

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

## MS-03 Mountable strain sensor

- 1) Calibrated in  $\mu\text{m}$  on demand
- 2) Accuracy is established for each sensor under laboratory conditions and it includes hysteresis, non-linearity, and repeatability of the sensor.
- 3) Precision is established on a batch basis and it includes hysteresis, non-linearity, repeatability, and reproducibility of the sensor.
- 4) FS: full-scale range

### 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               |

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

### 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