

Spot-weldable strain sensor LSWS-02



BASIC CHARACTERISTIC

- LSWS-02 is a short gauge spot-weldable strain sensor measuring strain changes in $\mu\epsilon$ or extensions (elongation) in μm
- Integrated temperature compensation
- LSWS-02 can be connected in series configuration

BENEFITS

- One-body design for both temperature measurement
- Surface-mountable using mounting screws, spot-welding or gluing to the surface
- Adjustable pre-strain during installation

APPLICATIONS

- Strain changes detection
- Steel deformations...
- Can be mounted on different surfaces including pipelines, walls...

PERFORMANCE PROPERTIES

Strain range	$\pm 2000 \mu\epsilon$
Accuracy (guaranteed) ¹⁾	$< 0.5\% \text{ FS}^{3)}$
Accuracy (typical) ¹⁾	$< 0.23\% \text{ FS}^{3)}$
Precision (guaranteed) ²⁾	$< 0.25\% \text{ FS}^{3)}$
Precision (typical) ²⁾	$< 0.15\% \text{ FS}^{3)}$
Temperature compensation	Integrated
Temperature accuracy ¹⁾	$< 1^\circ\text{C}$
Temperature precision ²⁾	$\pm 0.3^\circ\text{C}$
Operating Temperature range	-20°C to $+60^\circ\text{C}$
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	SS316L – 1.4404
Anchoring distance	105 +/- 6 mm
Dimensions (without cable) ¹⁾	127 x 35 x 8.2 mm
Weight (without cable)	170g
Cable type	3mm PE (Dyneema) reinforced cable
Connector type ³⁾	FC/APC
Mounting method	Screws, glue or spot welding

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
Every sensor is equipped with Transportation fixture

QUALITY STATEMENT

- LSWS-02 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

- Pre-strain setup installation dial tool – used for pre-strain set up during the installation
- 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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