

EN

INSTRUCTIONS
FOOD THERMOMETER



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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:




BP2F



<http://hub.trotec.com/?id=29257>

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 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 AAA.
 - 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 supply terminal in the battery compartment!
 - 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 food temperature measurements by means of the infrared sensor or 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:

- 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 folded out, be mindful of potential hazards and make sure to fold the penetration probe back in immediately after each 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

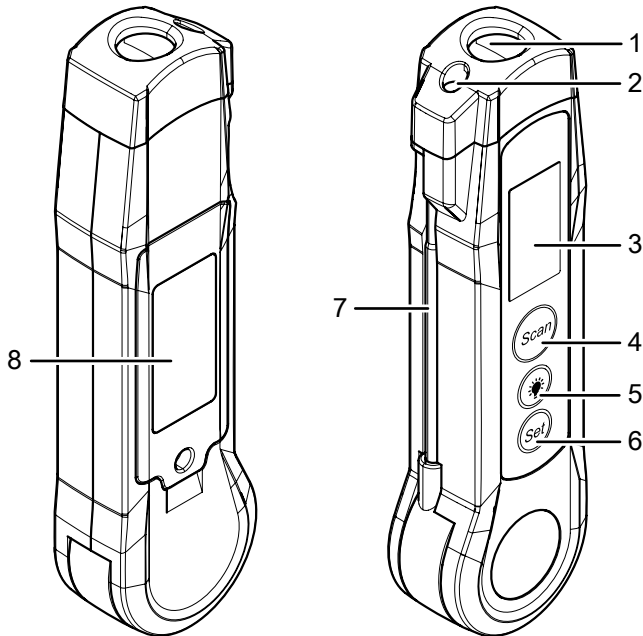
Device description

The device BP2F is a thermometer intended for temperature measurements in food, which are carried out by means of an infrared sensor or temperature probe in accordance with the HACCP standard (Hazard Analysis and Critical Control Points).

According to the HACCP directive, complying with the temperature ranges below 4 °C and above 60 °C is an important way of preventing the development and reproduction of harmful microorganisms. On the other hand, temperatures between 4 °C and 60 °C can promote the development of germs.

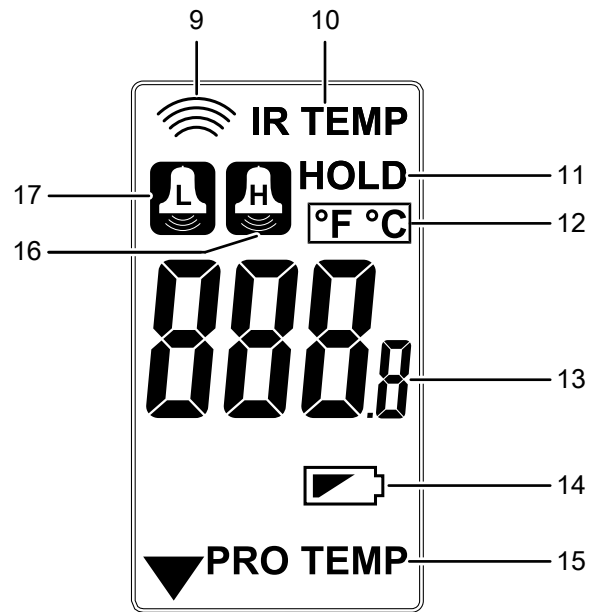
To easily monitor whether or not the safe temperature range is complied with, the device is equipped with an adjustable MIN and MAX alarm.

Device depiction



No.	Designation
1	Infrared sensor
2	LED (illumination)
3	Display
4	Scan button
5	LED button
6	SET button
7	Fold-out temperature probe
8	Battery compartment

Display



No.	Designation
9	IR measurement indication
10	IR temperature indication
11	HOLD indication
12	Temperature unit indication
13	Measurement value display
14	Battery indication
15	Probe temperature indication
16	Upper alarm limit indication (H = high)
17	Lower alarm limit indication (L = low)

Technical data

Parameter	Value
Model	BP2F
Article number	3.510.003.017
Power supply	2 x 1.5 V batteries, type AAA
Weight	150 g
Dimensions (length x width x height)	140 mm x 24 mm x 38 mm
Temperature probe	
Measuring range	-40 °C to +200 °C (-40 °F to 392 °F)
Accuracy	≤0 °C (32 °F): ± 2 °C (3.6 °F) 0 °C to 200 °C (32 °F to 392 °F): ±1%/ ±1 °C (1.8 °F)
Length temperature probe	75 mm
Infrared sensor	
Measuring range	-40 °C to +280 °C (-40 °F to 536 °F)
Accuracy	-40 °C to 20 °C (-40 °F to 68 °F): ± 3 °C (5.4 °F) 20 °C to 280 °C (68 °F to 536 °F): ±1%/ ±1 °C (1.8 °F)
Operating conditions	0 °C (32 °F) to 50 °C (122 °F) with max. 80 % r.F. (non-condensing)
Storage conditions	-20 °C (-4 °F) to 60 °C (140 °F) with max. 80 % r.F. (non-condensing)
Functions	hold function, temperature indication °C and °F, alarm function, automatic switch-off
Reaction time	< 500 ms
Type of protection	IP65
Emissivity	0.95
Optical resolution	4:1

