PERFORMANCE SPECS

Parameter	Symbol	Condition	Min.	Typical	Max.	Unit
Nominal Resistance at 0 °C	R_0	Class B	99.88 998.8	100.00 1000.0	100.12 1001.2	Ω
Tolerance at 25 °C	Class B	Room temperature calibration	-0.43	0	0.43	°C
Temperature Coefficient of Resistance	TCR	0 °C, 100 °C		3850		ppm/°C
Temperature Range		Class C (F0.6) Class B (F 0.3) Class A (F 0.15) Class T (F 0.1)	-50 -50 -30 -30		600 600 300 200	°C
Self Heating Coefficient in air, flow: 1 m/s		PTFC outline PTFD outline PTFF outline PTFM outline		0.5 0.33 0.5 0.5		°C/mW
Response Time Water Flow: 0.4 m/s	$\tau_{W,0.9}$	PTFC outline PTFD outline PTFF outline PTFM outline		0.2 0.35 0.2 0.2		s
Response Time Air Flow: 1 m/s	$\tau_{A,0.9}$	PTFC outline PTFD outline PTFF outline PTFM outline		10 17 10 10		s
Measuring Current R_0: 100 Ω		PTFC outline PTFD outline PTFF outline PTFM outline			1.4 1.7 1.4 1.4	mA
Measuring Current R_0: 1000 Ω		PTFC outline PTFD outline PTFF outline PTFM outline			0.4 0.5 0.4 0.4	mA

CALCULATION FORMULAS

The calculation formulas of Pt-RTDs are defined in DIN EN 60751 as following:

For T ≥ 0 °C: $R_{(T)} = R_{(0)} * (1 + a * T + b * T^2)$

For T < 0 °C: $R_{(T)} = R_{(0)} * [1 + a * T + b * T^2 + c * (T - 100°C) * T^3]$

Coefficients:

a = 3.9083E-03
b = -5.775E-07
c = -4.183E-12

Tolerances:

Class F 0.1 (T = AA):	± (0.10+0.0017*|T/°C|) °C	(-30…+200 °C)
Class F 0.15 (A)	± (0.15+0.002*|T/°C|) °C	(-30…+300 °C)
Class F 0.3 (B):	± (0.30+0.005*|T/°C|) °C	(-50…+600 °C)
Class F 0.6 (C):	± (0.60+0.01*|T/°C|) °C	(-50…+600 °C)

