

# Hand-held thermometer, industrial version

## Model CTH6300

## Model CTH6310, ATEX version

WIKA data sheet CT 51.05



### Applications

- Calibration service companies and service industry
- Measurement and control laboratories
- Industry (laboratory, workshop and production)
- Quality assurance

### Special features

- Accuracy up to 0.1 K (complete measuring chain)
- One- and two-channel versions
- Connection possibilities for various probe types
- Intrinsically safe version Ex ib IIB T4 Gb



Hand-held thermometer, model CTH6300

### Description

The all-purpose model CTH6300 hand-held thermometer, for superior mobile temperature measurement, is notable for its flexibility and ease of handling.

In addition to Pt100 resistance thermometers, it can also process signals from typical thermocouples. Thus temperatures from -200 ... +1,500 °C (-328 ... +2,732 °F) can be measured.

The explosion proof version is only for measuring Pt100 resistance thermometers available.

Its design makes it especially suitable for the commissioning, maintenance and service/calibration of temperature instruments and equipment.

Low-drift measuring amplifiers ensure small measurement errors, while easy-to-use adjustment features considerably simplify adjustments and calibrations:

- Calibration by code for fast setting of standard probes via identification numbers
- Physical calibration of probe and display at one, two or three different temperatures

In this way it is possible to reduce measuring errors to a minimum and ensure a high display accuracy.

#### Complete test and service cases

For the secure transportation and storage of the instrument and accessories, a rugged service case is available as a sensible addition. The service case can carry one model CTH6300 digital indicators and several temperature probes.

#### Certified accuracy

For each temperature probe, the accuracy for the complete measuring chain is certified by a factory calibration certificate which accompanies the instrument.

On request, we can provide a DKD/DAkkS calibration certificate for this instrument.

## Specifications

Hand-held thermometer	Model CTH6300	Model CTH6310
<b>Probe types</b>	Pt100, thermocouples	Pt100
<b>Measuring inputs</b>	1 or 2	1 or 2
<b>Measuring ranges</b>		
Pt100	-200 ... +600 °C (-392 ... +1,112 °F)	Pt100 -200 ... +600 °C (-392 ... +1,112 °F)
Thermocouples	-200 ... +1,500 °C (-392 ... + 2,732 °F)	-
<b>Accuracies</b>		
Resistance thermometer type Pt100	0.1 K for -100 ... +200 °C (-148 ... +392 °F) otherwise 0.1 % of reading	0.1 K for -100 ... +200 °C (-148 ... +392 °F) otherwise 0.1 % of reading
Thermocouple types K, J, L, N and T	0.3 K for 0 ... 200 °C (32 ... 392 °F) 1 K for 200 ... 1,000 °C (392 ... 1,832 °F) 1.5 K above 1,000 °C (1,832 °F)	-
Thermocouple types R and S	1 K + 0.1 % of reading	-

Digital indicator	
<b>Display</b>	
Screen	Large 4 1/2-digit 2-line LC display with backlighting
Resolution	0,1 K
<b>Functions</b>	
Measuring rate	4/s ("fast"); 1/s ("slow")
Memory	Min/Max
Functions via key press	Min/Max memory, Hold, Tare, Zero-point adjustment
Real-time clock	integrated clock with date
<b>Voltage supply</b>	
Power supply	DC 9 V battery or rechargeable battery
Battery life	approx. 20 hours of operation with battery
<b>Permissible ambient conditions</b>	
Operating temperature	0 ... 40 °C (32 ... 104 °F)
Storage temperature	-10 ... +50 °C (14 ... 122 °F)
<b>Communication</b>	
Interface	USB via interface cable
<b>Case</b>	
Material	impact-resistant ABS plastic, transparent screen
Dimensions (L x W x H)	200 x 93 x 44 mm (7.87 x 3.66 x 1.73 in)
Weight	300 g (0.66 lbs.)

