Technical Information

Calculation of the heater resistance at 0 °C (Platinum heater)

$$R_{H0} = \frac{R_t}{1 + A \cdot t + B \cdot t^2}$$

Whereby:

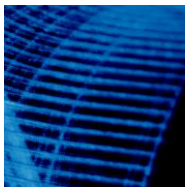
R_{H0}... Heater resistance at 0 °C

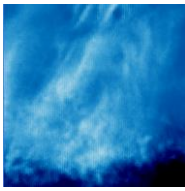
R_t... Heater resistance at ambient temperature t

t... Ambient temperature

A... Linear coefficient A = 3,9083 x 10^{-3} °C^{-1}

B... Quadratic coefficient B = -5,775 x 10^{-7} °C^{-2}





Calculation of the operating/heater temperature (Platinum heater)

$$t_H = -\left(\frac{A}{2 \cdot B} + \sqrt{\frac{A^2}{4 \cdot B^2} - \frac{R_{H0} - R_H}{R_{H0} \cdot B}} \right)$$

Whereby:

t_H... Heater temperature

R_{H0}... Heater resistance at 0 °C

R_H... Heater resistance at temperature t_H

A... Linear coefficient A = 3,9083 x 10^{-3} °C^{-1}

B... Quadratic coefficient B = -5,775 x 10^{-7} °C^{-2}

UST Umweltsensortechnik GmbH
is certified according to

UST Umweltsensortechnik GmbH
Dieselstr. 2 und 4, 98716 Geschwenda, Germany
Tel. +49 36205 713-0
Fax +49 36205 713-10
info@umweltsensortechnik.de
www.umweltsensortechnik.de