**LIST OF CALIBRATION COEFFICIENTS**

| **Customer order:** | | **Revision:** | A | **Print date:** | 22.03.2022 |
| --- | --- | --- | --- | --- | --- |
| **Quality supervisor:** | tsalat@sylex.sk | **Production supervisor:** | mmucka@sylex.sk | | |

# EQUATIONS

## STRAIN EQUATION

$$\Delta\varepsilon = \frac{\Delta\lambda - B.\Delta T}{A}$$

$$\Delta\lambda = \frac{\lambda_{act} - \lambda_0}{\lambda_0} \qquad \Delta T = (T_{act} - T_0)$$

| Measurand | Description |
| --- | --- |
| $\Delta\varepsilon$ [με] | Strain shift |
| $\lambda_{0,inst,strain}$ [nm] **1 | Initial strain wavelength |
| $T_{0,inst}$ [°C] **1 | Initial temperature |
| $T_{act}$ [°C] **2 | Actual temperature |
| $\lambda_{act,strain}$ [nm] **2 | Actual strain wavelength |

## STRING EXPRESSION

$\Delta\varepsilon$ = ((Δλ - B * ΔT) / A)
$\Delta\lambda$ = ((λact - λ0) / λ0)
$\Delta T$ = (T act - T0)

*For the determination of the strain sensitivity the free fiber length was used as a basis*
*\*\*1 To be measured after installation of the sensor*
*\*\*2 Measured value during monitoring of the sensor*

# CALIBRATION COEFFICIENTS

| | | | | STRAIN COEFFICIENTS | |
| --- | --- | --- | --- | --- | --- |
| Nr. | Serial number | Customer code | Product | A [$\mu\varepsilon^{-1}$] | B [$°C^{-1}$] |
| 1 | 123456/0001 | | SB-01; 1550nm; 2x 1,5mtr | 7,75842E-07 | 5,89292E-06 |

The sensor is compliant with IEC 61757-1-1:2020 and IEC 61757:2018
Sensor is manufactured according to ISO 9001:2015 and ISO 14001:2015

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