

Hand-held thermometer Model CTH6300

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



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 can be measured.

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 are also pleased to provide a DKD/DAkkS calibration certificate for the instrument from our own DKD/DAkkS laboratory.

Specifications

Model CTH6300

Hand-held thermometer (complete measuring chain)

Probe types	Pt100, thermocouples
Measuring inputs	1 or 2
Measuring ranges	
Pt100	-200 ... +600 °C / -392 ... +1,112 °F
Thermocouples	-200 ... +1,500 °C / -392 ... + 2,732 °F
Measurement uncertainties ¹⁾	
Resistance thermometer type Pt100	0.1 K for -100 ... +200 °C otherwise 0.1 % of reading
Thermocouple types K, J, L, N and T	0.3 K for 0 ... 200 °C 1 K for 200 ... 1,000 °C 1.5 K above 1,000 °C
Thermocouple types R and S	1 K + 0.1 % of reading

1) The measurement uncertainty applies for the respective indicator-probe combination following adjustment and calibration.

Digital indicator

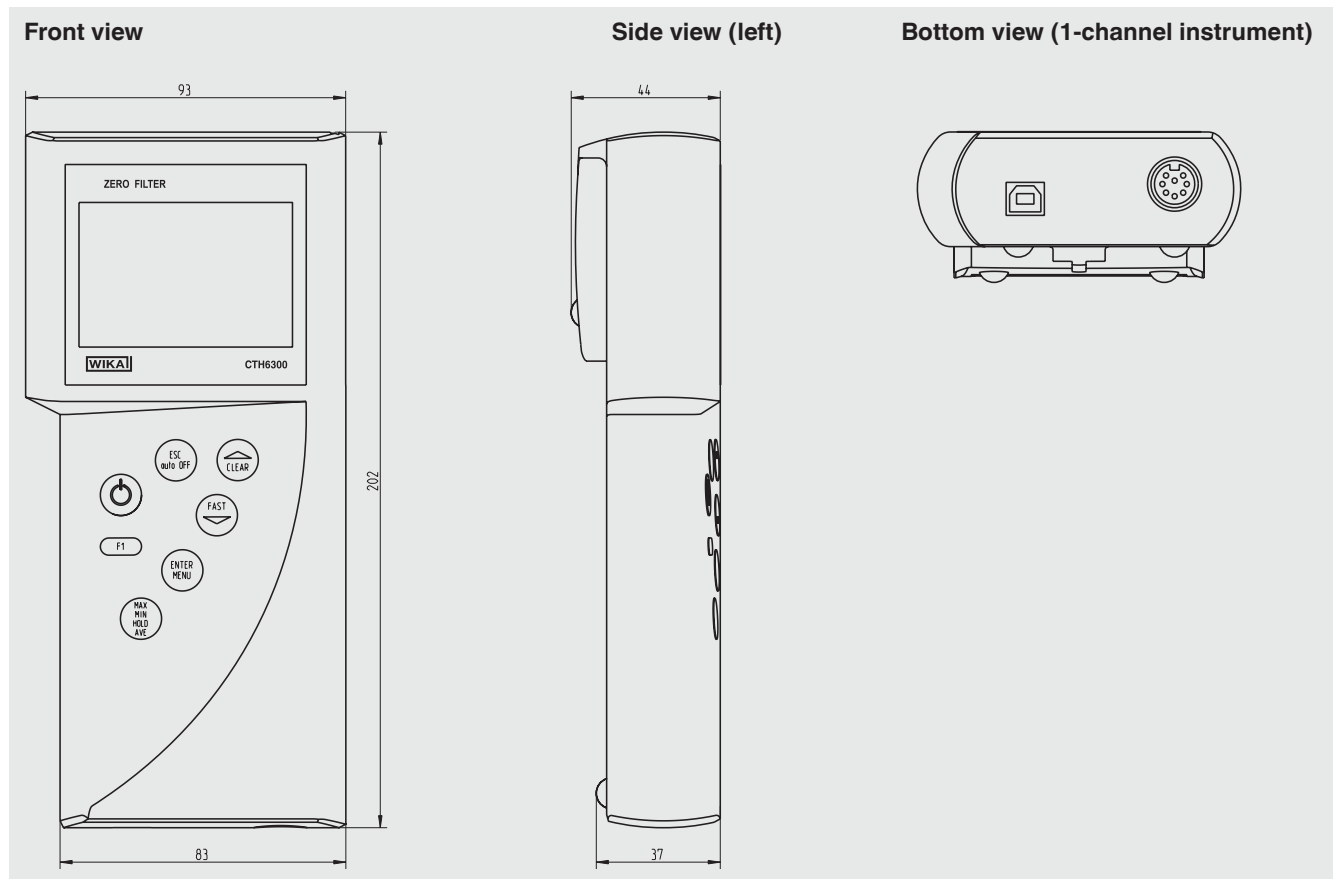
Display	
Screen	Large 4 1/2-digit two-line LCD screen with backlighting
Resolution	0,1 K
Functions	
Measuring rate	4/s ("fast"); 1/s ("slow")
Memory	Min/Max
Functions via key press	Min/Max memory, Hold, Tare, Zero-point adjustment
Real-time clock	integrated clock with date and year
Voltage supply	
Power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

CE conformity, certificates

CE conformity	
EMC directive	2004/108/EC, EN 61326 emission (group 1, class B) and interference immunity (portable test and measuring equipment)
Certificates	
Calibration	Standard: 3.1 calibration certificate per DIN EN 10204 Option: DKD/DakKS calibration certificate
Recommended calibration interval	1 year (dependent on the use)

Approvals and certificates, see website

Dimensions in mm



Temperature probes

Standard probe (immersion probe)	Temperature range	
	°C	°F
Pt100, d = 3 mm, l = 150 mm	-200 ... +450	-392 ... +842
Pt100, d = 3 mm, l = 300 mm	-200 ... +450	-392 ... +842
Pt100, d = 6 mm, l = 300 mm	-200 ... +450	-392 ... +842
TC K, d = 3 mm, l = 300 mm	-200 ... +1,100	-392 ... +2,012
TC K, d = 3 mm, l = 500 mm	-200 ... +1,100	-392 ... +2,012



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

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 SmartGraph software

Operation

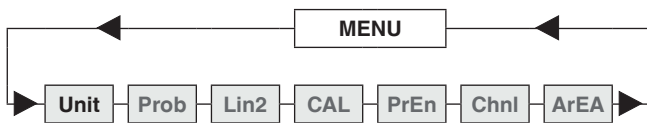
In the **SETUP** menu, a menu point can be selected and altered using the **UP** and **DOWN** keys. **ENTER** and **ESC** are used for confirmation and exit.

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 LCD 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 ³	N					
°C td	R					
°F td	S					
Pa	T					
hPa	RH					
m ³ /s	D					
	Pr					
	H					

Parameter menu for CTH6300

Scope of delivery

- Model CTH6300 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

- SmartGraph 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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We reserve the right to make modifications to the specifications and materials.

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