

# Temperature Calibration Device

## General Function

With the 3-channel temperature calibration device **htm-p** two temperatures can be measured simultaneously with a very high accuracy. Both temperature values or one temperature values and the difference between two channels can be displayed. The battery powered temperature calibration device **htm-p** is working independent of power supply and thus is suitable for precise on-site measurements. The device is furnished with two Pt100-inputs (4-wire) and one input for connecting temperature sensors with integrated head transmitters. In this case the output current or the temperature can be displayed.

## Features

- for monitoring Pt100 accord. to DIN ISO 9001...9003
- deliverable with accuracy certificate of German DKD
- calibration on site, compact lightweight style
- battery powered
- measurement of absolute or difference temperatures
- for Pt100 sensors with or without head transmitters

## Scope of Delivery

- 2 adapter cables for Pt100, 4-wire with LEMO plug-in
- 1 adapter cable for transmitter input with LEMO-plug-in
- power supply unit **hnt-12**

## Options

- carrier bag **htt**, material leather
- Pt100 DIN A
- Pt100 1/10 DIN B
- models: see Negele temperature sensor range, special versions and DKD certificate
- factory calibration certificate for **htm-p**
- DKD-certificate for **htm-p**



Calibration Device **htm-p** with leather bag **htt** and power supply unit

## Specification

Housing	ABS plastics	100x185x45mm	Measurement range	-100...+200°C	
Weight		0,50kg	Accuracy	(without Pt100)	≤0,05K with 20...25°C ambient temperature
Ambient	operation temp.	0...+50°C	Indicator	LCD, 2 lines	4½ digits
	storage temp.	-20...+70°C		resolution	0,01°C
	humidity	0...95%	Battery	storage battery	4xMignon
Inputs	Pt100 I, Pt100 II	4-wire connection	Operating time	maximum	about 12h
		for sensor under test without transmitter	with middle load	about 3h	
	current	0/4-20mA	Supply voltage	power supply unit	230V AC, 50Hz
		for sensors with integrated 2/3-wire transmitter			

## Order Code

Type	Certificate
htm-p	DKD accuracy certificate of German DKD WZ factory certificate
htt	
HTEP-07/200	
Order example:	htm-p / DKD

## Setting elements htm-p

- 1 Connector "Pt100 I" for 4-wire Pt100 connection
- 2 Connector "Pt100 II" for 4-wire Pt100 connection
- 3 Connector "current", for 2/3-wire 4-20mA transmitter connection (e.g. mpu-3)
- 4 Connector for power supply unit
- selection push button, selecting menu points
- ↑ back to the previous menu, setting of figures
- ENTER enter push button, saving of adjustments

## Connecting Pt100 with integrated transmitter

To measure sensors with 2-wire transmitters 8 standard temperature ranges are preset:

input	0...20mA	4-20mA
0-50°C	range 1	range 5
0-100°C	range 2	range 6
0-150°C	range 3	range 7
0-200°C	range 4	range 8

Further it is possible to select 4 configurable ranges.

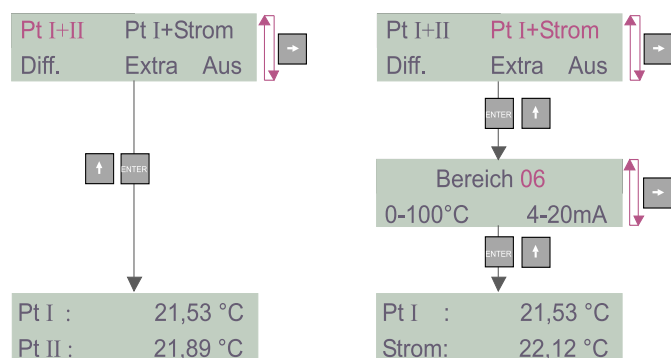
These ranges are set in the following way:

1. Select "Extra" in main menu, press "ENTER"
2. Select "Bereich" and press "ENTER"
3. Number of range is flashing. Select number you need with → Press "ENTER"
4. Select range start with →, set start value of range with ↑ (same way: range end value and 0/4-20mA). Select "ok" and press "Enter"
5. "Werte speichern?", "Ja" : saving of indicated values. "Nein": no saving, go to new setting of range values. "Abbruch": no saving, cancel the transaction
6. Two times ↑ : back to main menu.



## Operation and menu structure htm-p

Note: Violet texts are flashing and are active.



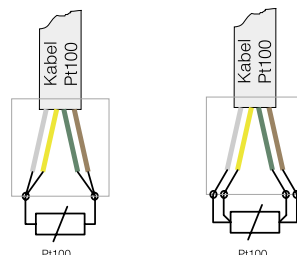
## Meaning of menu texts

- PtI+II** indicating inputs Pt100-I and Pt100-II
- PtI+Strom** indicating inputs Pt100-I and current
- Diff.** difference between Pt100-II minus Pt100-I or current minus Pt100-I

## Connecting Diagram

### 1. Pt100 4-wire connection

- a) 2 terminals
- b) 4 terminals



### 2. Sensors with transmitter

- a) 2-wire
- b) 3-wire
- c) separate feed-in