Scope of delivery

- 1 x Device BP2F (without batteries)
- 1 x Quick guide

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

When transporting the device, ensure dry conditions and protect the device from external influences e.g. by using a suitable bag.

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

Notice

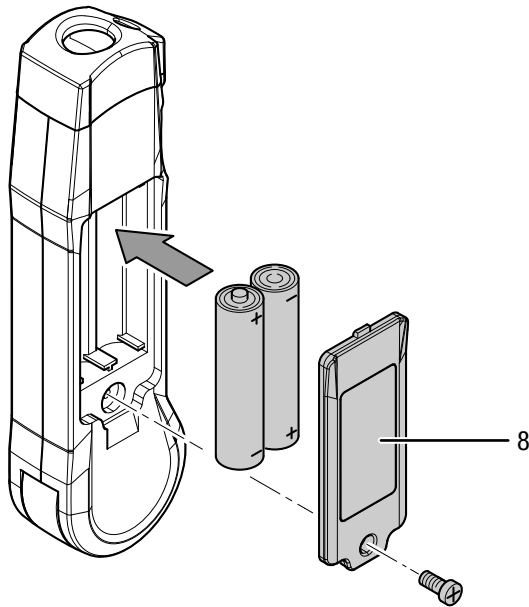
Note that moving from a cold area to a warm area can lead to condensation forming on the device's circuit board. This physical and unavoidable effect can falsify the measurement. In this case, the display shows either no measured values or they are incorrect. Wait a few minutes until the device has become adjusted to the changed conditions before carrying out a measurement.

Inserting the battery

Notice

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

1. Remove the screw from the battery compartment (8).
2. Remove the cover from the battery compartment.
3. Insert the batteries with correct polarity.
4. Reattach the cover to the battery compartment.
5. Fasten the battery compartment cover with the screw.



Temperature measurement with infrared sensor



Info

Vapours and smoke can influence the measurement.



Info

Ensure that the surface to be measured is free of dust, dirt, ice or similar substances.



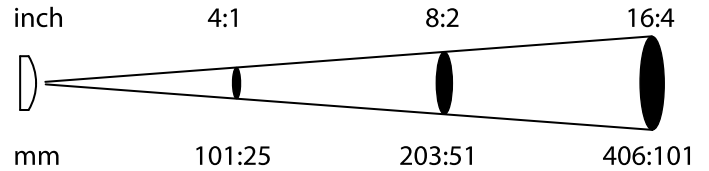
Info

To be able to gain exact measurement results on surfaces which reflect heavily, stick matt masking tape to the surface or apply matt black paint with a very high and known emissivity.

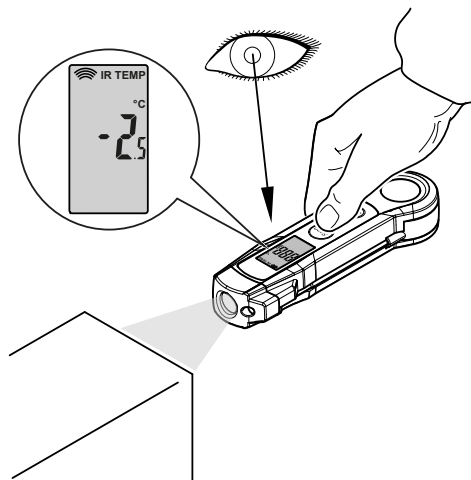


Info

Note the 4:1 ratio of the distance to the measuring spot diameter. The larger the distance to the object, the larger the measuring spot diameter and hence, the less precise the measured result.



1. Switch the device on by pressing the *Scan* button (4).
⇒ The display switches on.
2. Point the device at the object to be measured and hold down the *Scan* button (4).
⇒ The current measured value is displayed in the measurement value display (13).
⇒ The *IR measurement* indication (9) flashes.
⇒ The *IR temperature* indication (10) appears on the display.



3. Release the *Scan* button (4) to terminate the measurement.
⇒ The most recent measured value is frozen and indicated on the display for approx. 7 seconds.
⇒ The *HOLD* indication (11) is shown on the display.
⇒ The *IR measurement* indication (9) disappears.
⇒ After 7 seconds the device switches off.