TYPICAL PERFORMANCE CURVES

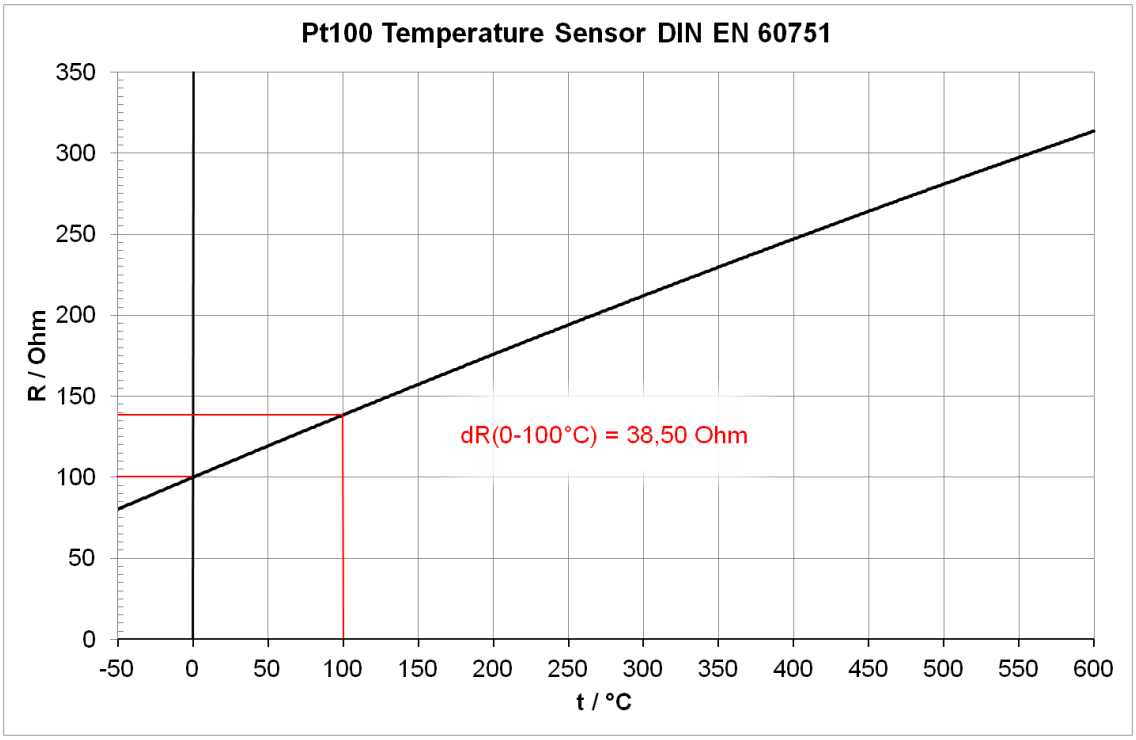

Figure 1: Resistance characteristics

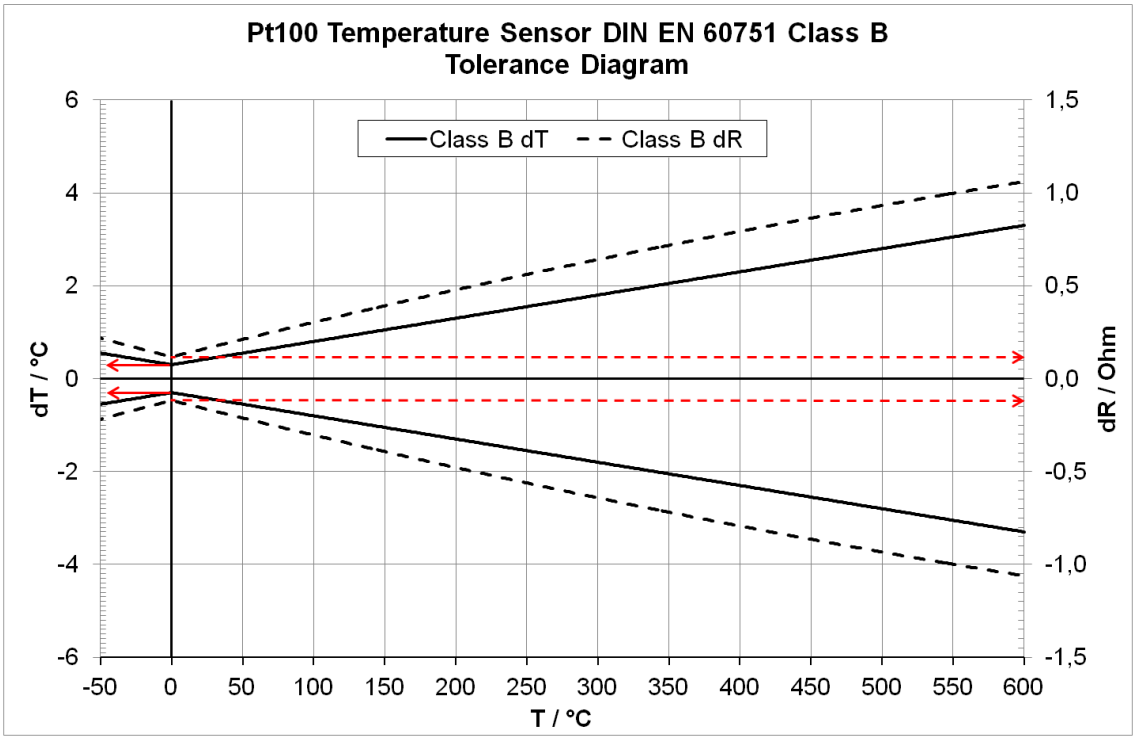

Figure 2: Tolerance chart