

# EN

## INSTRUCTIONS INSERTION THERMOMETER



## Table of contents

Information on the use of these instructions .....	2
Safety .....	2
Information about the device .....	3
Transport and storage .....	5
Operation .....	5
Maintenance and repair .....	6
Errors and faults .....	6
Disposal .....	6

## Information on the use of these instructions

### Symbols



#### Warning of electrical voltage

This symbol indicates dangers to the life and health of persons due to electrical voltage.



#### Warning

This signal word indicates a hazard with an average risk level which, if not avoided, can result in serious injury or death.



#### Caution

This signal word indicates a hazard with a low risk level which, if not avoided, can result in minor or moderate injury.

#### Notice

This signal word indicates important information (e.g. material damage), but does not indicate hazards.



#### Info

Information marked with this symbol helps you to carry out your tasks quickly and safely.



#### Follow the manual

Information marked with this symbol indicates that the instructions must be observed.

You can download the current version of the instructions and the EU declaration of conformity via the following link:



BT20



<https://hub.trotec.com/?id=43281>

## Safety

**Read this manual carefully before starting or using the device. Always store the manual in the immediate vicinity of the device or its site of use.**



### Warning

**Read all safety warnings and all instructions.**

Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

**Save all warnings and instructions for future reference.**

- Do not use the device in potentially explosive rooms or areas and do not install it there.
- Do not use the device in an aggressive atmosphere.
- Protect the device from permanent direct sunlight.
- Do not open the device.
- Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in legible condition.
- Use batteries of type LR44 (1,5 V).
- Never charge batteries that cannot be recharged.
- Different types of batteries and new and used batteries must not be used together.
- Insert the batteries into the battery compartment according to the correct polarity.
- Remove discharged batteries. Batteries contain materials hazardous to the environment. Dispose of the batteries according to the national regulations.
- Remove the batteries from the device if you will not be using the device for a longer period of time.
- Never short-circuit the terminals of batteries!
- Do not swallow batteries! If a battery is swallowed, it can cause severe internal burns within 2 hours! These burns can lead to death!
- If you think batteries might have been swallowed or otherwise entered the body, seek medical attention immediately!
- Keep new and used batteries and an open battery compartment away from children.
- Observe the storage and operating conditions (see Technical data).

## Intended use

Only use the device for temperature measurements by means of the temperature probe within the measuring range specified in the technical data.

Any use other than the intended use is regarded as misuse.

## Reasonably foreseeable misuse

This device is not suited for measuring the body temperature in humans or animals. The device must not be pointed at people. Do not use the device in potentially explosive atmospheres, for measurements in liquids or at live parts.

Any unauthorised changes, modifications or alterations to the device are forbidden.

## Personnel qualification

People who use this device must:

- be aware of the dangers that occur when handling food at high temperatures, e.g. frying or grilling.
- have read and understood the instructions, especially the Safety chapter.

## Residual risks



### Warning of electrical voltage

There is a risk of a short-circuit due to liquids penetrating the housing!

Do not immerse the device and the accessories in water. Make sure that no water or other liquids can enter the housing.



### Warning of electrical voltage

Work on the electrical components must only be carried out by an authorised specialist company!



### Warning

Handling the penetration probe involves a risk of injury. When the penetration probe is unprotected, be aware of possible hazards and put the protective cover back on the penetration probe immediately after use.



### Warning

Risk of suffocation!

Do not leave the packaging lying around. Children may use it as a dangerous toy.



### Warning

The device is not a toy and does not belong in the hands of children.



### Warning

Dangers can occur at the device when it is used by untrained people in an unprofessional or improper way! Observe the personnel qualifications!



### Caution

Keep a sufficient distance from heat sources.

## Notice

To prevent damages to the device, do not expose it to extreme temperatures, extreme humidity or moisture.

## Notice

Do not use abrasive cleaners or solvents to clean the device.

## Information about the device

### Device description

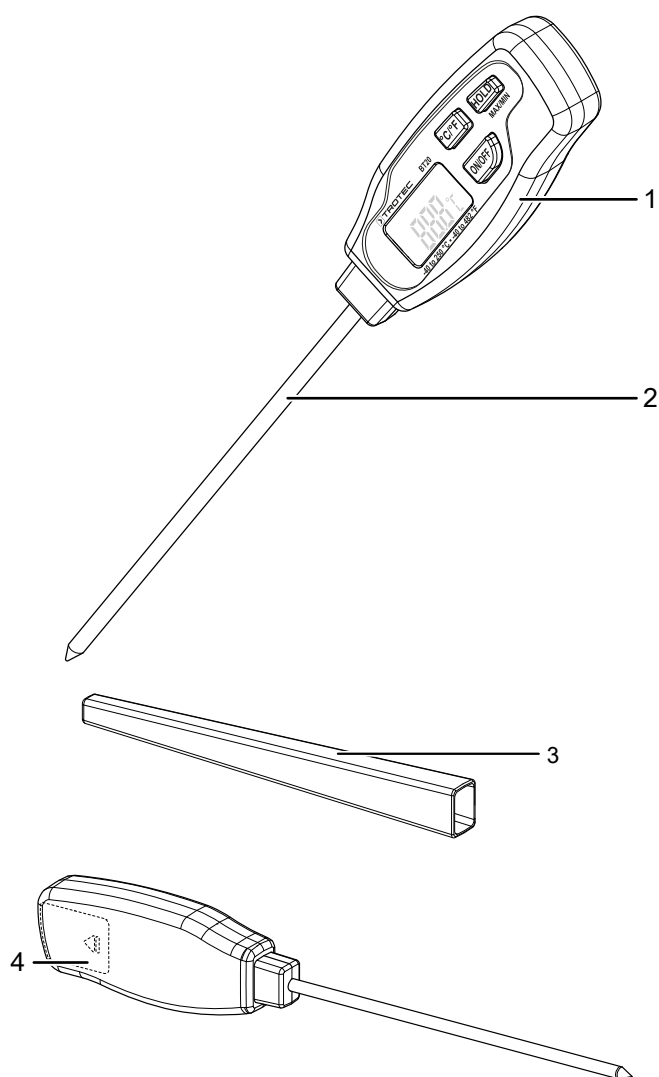
The device BT20 is a contact thermometer for core temperature measurements.

