

Long Gage Length Sensor | os3600

Applications

Long-term Monitoring, Risk and Damage Assessment of:

- Civil Structures/Civionics (bridges, dams, tunnels, buildings)
- Transportation (railways, roadways)
- Energy (wind turbines, pipelines, nuclear reactors)
- Aerospace Vehicles (composite structures, wind tunnels, dynamic tests)
- Oil & Gas (platform structural health monitoring)
- Marine Vessels and Deck Monitoring

Features

- Built in temperature compensation
- High resolution
- Static and dynamic measurements
- Long gauge length
- Stainless steel/ teflon construction
- Ideal for harsh environments
- Available in double-ended configurations
- Insensitive to corrosion
- Immune to electromagnetic fields
- Easy to install, Can be removed for re-use
- Long lifetime
- Water resistant
- Armored cables

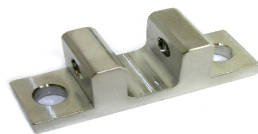
Description

The Micron Optics os3600 Long Gage Length Sensor provides an ideal alternative to electrical strain sensors. Advantages include high accuracy, long-term stability, and premium performance under harsh environmental conditions. Temperature compensation is also built in for maximum results. The os3600 can be easily embedded, bolted on, grouted in or welded to most materials using conventional installation techniques. A professional installation kit is also available from Micron Optics.

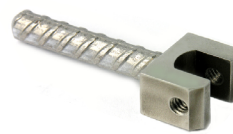


os3600 strain sensor shown with embeddable mounting bracket disks

Other mounting options:



Bolt-on



Grout-in



Weldable

os3600 sensors are available in double-ended and chained configurations. It is often economical and effective to connect multiple os3600 sensors on a single optical fiber. It is also practical, and sometimes required for redundancy purposes, to install multiple os3600 sensors on separate fibers yet merging them onto a single optical channel.

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Specifications ^β

os3600

Performance Properties

| | |
|-----------------------------|---|
| Accuracy | ± 0.5 % F.S. |
| Strain Sensitivity | ~ 1µε |
| Gage Length | 25.4 cm and 100 cm standard |
| Operating Temperature Range | -40 to 80°C |
| Strain Limits | ± 2,500 µε |
| Water Resistant | Suitable for wet, high humidity environments. |

Physical Properties

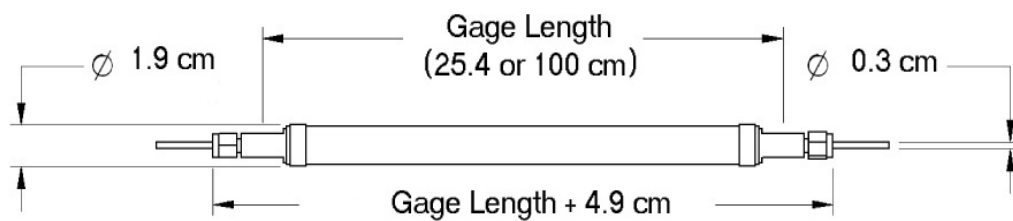
| | |
|------------------|---|
| Dimensions | See technical drawing below |
| Weight | 280 g |
| Material | Stainless steel/ Teflon construction |
| Cable Length | 1 m (± 10 cm), each end |
| Cable Type | 3mm armored cable |
| Connectors | FC/APC included |
| Mounting Options | Bolt-on, Grout-in, Weldable, Embeddable |
| Installation Kit | Optional |

Optical Properties

| | |
|--------------------------|--|
| Center Wavelengths | From 1460 to 1620 (Two FBGs per os3600 sensor. See standard wavelength sets below.) ± 1 nm |
| Peak Reflectivity (Rmax) | > 70% |
| FWHM (-3 dB point) | 0.25 nm (± .05 nm; apodized grating) |
| Isolation | > 12 dB (@ ± 0.4 nm around center wavelength) |

Notes:

1. Denotes Beta product. For more details see www.micronoptics.com/product_designation.php.



Ordering Information

os3600 - ggg - www - 1FC-1FC - m (Example: os3600 - 25.4 - Set4 - 1FC-1FC - W)

| | | | |
|---|--|--|---|
| ggg: Gage Length 25.4 (cm Standard) 100 (cm) | www: Temperature Wavelength / Strain Wavelength Set 1: 1512/1516 nm Set 2: 1522/1526 nm Set 3: 1532/1536 nm Set 4: 1542/1546 nm Set 5: 1552/1556 nm Set 6: 1562/1566 nm Set 7: 1572/1576 nm Set 8: 1582/1586 nm | 1 FC: Cable 1, Length & Connector 1 1m standard, Cable Length FC - FC/APC Connector 1 FC: Cable 2, Length & Connector 1 1m standard, Cable Length FC - FC/APC Connector | m: Mounting Methods B Bolt-on G Grout-in W Weldable E Embeddable |
|---|--|--|---|