

Strain cable sensor LSCS-01



BASIC CHARACTERISTIC

- Long gauge strain sensor with 30cm to 10m measuring base (gauge length)
- LSCS-01 is measuring strain between its anchoring brackets and is therefore immune to local defects or inhomogeneity
- Integrated temperature compensation
- LSCS-01 can be connected in 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 ¹⁾	±5000με
Accuracy (guaranteed) ²⁾	<0.35% FS ³⁾
Accuracy (typical) ²⁾	<0.18% FS ³⁾
Precision (guaranteed) ³⁾	<0.15% FS ³⁾
Precision (typical) ³⁾	<0.10% FS ³⁾
Temperature compensation	Integrated
Temperature accuracy ¹⁾	<1°C
Temperature precision ²⁾	±0.3°C
Operating Temperature range	-20°C to +60°C
Ingress Protection rating	IP 67

1) Accuracy is established for each individual 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

PHYSICAL PROPERTIES

Housing material	Stainless steel SS316L and polyamide
Anchoring distance	Adjustable parameter
Dimensions (without cable) ¹⁾	Ø12 mm x L mm [Washer Ø24 mm]
Weight (without cable)	450g
Cable type	3mm PE (Dyneema) reinforced cable
Cable length ²⁾	1m
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

- LSC-01 sensor is compliant with IEC 61757-1-1:2016/Ed1.0 and IEC 61757:2018
- All sensors are 100% tested and calibrated
- Sensor is manufactured according to ISO 9001:2008 and ISO 14001:2004

OPTIONAL ACCESSORIES

- Mounting brackets – used for sensor mounting to the measured object. Brackets can be screwed, glued or welded to the surface
- Watertight connector protection – used for FC/APC connector protection during the installation against dust and water – IP67 rated
- Longer cable pigtails – used to extend the cable lengths from 1m up to 20m



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