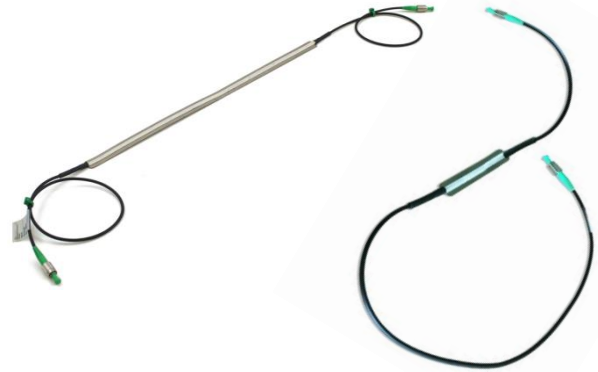


## SWA-01 Spot-weldable strain array sensor

### Basic characteristic

- ▲ SWA-01 is a spot-weldable strain array sensor with variable number of FBG sensors (min = 1, max = custom) and flexible body simply adaptable to any surface curvature. Shortest length for 1xFBG configuration is 30mm, however standardly offered as 40mm for easier installation.
- ▲ [Optional] Integrated temperature compensation.



### Benefits

- ▲ One-body design for both strain and temperature measurement.
- ▲ Surface-mountable using spot-welding or direct gluing to the surface.
- ▲ No need for adjusting pre-strain during installation.

### Applications

- ▲ Strain changes detection
- ▲ Steel deformations, etc...
- ▲ Can be mounted on different surfaces including pipelines, walls, etc.
- ▲ Any curved objects.

### Performance properties

Strain range	±1500µε
Accuracy (guaranteed) <sup>1)</sup>	<0.5% FS <sup>3)</sup>
Accuracy (typical) <sup>1)</sup>	<0.23% FS <sup>3)</sup>
Precision (guaranteed) <sup>2)</sup>	<0.25% FS <sup>3)</sup>
Precision (typical) <sup>2)</sup>	<0.15% FS <sup>3)</sup>
Temperature compensation	Integrated <sup>4)</sup>
Temperature accuracy <sup>1)</sup>	<1°C
Temperature precision <sup>2)</sup>	±0.3°C
Operating Temperature range	-20°C to +60°C

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

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

<sup>3)</sup> FS: full scale range

<sup>4)</sup> Optional

## SWA-01 Spot-weldable strain array sensor

### Physical properties

Housing material	0.2mm thick SS304 – 1.4301
Anchoring distance	n/a
Dimensions (without cable) <sup>1)</sup>	Variable length (min 30mm) x 15 x 3.2 mm
Weight (without cable)	Around 50g per FBG
Cable type	3mm Dyneema reinforced cable
Cable length <sup>2)</sup>	1mtr
Cable Bend Radius (dynamic)	40mm
Cable Bend Radius (static)	30mm
Connector type <sup>3)</sup>	FC/APC
Mounting method	Spot welding or glue

<sup>1)</sup> For further dimensions details see the product drawing

<sup>2)</sup> Cable length is extendable on request

<sup>3)</sup> Other connector types available on request

### Packaging

Cardboard box with dimensions: 370x290x45mm<sup>1)</sup>

### Quality statement

SWA-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

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](mailto:sales@sylex.sk)

\* Specifications are subject to change without notice