## Approvals

Logo	Description	Country
	<b>EC declaration of conformity for CTH6300</b> <ul style="list-style-type: none"> <li>■ EMC directive 2004/108/EC</li> <li>EN 61326-1:2006 emission (group 1, class B) and interference immunity (portable test and measuring equipment)</li> </ul>	European Community
 	<b>EC declaration of conformity for CTH6310</b> <ul style="list-style-type: none"> <li>■ EMC directive 2004/108/EC</li> <li>EN 61326-1:2013 emission (group 1, class B) and interference immunity (portable test and measuring equipment)</li> <li>EN 60079-0:2012</li> <li>EN 60079-11:2012</li> <li>■ ATEX directive 94/9/EC</li> <li>- Ex i Category II 2 G, ignition protection type Ex ib IIB T4 Gb</li> </ul>	European Community

Logo	Description	Country
	<b>EAC</b> ■ Electromagnetic compatibility	Eurasian Economic Community
	<b>GOST</b> Metrology/measurement technology	Russia

## Certificates

Certificate	
<b>Calibration</b>	Standard: 3.1 calibration certificate per DIN EN 10204 Option: DKD/DAkkS calibration certificate
<b>Recommended recalibration interval</b>	1 year (dependent on conditions of use)

Approvals and certificates, see website

## Temperature probes

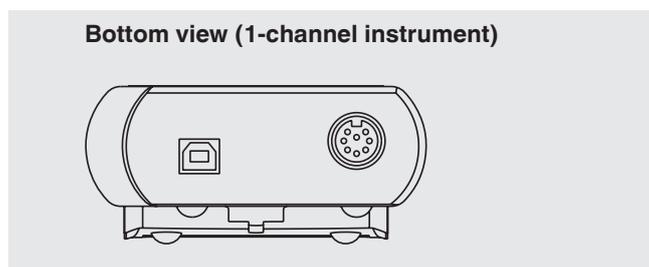
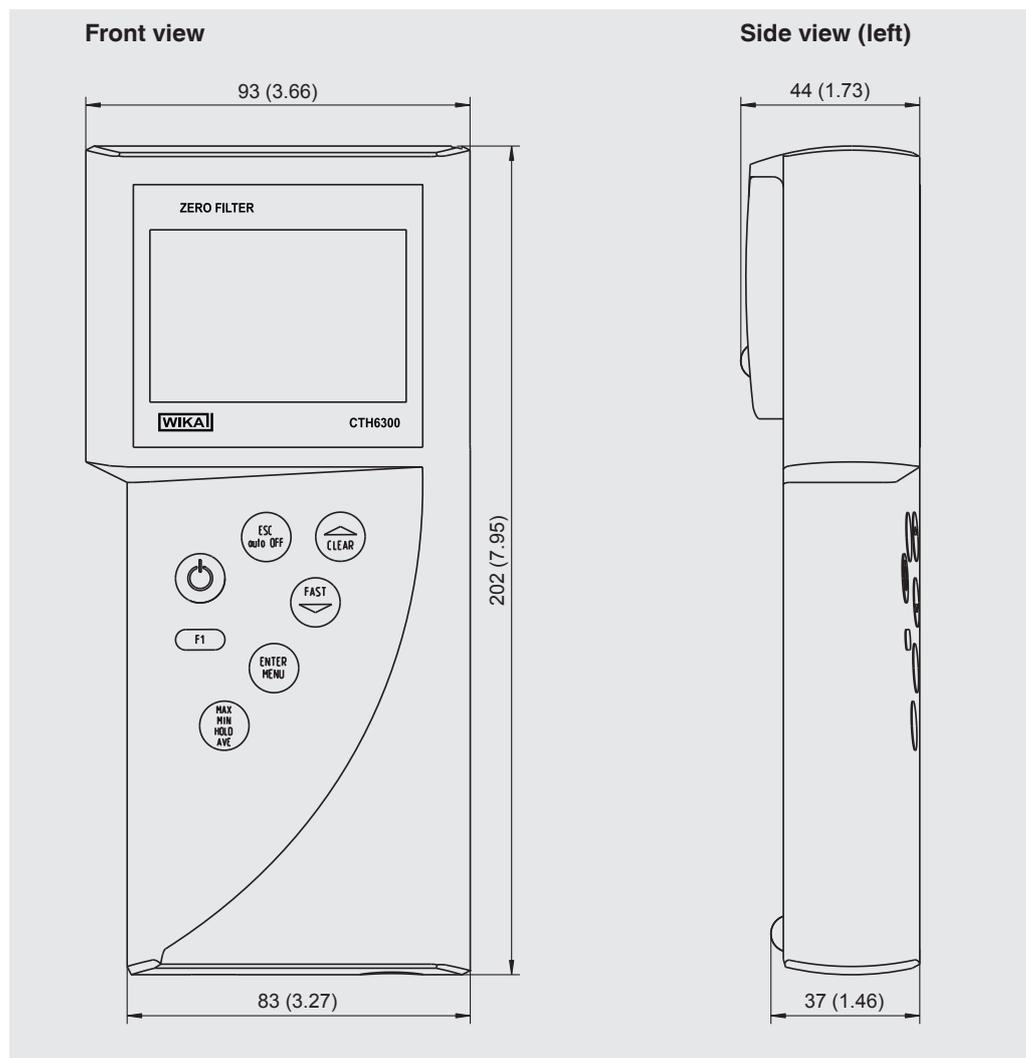
Standard probe (immersion probe)	Temperature range	
	°C	°F
Pt100, d = 3 mm, l = 150 mm (d = 0.12 in, l = 5.91 in)	-200 ... +450	-392 ... +842
Pt100, d = 3 mm, l = 300 mm (d = 0.12 in, l = 11.81 in)	-200 ... +450	-392 ... +842
Pt100, d = 6 mm, l = 300 mm (d = 0.24 in, l = 11.81 in)	-200 ... +450	-392 ... +842
TC K, d = 3 mm, l = 300 mm (d = 0.12 in, l = 11.81 in)	-200 ... +1.100	-392 ... +2.012
TC K, d = 3 mm, l = 500 mm (d = 0.12 in, l = 19.69 in)	-200 ... +1.100	-392 ... +2.012



