



LIST OF CALIBRATION COEFFICIENTS - EXAMPLE

Customer order: Revision: A Print date: 28.03.2021
 Quality supervisor: tsalat@sylex.sk Production supervisor: mmucka@sylex.sk

EQUATIONS

TEMPERATURE EQUATION

$$T = T_{S1} \left(\frac{\lambda_{T,act} - \lambda_{T,ref}}{\lambda_{T,ref}} \right)^3 + T_{S2} \left(\frac{\lambda_{T,act} - \lambda_{T,ref}}{\lambda_{T,ref}} \right)^2 + T_{S3} \left(\frac{\lambda_{T,act} - \lambda_{T,ref}}{\lambda_{T,ref}} \right) + T_{S4}$$

Measurand	Description
T [°C]	Temperature
$\lambda_{T,act}$ [nm] **1	Actual temp. wavelength
$\lambda_{T,ref}$ [nm]	Reference temp. wavelength
T _{S1} [°C]	Temperature sensitivity 1
T _{S2} [°C]	Temperature sensitivity 2
T _{S3} [°C]	Temperature sensitivity 3
T _{S4} [°C]	Temperature sensitivity 4

STRING EXPRESSION

Ts1*((λT,act-λT,ref)/λT,ref)^3+Ts2*((λT,act-λT,ref)/λT,ref)^2+Ts3*((λT,act-λT,ref)/λT,ref)+Ts4

**1 Measured value during monitoring of the sensor

CALIBRATION COEFFICIENTS

Nr.	Serial number	Customer code	Product	T _{S1} [°C]	T _{S2} [°C]	T _{S3} [°C]	T _{S4} [°C]	$\lambda_{T,ref}$ [nm]
1	197322/0001		STS-04; Range: -50 to +250°C, WL: 1558nm, LCP-01: 0,6mtr SS / 2,5mtr Dyneema, 1x FC/APC	1,05531E+10	-3,32227E+07	1,60646E+05	2,25160E+01	1558,101696