

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

¹⁾ Calibrated in μm 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

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Physical properties

Housing material	Stainless steel SS304
Anchoring distance	90 up to 110mm
Dimensions (without cables) ¹⁾	Ø12 mm x 174 mm [Washer Ø12 mm]
Weight (without/with cables)	80 g / 100 g
Cable type	3mm Dyneema reinforced cable
Cable length ²⁾	1mtr
Cable Bend Radius (dynamic)	40mm
Cable Bend Radius (static)	30mm
Connector type ³⁾	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

* Specifications are subject to change without notice