**Fig. left: Penetration probe**  
**Fig. right: Immersion probe**

## Dimensions in mm (in)

Hand-held thermometer, model CTH6300 and CTH6310 ATEX version



## Features of the hand-held thermometer

- Simple handling
- Large display with dual temperature display and bargraph
- Min/Max value for monitoring of temperature limits
- Mean value function for statistical evaluation
- "Fast mode" for faster measurements up to 4/s
- Selectable channel can be switched off to improve the clarity of the display data
- Recording and visualisation of temperature cycles with the help of the DE-Graph software

## Operation

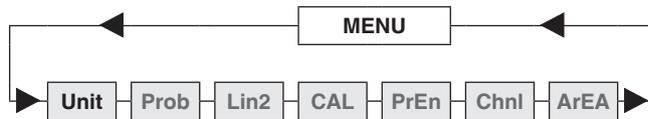
In the **SETUP** menu, a menu point can be selected and altered using the **UP** and **DOWN** keys. **ENTER** and **ESC** are used for confirmation and exit.

The operator menu is intuitively understandable and is subdivided into only two levels:

Main menu for the selection of the basic functions and parameter menu for setting the parameters.



- ① Probe holder
- ② Connection port 1 for temperature probe
- ③ Connection port 2 for temperature probe
- ④ USB connection port for PC
- ⑤ Keyboard
- ⑥ Large LC display



### Main menu for CTH6300

Unit	Prob	Lin2	CAL	PrEn	Chnl	ArEA
°C	P	T1-T2	OFF	OFF	OFF	c
°F	J		oP1	ON	ON	m
m/s	K		oP2			
%rh	L					
g/m <sup>3</sup>	N					
°C td	R					
°F td	S					
Pa	T					
hPa	RH					
m <sup>3</sup> /s	D					
	Pr					
	H					

### Parameter menu for CTH6300

## Scope of delivery

- Model CTH6300 hand-held thermometer incl. 9 V battery or model CTH6310 intrinsically safe hand-held thermometer incl. 9 V battery
- 3.1 calibration certificate per DIN EN 10204
- Choice of temperature probes

## Option

- DKD/DAkkS calibration certificate

## Accessories

### Temperature probes

- Immersion probe
- Penetration probe
- Customer-specific probes are available on request
- Adapter for thermocouples, DIN on TC miniature connector
- Spare DIN connector for the probe

### Voltage supply

- AC adapter
- 9 V rechargeable battery and charger
- 9 V battery

### Test case

- Transport case, robust
- Case set with rechargeable battery, charger, power supply unit, interface cable and software
- Case set with power supply unit AC 100 ... 260 V, interface cable and software

### Software

- DE-Graph software
- PC adapter cable USB



Service case

## Ordering information

Model / Version / Probe at input 1 / Probe at input 2 / Service case / Calibration / Additional ordering information

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