

SC-01 Strain cable sensor

Basic characteristic

- ▲ Long gauge strain sensor with 30cm to 10mtr measuring base (gauge length).
- ▲ SC-01 measures strain between its anchoring brackets and is therefore immune to local defects or inhomogeneities present on the surface.
- ▲ Integrated temperature compensation.
- ▲ SC-01 can be connected in a series configuration.



Benefits

- ▲ Measurement of large structures with fewer sensors. One-body design for both strain and temperature measurement.
- ▲ Can be both concrete embedded and surface mounted.
- ▲ Adjustable pre-strain during installation.
- ▲ Customizable gauge length.

Applications

- ▲ Strain profile in concrete or metal structures (ceiling pillars, roofs, walls)
- ▲ Crack monitoring
- ▲ Deformations
- ▲ Borehole deformation (embedded or grouted)

Performance properties

Strain range	±5000µε
Accuracy (guaranteed) ¹⁾	<0.35% FS ³⁾
Accuracy (typical) ¹⁾	<0.18% FS ³⁾
Precision (guaranteed) ²⁾	<0.15% FS ³⁾
Precision (typical) ²⁾	<0.10% FS ³⁾
Temperature compensation	Integrated
Temperature accuracy ¹⁾	<1°C
Temperature precision ²⁾	±0.3°C
Temperature resolution	0.05°C
Temperature sensitivity	28pm/°C
Strain sensitivity	~1.35pm/µε
Operating Temperature range	-20°C to +60°C
Ingress Protection rating	IP 67

¹⁾ Accuracy is established for each sensor under laboratory conditions and it includes hysteresis, non-linearity, and repeatability of the sensor.

²⁾ Precision is established on a batch basis and it includes hysteresis, non-linearity, repeatability, and reproducibility of the sensor.

³⁾ FS: full-scale range

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Physical properties

Housing material	Stainless steel SS316L and PA12
Anchoring distance	Adjustable parameter
Dimensions (without cable) ¹⁾	Ø12 mm x L mm [Washer Ø24 mm]
Weight (without cable)	450g
Cable type	3mm Dyneema reinforced cable
Cable length ²⁾	1mtr
Cable Bend Radius (dynamic)	40mm
Cable Bend Radius (static)	30mm
Connector type ³⁾	FC/APC
Mounting method	Mounting brackets

¹⁾ See the product drawing for further dimension details

²⁾ Cable length is extendable on request

³⁾ Other connector types available on request

Packaging

Cardboard box – dimensions depending on the final configuration.

Quality statement

SC-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

- ▲ **MBS-01 Mounting brackets** – used for sensor mounting to the measured object. Brackets can be screwed, glued, or welded to the surface.
- ▲ **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