

## MS-03 Mountable strain sensor

### Basic characteristic

- ▲ Short gauge strain sensor with a 90-110mm measuring base (gauge length).
- ▲ MS-03 is capable of measuring length changes in  $\mu\epsilon$  or  $\mu\text{m}$  between its anchoring points.
- ▲ Possible pre-strain setup during installation up to  $\pm 5000\mu\epsilon$ .
- ▲ MS-03 can be connected in a series configuration.



### Benefits

- ▲ Embeddable into concrete or surface-mounted
- ▲ Adjustable pre-strain during installation
- ▲ Various anchor designs

### Applications

- ▲ Strain monitoring
- ▲ Rebar strain, stress, or force monitoring
- ▲ Wall-tie monitoring

### Performance properties

Strain range <sup>1)</sup>	$\pm 5000\mu\epsilon$	[ $\pm 500\mu\text{m}$ or 0-1000 $\mu\text{m}$ ]
Accuracy (guaranteed) <sup>2)</sup>	$<0.50\% \text{ FS}^4$	$<5\mu\text{m}$
Accuracy (typical) <sup>2)</sup>	$<0.23\% \text{ FS}^4$	$<3\mu\text{m}$
Precision (guaranteed) <sup>3)</sup>	$<0.25\% \text{ FS}^4$	$<3\mu\text{m}$
Precision (typical) <sup>3)</sup>	$<0.15\% \text{ FS}^4$	$<1.5\mu\text{m}$
Strain sensitivity	1.2 $\text{pm}/\mu\epsilon$	12 $\text{pm}/\mu\text{m}$
Temperature compensation	External	
Operating Temperature range	$-20^\circ\text{C}$ to $+60^\circ\text{C}$	
Ingress Protection rating	IP 67	

<sup>1)</sup> Calibrated in  $\mu\text{m}$  on demand

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

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

<sup>4)</sup> FS: full-scale range

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### Physical properties

Housing material	Stainless steel SS304
Anchoring distance	90 up to 110mm
Dimensions (without cables) <sup>1)</sup>	Ø12 mm x 174 mm [Washer Ø12 mm]
Weight (without/with cables)	80 g / 100 g
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	Mounting brackets

<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

### Quality statement

MS-03 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-03 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](mailto:sales@sylex.sk)

\* Specifications are subject to change without notice