon$
Accuracy (guaranteed) ²⁾	$< 0.50\% FS^4$
Accuracy (typical) ²⁾	$< 0.23\% FS^4$
Precision (guaranteed) ³⁾	$< 0.25\% FS^4$
Precision (typical) ³⁾	$< 0.15\% FS^4$
Strain sensitivity	$1.2\text{pm}/\mu\epsilon$
Temperature compensation	External
Operating Temperature range	-20°C to $+60^\circ\text{C}$
Ingress Protection rating	IP 67

¹⁾ Calibrated in μm on demand

²⁾ Accuracy is established for each sensor under laboratory conditions and it includes hysteresis, non-linearity, and repeatability of the sensor.

³⁾ Precision is established on a batch basis and it includes hysteresis, non-linearity, repeatability, and reproducibility of the sensor.

⁴⁾ FS: full-scale range

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Physical properties

Housing material	Construction steel, 1.0439 (B500B)
Anchoring distance	Not applicable
Dimensions (without cable) ¹⁾	Ø8-12mm x 250-1000mm
Weight (without cable)	150-850g
Cable type	3mm armored cable
Cable length ²⁾	1mtr
Cable Bend Radius (dynamic)	40mm
Cable Bend Radius (static)	30mm
Connector type ³⁾	FC/APC
Mounting method	Embedding

¹⁾ For further dimensions details see the product drawing

²⁾ Cable length is extendable on request

³⁾ Other connector types available on request

Packaging

Cardboard box with dimensions: 370x290x45mm

Quality statement

SB-01 sensor is compliant with IEC 61757-1-1:2016/Ed1.0 and IEC 61757:2018

All sensors are 100% tested and calibrated at SYLEX

The sensor is manufactured according to ISO 9001:2008 and ISO 14001:2004

Optional accessories

- ▲ **WCP-01 Watertight connector protection** – used for FC/APC connector protection during the installation against dust and water – IP67 rated.
- ▲ **LCP-03 Longer cable pigtails** – used to extend the cable lengths from 1mtr up to 20mtr.

For more information contact our sales team at sales@sylex.sk

* Specifications are subject to change without notice