Technical Data

Resistance at 0 °C (R_0)	200 Ω
Temperature coefficient (TC), 0 °C up to +100 °C	$3.85 \cdot 10^{-3} K^{-1}$
Tolerance class according to DIN EN 60751	F 0,6 (-50 °C - +600 °C)
Operating temperature range depending on lead material:	
HT-Pt	-50 °C up to +850 °C
Measurement current (DC) at 25 °C	1 mA
Maximal permissible peak current (DC) at 25 °C	3 mA
Insulation resistance	> 10 MΩ
Self-heating at 0 °C	< 0.5 K / mW
Thermal response time	
Flowing water (v = 0.2 m/s)	$T_{0.5}$ = 0.07 s, $T_{0.9}$ = 0.2 s
Flowing air (v = 1 m/s)	$T_{0.5}$ = 4 s, $T_{0.9}$ = 10 s
Resistance value [Ω] at	
Temperature	Tolerance F 0,6 / HT [Ω]
0 °C	200 ± 0.48
+100 °C	277.01 ± 1.21
R_t measuring point	2 mm from wire end
Maximal Resistance Change at UCT 250 h	< 0.1 %

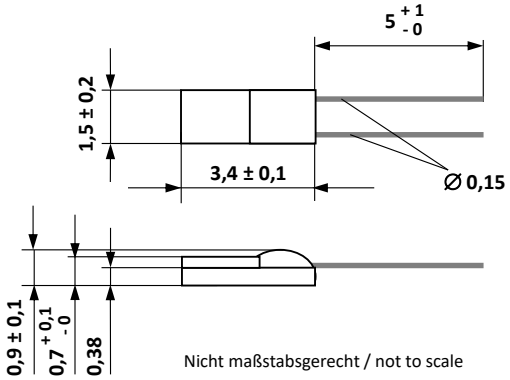
Specification	DIN EN 60751
Type	Film sensor

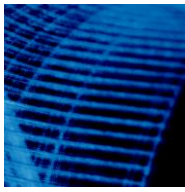
Technology: Advanced thin-film-technology - ceramic carrier with a micro-structured platinum layer and specific ceramic covering

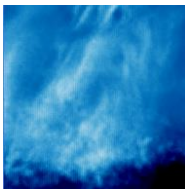
Operating conditions: Unprotected application only in dry environments without any contamination. Any compressive and tensile stresses of the leads have to be avoided.

Conformity: 2011/65/EU Restriction of the use of Hazardous Substances Directive (RoHS)

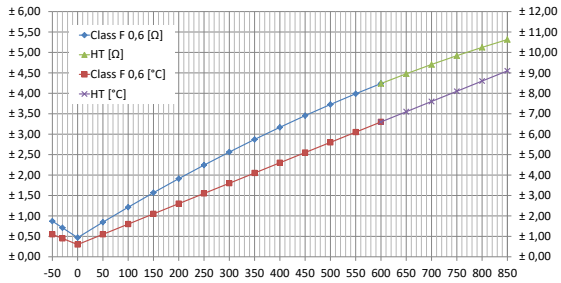
Dimensions [mm]







Functional performance



Picture 1: Resistance and temperature tolerances of Pt200

Temperature range from -50 °C up to 0 °C:

$R_t = R_o \cdot (1 + A \cdot t + B \cdot t^2 + C \cdot (t - 100\ °C) \cdot t^3)$

Temperature range from 0°C up to +600°C/+850°C:

$R_t = R_o \cdot (1 + A \cdot t + B \cdot t^2)$

Tolerance class according to DIN EN 60751:

Class F 0,6: (-50°C - +600°C): $\Delta t = \pm (0.6+0.01 \cdot |t|)$

Tolerance

HT: (-50°C - +850°C): $\Delta t = \pm (0.6+0.01 \cdot |t|)$

Whereby:

R_t … Resistance [Ω] at temperature t

R_o … Resistance [Ω] at 0 °C

t … Temperature [°C]

Δt … Permissible temperature deviation at t [°C]

A = $3.9083 \cdot 10^{-3}\ °C^{-1}$

B = $-5.775 \cdot 10^{-7}\ °C^{-2}$

C = $-4.183 \cdot 10^{-12}\ °C^{-4}$

Fields of application

- Industrial electronics
- Process engineering
- Building automation
- Automotive electronics
- Energy and environmental engineering
- Safety engineering

Ordering example

Construction	Accuracy	Leads (ø d x l [mm] lead material)	Operating temperature range [°C]
Pt200 FMC 1.5x3.,5 HT850, TC 3,85 cc	**HT**	**0.15x5 HT-Pt**	**-50/+850**

Other classes of accuracy, wire lengths, TC's, e.g. $3.77 \cdot 10^{-3} K^{-1}$ are available on request.

Made in Germany

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