

INTERNATIONAL COLOR CODING

Calibration EN 60584-1	IEC 584 DIN 43722	ANSI MC96.1	GB/T4989-94	JIS C 1610
J				
K				
T				
E				
S/R				
N				
B				

Tolerance Values and Temperature Limits as per IEC 60584

(reference temperature at 0°C)

Calibration	Range	Class 1	Range	Class 2
J	-40 ... 750 °C	±1,5 °C or 0,004(t)	-40 ... 750 °C	±2,5 °C or 0,0075(t)
K	-40 ... 1000 °C	±1,5 °C or 0,004(t)	-40 ... 1200 °C	±2,5 °C or 0,0075(t)
T	-40 ... 350 °C	±0,5 °C or 0,004(t)	-40 ... 350 °C	±1,0 °C or 0,0075(t)
E	-40 ... 800 °C	±1,5 °C or 0,004(t)	-40 ... 900 °C	±2,5 °C or 0,0075(t)
S/R	0 ... 1600 °C	±1,0 °C or [1,0+0,003(t-1100)] °C	0 ... 1600 °C	±1,5 °C or 0,0025(t)
N	-40 ... 1000 °C	±1,5 °C or 0,004(t)	-40 ... 1200 °C	±2,5 °C or 0,0075(t)
B			600 ... 1700 °C	±1,5 °C or 0,0025(t)

The highest value of inaccuracy applies

(t = absolute value of the actual temperature)

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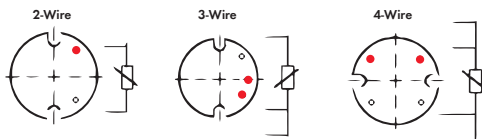


Tolerance values for measuring resistors as per IEC 60751

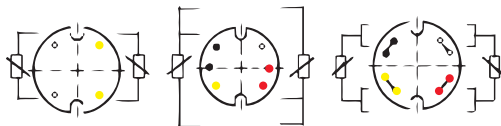
Wire-wound Resistors		Flat-form Resistors		Tolerance Value in °C
Class	Operating Range in °C	Class	Operating Range in °C	
W 0.1	-100 ... 350	F 0.1	0 ... 150	$\pm [0.1 + 0.0017 \cdot (t)]$
W 0.15	-100 ... 450	F 0.15	-30 ... 300	$\pm [0.15 + 0.002 \cdot (t)]$
W 0.3	-196 ... 550	F 0.3	-50 ... 500	$\pm [0.3 + 0.005 \cdot (t)]$
W 0.6	-196 ... 600	F 0.6	-50 ... 600	$\pm [0.6 + 0.01 \cdot (t)]$

Temperature coefficient of resistance = 0.00385 /°C t = absolute value of the actual temperature

Circuit for PT 100/0



Circuit for Duplex PT 100/0



Temperature Scale Conversion:

$$\begin{aligned} ^\circ\text{C} &= 5/9 (^\circ\text{F}-32) \\ ^\circ\text{F} &= 9/5 ^\circ\text{C} + 32 \\ ^\circ\text{K} &= ^\circ\text{C} + 273.15 \end{aligned}$$

Self Heating : To prevent measurement errors due to self heating, a measuring current lower than 1mA is recommended



Ex ia
Intrinsic Safety



Ex d
Flameproof



Ex m
Encapsulation



Ex e
Increased Safety



Ex n
Non-sparking

Under reservation of type setting and printing errors

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