The wide measuring range of -40 °C to +250 °C renders it suitable for manifold measuring applications in the industry as well as in the craft and hobby sector.

The device comes equipped with a long, thin stainless steel measuring tip permitting core temperature measurements within 2 seconds.

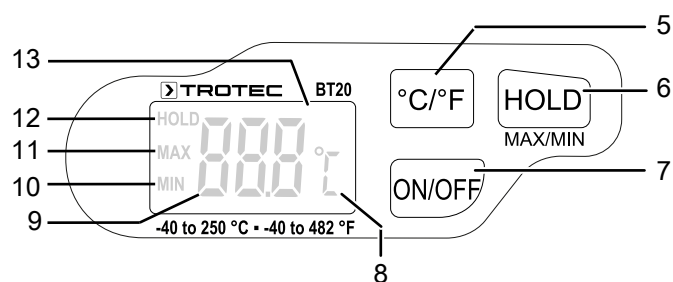
Owing to a soft-touch protective cover the plastic housing is additionally protected from dirt and external influences such as splashing water.

## Device depiction



No.	Designation
1	Housing
2	Penetration probe
3	Protective cover
4	Battery compartment

## Display/control panel



No.	Designation	Function
5	°C/°F button	Changing the temperature unit
6	HOLD button	Holding the measured value Indicating the maximum/minimum measured value
7	ON/OFF button	Switching the device on/off
8	Temperature unit indication	Measuring unit for temperature (°C/°F)
9	Measurement value display	Current or last measured value
10	MIN indication	Minimum measured value is displayed
11	MAX indication	Maximum measured value is displayed
12	HOLD indication	Last measured value is held
13	Display	Indicates measured values

## Technical data

Parameter	Value
Model	BT20
Article number	3.510.250.001
Weight (packaging excluded)	40 g
Dimensions (length x width x height)	211 mm x 19 mm x 32 mm
<b>Temperature</b>	
Measuring range	-40 °C to +250 °C or -40 °F to 482 °F
Accuracy	± 2 °C or ± 3.8 °F
Measuring range resolution	0.1 °C or 0.1 °F
Response time	2 s
<b>Power supply</b>	
Battery	1 x 1.5 V, LR44

## Scope of delivery

- 1 x Device BT20
- 1 x Quick guide
- 1 x Protective cover

## Transport and storage

### Notice

If you store or transport the device improperly, the device may be damaged.

Note the information regarding transport and storage of the device.

### Transport

For transporting the device use a suitable bag to protect it from external influences.

### Storage

When the device is not being used, observe the following storage conditions:

- dry and protected from frost and heat
- protected from dust and direct sunlight
- at the temperature specified in the technical data
- Batteries are removed from the device

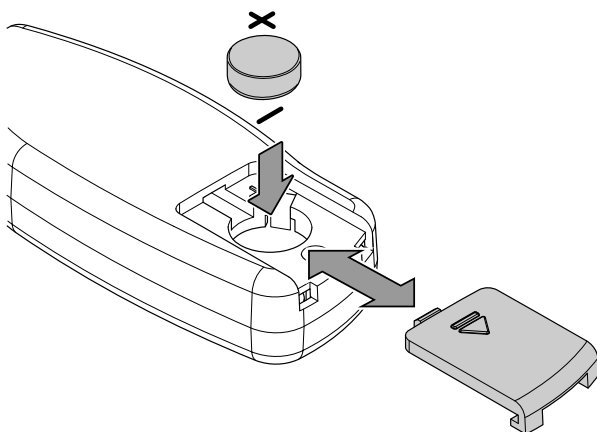
## Operation

### Inserting the batteries

#### Notice

Make sure that the surface of the device is dry and the device is switched off.

1. Remove the cover from the battery compartment (4).
2. Insert the battery into the battery compartment with correct polarity.
3. Put the cover back onto the battery compartment.



### Carrying out the measurement

✓ Remove the protective cover (3) before you use the device.

