Temperature dry-well calibrator Model CTD9100-375

Applications

- Testing and calibration of temperature measuring instruments
- Reference instrument for on-site laboratories for the calibration of thermometers
- Also suitable for on-site calibration

Special features

- High accuracy and stability
- Possibility to check temperature switches
- Low weight and compact design
- Simple operation

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Description

Versatile in application

Nowadays, fast and simple testing of thermometers is a “must” when it comes to the operational safety of machines and plants.

The portable calibrators of the CTD9100 family are particularly suited to local calibration tasks and extremely user-friendly. Due to their compact design and their low weight, the instruments can be taken and used almost anywhere. The CTD9100-375 in particular is characterised by its robust case design and compact dimensions.

The new instrument concept brings together a stable heat source with precision Pt100 temperature measurement. This enables industrial temperature probes to be calibrated even more efficiently. Regular monitoring of temperature probes helps to recognise failures promptly and shorten downtimes.

Easy to use

The temperature dry-well calibrators of the CTD9100 series work with temperature-controlled metal blocks and inter-changeable inserts.

The calibration temperature, adjusted simply using two keys on the controller, can be very quickly controlled. The set temperature of the heating block is displayed on a large, 4-line, high-contrast LED display. Thus reading errors are virtually eliminated.

Thermometers with different diameters can be fitted into the calibrator using inserts, drilled to suit. A new block design, with improved temperature homogeneity at the calibrator's lower range, leads to smaller measurement uncertainties.

Specifications	Model CTD9100-375
Display	
Temperature range	t_{amb} … 375 °C (t_{amb} ... 707 °F)
Accuracy [1]	± 0.5 ... 0.8 K
Stability [2]	± 0.05 K to 100 °C (212 °F)
Resolution	0.1 °C
Temperature control	
Heating time	6 min from 20 °C to 300 °C (from 68 °F to 572 °F)
Cooling time	14 min from 300 °C to 60 °C (from 572 °F to 140 °F)
Stabilisation time [3]	5 min
Insert	
Immersion depth	100 mm (3.94 in)
Insert dimensions	Ø 13 x 100 mm (0.51 x 3.94 in)
Insert material	Brass
Voltage supply	
Power supply	AC 230 V, 50/60 Hz or AC 110 V, 50/60 Hz
Power consumption	250 VA
Power cord	for Europe, 230 V
Communication	
Interface	RS-232
Case	
Dimensions (W x H x D)	149 x 74 x 155 mm (5.9 x 2.9 x 6.1 in)
Weight	1.7 kg (3.8 lbs)

1) Is defined as the measuring deviation between the measured value and the reference value.
2) Maximum temperature difference at a stable temperature over 30 minutes.
3) Time before reaching a stable measuring value.

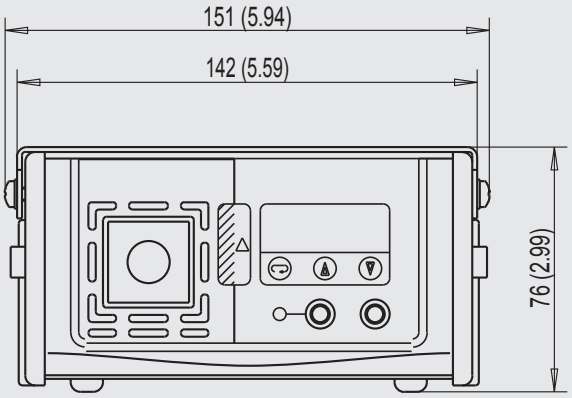
The measurement uncertainty is defined as the total measurement uncertainty (k = 2), which contains the following shares: accuracy, measurement uncertainty of reference, stability and homogeneity.

CE conformity, approvals, certificates	
EC declaration of conformity	
EMC directive	2004/108/EC, EN 61326 emission (group 1, class B) and interference immunity (industrial application)
Low voltage directive	2006/95/EC, EN 61010-1 and EN 61010-2-10, safety requirements for electrical equipment for measurement, control and laboratory use
Approvals	
EAC	Import certificate, Eurasian Economic Community
GOST	Metrology/measurement technology, Russia
Certificate	
Calibration	Standard: 3.1 calibration certificate per DIN EN 10204 Option: DKD/DAkkS calibration certificate
Recommended recalibration interval	1 year (dependent on conditions of use)

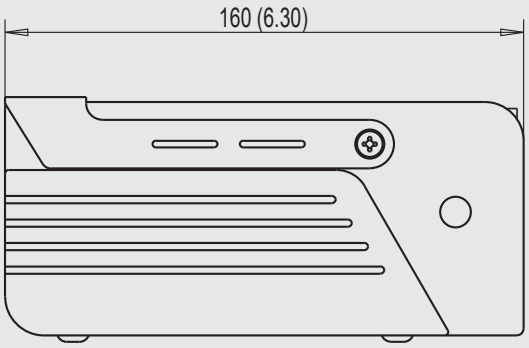
Approvals and certificates, see website

Dimensions in mm (inch)

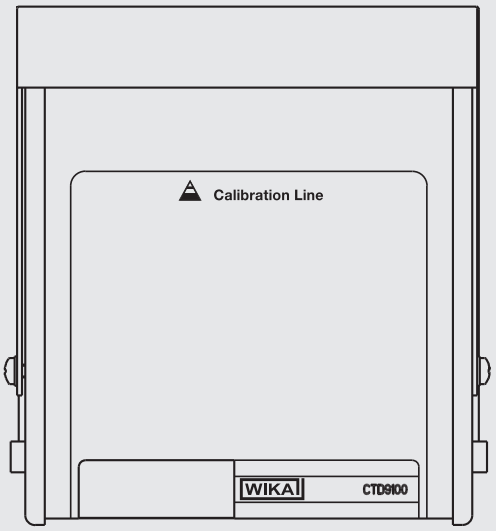
Front view



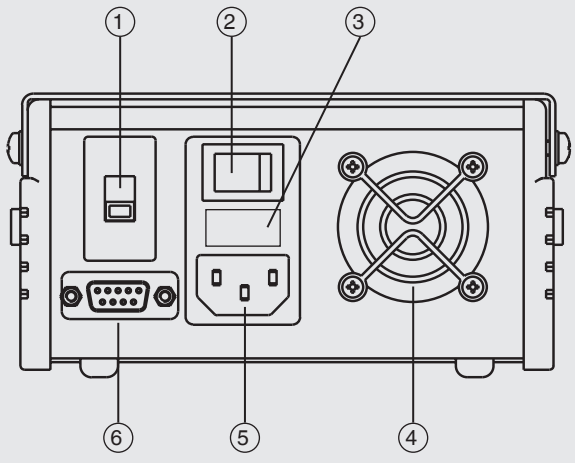
Side view (left)



Top view



Rear



1. Selection of the mains voltage
2. ON/OFF switch
3. Fuse
4. Fan
5. Mains connection socket
6. RS-232 interface

Design and controls

1. Carrying handle
2. Display
3. Controls
4. Sockets for temperature switch test
5. Insert with opening for test item

Scope of delivery

- Temperature dry-well calibrator model CTD9100-375
- Power cord 1.5 m (5 ft) with safety plug
- Insert with 6.2 mm bore (0.24 in)
- Replacement tools
- Operating instructions
- 3.1 calibration certificate per DIN EN 10204

Accessories

- Inserts, undrilled and drilled to specification
- Transport case
- Power cord for Switzerland
- Power cord for USA/Canada
- Power cord for UK

Options

- DKD/DAkkS calibration certificate

Ordering information
Model / Certificate type / Transport case / Power cord / Additional ordering information

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