

Reference Book

- Temperature -

Thomas Klasmeier 4th Edition (English)



Reference Book - Temperature -

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Klasmeier

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4th Edition (English)

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Foreword

The Reference Book - Temperature is designed as a practical companion for professionals and students in the field of metrology.

As a metrologist and engineer, I have compiled this reference book with a focus on temperature to provide precise and up-to-date information on temperature measurement and calibration.

The book originally grew out of a collection of formulas I began compiling during my studies. Over time, it expanded steadily and became an essential tool in my daily laboratory work. It has also served as valuable support material for participants in my seminars. Following many requests, I decided to publish this collection in the form of a book.

Today, it offers you a reliable source of tables, equations, and diagrams that can assist you in your daily work in temperature measurement and calibration.

I hope it will serve you as a useful reference and practical guide in your professional activities.

Fulda/Germany, 2025

Thomas Klasmeier

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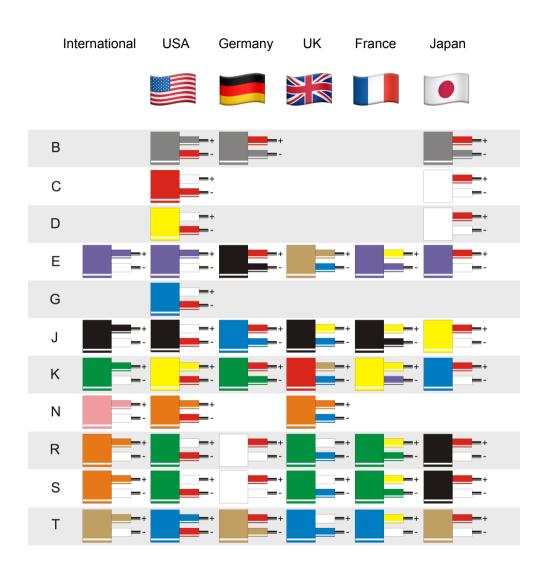
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Thermocouples

$Material\ Combinations$						
Type	Type + Leg		$egin{aligned} Range \ in \ ^{\circ}C \end{aligned}$			
T	Cu	CuNi	-270 400			
J	Fe	CuNi	-210 1200			
$oldsymbol{E}$	E NiCr CuNi K NiCr Ni N NiCrSi NiSi R Pt13Rh Pt S Pt10Rh Pt B Pt30Rh Pt6Rh C W5Re W26Re		-270 1000 -270 1372 -200 1200			
K						
N						
R			-50 1768			
$oldsymbol{S}$			-50 1768			
В			0 1820			
C			0 2315			
\boldsymbol{A}	A W5Re W20Re		0 2500			
	cf. DIN EN 60584-1					

Type	+ Leg	- Leg	$egin{aligned} Range \ in\ ^{\circ}C \end{aligned}$
Au/Pt	Au	Pt	0 1000
Pt/Pd	Pt	Pd	0 1500
			cf. DIN EN 62460

International Standardized Color Codes¹



¹ Some regions may use national variations not shown here. - Poster from Klasmeier

$Obsolete \ Thermocouples$

Tumo	+ Leg	- Leg	$Identification\ Colors$		
Type			Positive	Negative	Sheath
$oldsymbol{U}$	Cu	CuNi	red	brown	brown
L	Fe	CuNi	red	blue	blue

cf. DIN EN 43714

Obsolete Thermocouple Wires

Tumo	+ Leg	T	$Identification\ Colors$		
Type		- Leg	Positive	Negative	Sheath
UX	Cu	CuNi	red	brown	brown
LX	Fe	CuNi	red	blue	blue
	•				cf DIN EN 43714

cf. DIN EN 43714



Reference Book - Temperature

Your compact guide for precision in temperature measurement

Temperature measurement is one of the most important disciplines in metrology and calibration. This reference book provides engineers, technicians, metrologists, and students with a practical and reliable source of knowledge.

The book offers:

- Clearly structured tables, formulas, and diagrams for quick reference
- Practical support for temperature measurements and calibrations
- Reliable data for laboratory work, industry, and education
- A handy format that makes it easy to use at the workplace or in the field

With its focus on accuracy and clarity, Reference Book – Temperature is designed to assist you in your daily professional practice. Whether you are performing calibrations in an accredited laboratory, working with industrial sensors, or studying the fundamentals of metrology.



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