1. Press the *ON/OFF* button (7).
  - ⇒ The display (13) is switched on and the device is ready for operation.
2. Put the penetration probe (2) at least halfway into the material to be tested.
  - ⇒ The current temperature is displayed in the measurement value display (9).

### Switching between °C and °F indication

1. Press the *°C/°F* button (5) to change the temperature unit.
  - ⇒ The current measuring unit for the temperature is indicated in the *Temperature unit* indication (8).

### Holding the temperature value

1. Press the *HOLD* button (6) once.
  - ⇒ The *HOLD* indication (12) appears.
  - ⇒ The previously measured temperature value is permanently indicated in the measured value display (9).
2. To indicate the current temperature, press the *HOLD* button (6) three times.

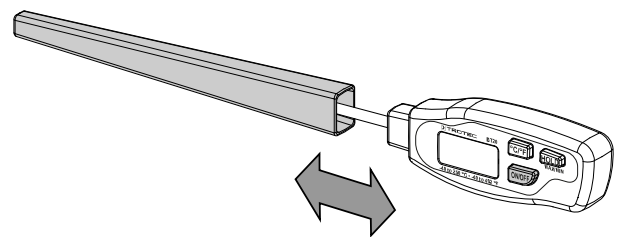
### Indication of maximum and minimum value

1. To call up the maximum temperature, press the *HOLD* button (6) twice.
  - ⇒ The *MAX* indication (11) appears.
  - ⇒ The highest measured temperature value is indicated in the measured value display (9).
2. Press the *HOLD* button (6) again to call up the minimum temperature.
  - ⇒ The *MIN* indication (10) appears.
  - ⇒ The lowest measured temperature value is indicated in the measured value display (9).
3. Press the *HOLD* button (6) again to display the currently temperature value.

### Switch-off

The device switches off automatically after approx. 20 minutes so as to save the batteries.

1. To switch off the device manually, press the *ON/OFF* button (7).
2. Put the protective cover (3) back onto the device.



## Maintenance and repair

### Battery change

A battery change is required, when the displayed values are difficult to read or the device can no longer be switched on. See chapter Operation.

### Cleaning

Clean the device with a soft, damp and lint-free cloth. Make sure that no moisture enters the housing. Do not use any sprays, solvents, alcohol-based cleaning agents or abrasive cleaners, but only clean water to moisten the cloth.

The device and its components are **not** dishwasher-safe.

### Repair

Do not modify the device or install any spare parts. For repairs or device testing, contact the manufacturer.

## Errors and faults

The device has been checked for proper functioning several times during production. If malfunctions occur nonetheless, check the device according to the following list.

#### Display segments are only faintly visible or flicker:

- Check the charging status of the battery. Change the battery, if required (see chapter Inserting the battery).
- Make sure that the battery is properly positioned. Check the polarity is correct.

#### The device displays implausible measured values:

- Check the charging status of the battery. Change the battery, if required (see chapter Inserting the battery).
- Make sure that the battery is properly positioned. Check the polarity is correct.
- The penetration probe is defective or soiled. Clean the device as described in the Cleaning chapter.

## Disposal

Always dispose of packing materials in an environmentally friendly manner and in accordance with the applicable local disposal regulations.



The icon with the crossed-out wheeled bin indicates that this device and any associated components (e.g. remote controls) must not be disposed of with household waste at the end of their life, in accordance with the Waste Electrical and Electronic Equipment Directive (2012/19/EU) and national laws.

You will find collection points for free return of waste electrical and electronic equipment in your vicinity. The addresses can be obtained from your municipality or local administration. You can also find out about other return options that apply for many EU countries on the website <https://hub.trotec.com/?id=45090>. Otherwise, please contact an official recycling centre for electronic and electrical equipment authorised for your country.

The separate collection of waste electrical and electronic equipment aims to enable the re-use, recycling and other forms of recovery of waste equipment as well as to prevent negative effects for the environment and human health caused by the disposal of hazardous substances potentially contained in the equipment.



This icon with the crossed-out wheeled bin indicates that batteries or accumulators must not be disposed of with household waste at the end of their life. If the device contains batteries or accumulators that contain mercury, cadmium or lead, the respective chemical symbol (Hg, Cd or Pb) is shown below the icon of the crossed-out wheeled bin. To prevent environmental pollution, do not carelessly leave batteries or electrical and electronic equipment containing batteries in public areas. In the European Union, batteries and accumulators must be returned to a designated collection point in accordance with REGULATION (EU) 2023/1542 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 12 July 2023 concerning batteries and waste batteries. Remove batteries/accumulators and dispose of them separately according to the relevant legal requirements.

### Only for United Kingdom

According to Waste Electrical and Electronic Equipment Regulations 2013 (SI 2013/3113) (as amended) and the Waste Batteries and Accumulators Regulations 2009 (SI 2009/890) (as amended), devices that are no longer usable must be collected separately and disposed of in an environmentally friendly manner.

Trotec GmbH

Grebbeener Str. 7  
52525 Heinsberg  
Germany

☎ +49 2452 962-0

☎ +49 2452 962-200

[online@trotec.com](mailto:online@trotec.com)

[www.trotec.com](http://www.trotec.com)