上海科蕊

Technical Data

Resistance at 0°C (R_0)	20 Ω
Temperature coefficient (0°C up to +100°C)	$3.85 \cdot 10^{-3}$ K^{-1}
Specific R_0 tolerance at 0°C	± 0,12 Ω
Operating temperature range depending on lead material:	
AgPd5	-50 °C up to +400 °C
Pt-coated Ni-wire(NiPt)	-50 °C up to +500 °C (short-time up to +550 °C)
Pt	-50 °C up to +600 °C
Measurement current (DC) at 25 °C	1.0 mA
Maximal permissible peak current (DC) at 25 °C	3.0 mA
Insulation resistance	> 10 MΩ
Self-heating at 0 °C	< 0.5 K / mW
Thermal response time	
Flowing water (v = 0.2 m/s)	$T_{0.5}$ = 0.07s, $T_{0.9}$ = 0.2s
Flowing air (v = 1 m/s)	$T_{0.5}$ = 4 s, $T_{0.9}$ = 10 s

Resistance value R_t [Ω] at Temperature t	Tolerance Specific ±0,12 Ω at 0°C
0 °C	20 ± 0.12
+100 °C	27.702 ± 0.3
R_t measuring point	2 mm from wire end

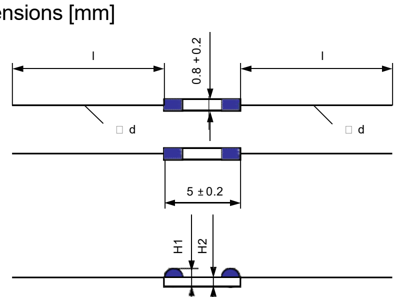
Maximal Resistance Change at UCT 250 h	< 0.1 %
Specification	DIN EN 60751
Type	Film sensor

Technology: Advanced thin-film-technology (ceramic carrier with a structured platinum layer, covered with a passivating layer)

Operating conditions: Unprotected application only in dry environments without any contamination

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

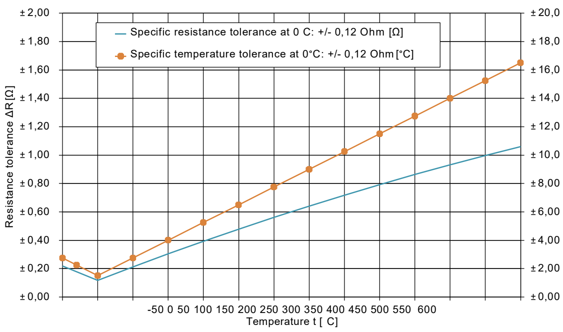
Dimensions [mm]



	Pt20 FMC 0.8x5x0.7 axial	Pt20 FMC 0.8x5x1 axial	Pt20 FMC 0.8x5x1.3 axial	Leads	AgPd5	NiPt 1)	Pt
H1 [mm]	0.7± 0.2	1± 0.2	1.3 ± 0.2	l [mm]	15 ± 1	10 ± 1	7 ± 1
H2 [mm]	0.27	0.4	0.65	d [mm]	0,15	0,15	0,15

1) not available with H1 = 0.7 mm and H2= 0.27 mm

Functional performance



Picture 1: Resistance and temperature tolerances of Pt20 ± 0,12 Ω at 0°C (Please note - the operating temperature range depends on lead material!)

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

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
- Building automation
- Automotive electronics
- Energy and environmental engineering
- Safety and medical engineering

Ordering examples

Construction	Class of accuracy	Leads (ø d x l [mm] lead material)	Operating temperature range [°C]
Pt20 FMC 0.8x5x1 axial	**+/- 0,12 Ohm at 0°C**	**0.15x15 AgPd5**	**- 50/+400**
Pt20 FMC 0.8x5x1.3 axial	**+/- 0,12 Ohm at 0°C**	**0.15x10 NiPt**	**- 50/+500**

Other classes of accuracy and wire lengths are available on request.

UST Umweltsensortechnik GmbH is certified according to

TÜV NORD TÜV NORD CERT GmbH ISO/TS 16949

TÜV NORD TÜV NORD CERT GmbH ISO 14001

Shanghai Kerui Trading Co.,Ltd.
203，No.19 Guoshun East Road,Yangpu District
Shanghai, China
Tel. +86 021 66300096