Temperature measurement with temperature probe



Caution

The material to be measured may become soiled/contaminated upon contact with the temperature probe. Disinfect the temperature probe before using it in food. Use a disinfectant suitable for stainless steel and food.

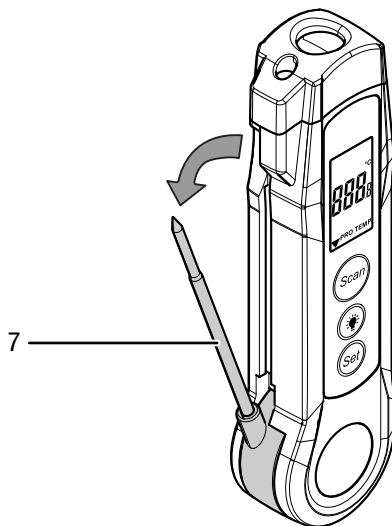
Notice

The temperature probe is not suitable as an ice pick and should never be pricked into frozen objects forcefully to prevent damages to the device.

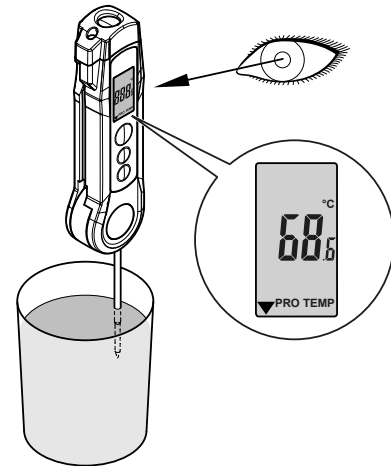
Notice

Clean the temperature probe (7) after every measurement. If necessary, remove any residues of the measured material before folding the temperature probe (7) back in.

1. Switch the device on by folding out the temperature probe (7).
⇒ The display switches on.



2. Insert the temperature probe (7) into the material to be measured by approx. 1 cm.
⇒ The current measured value is displayed in the measurement value display (13).
⇒ The *Probe temperature* indication (15) appears on the display.



3. Switch off the device by folding in the temperature probe (7).

Settings

You can use the *SET* button (6) to set the upper and lower alarm value and the temperature unit for the measured value display (13):

SET button (6)	Function
Press 1 x	Set upper alarm limit
Press 2 x	Enable or disable upper alarm limit
Press 3 x	Set lower alarm limit
Press 4 x	Enable or disable lower alarm limit
Press 5 x	Set unit °C or °F

Setting the alarm limits

1. Press the *SET* button (6) once so that the *Upper alarm limit* indication (16) flashes.
2. Select the upper alarm limit using the *Scan* (4) and *LED* (5) buttons.
3. Press the *SET* button (6) again to save the setting.
 - ⇒ *ON* or *OFF* will flash in the measurement value display (13).
 - ⇒ The *Upper alarm limit* indication (16) will flash.
4. Enable/disable the upper alarm limit using the *Scan* (4) and *LED* (5) buttons.
 - ⇒ If *ON* is shown in the measurement value display (13), the upper alarm threshold is enabled.
 - ⇒ If *OFF* is shown in the measurement value display (13), the upper alarm threshold is disabled.
5. Press the *SET* button (6) again.
 - ⇒ The *Lower alarm limit* indication (17) will flash.
6. Select the lower alarm limit using the *Scan* (4) and *LED* (5) buttons.
7. Press the *SET* button (6) again to save the setting.
 - ⇒ *ON* or *OFF* will flash in the measurement value display (13).
 - ⇒ The *Lower alarm limit* indication (17) will flash.
8. Enable/disable the lower alarm limit using the *Scan* (4) and *LED* (5) buttons.
 - ⇒ If *ON* is shown in the measurement value display (13), the lower alarm threshold is enabled.
 - ⇒ If *OFF* is shown in the measurement value display (13), the lower alarm threshold is disabled.
9. Press the *SET* button (6) twice to return to the measuring function.
 - ⇒ The alarm limits and the settings are saved.

Changing the unit °C / °F indication



Info

The default setting for the temperature unit is °C.

Please proceed as follows to change the temperature unit at the device:

1. Press the *SET* button (6) five times until the *Temperature unit* indication (12) flashes.
2. Select the desired unit using the *Scan* (4) and *LED* (5) buttons.
3. Press the *SET* button (6) again to save the setting.

Maintenance and repair

Battery change

A battery change is required when the *Battery* indication (14) displays an empty battery symbol or when the device can no longer be switched on (see chapter Inserting the battery).

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.

Clean the temperature probe (7) after every measurement. If necessary, remove any residues of the measured material before folding the temperature probe (7) back in.

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.

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 waste bin on waste electrical or electronic equipment is taken from Directive 2012/19/EU. It states that this device must not be disposed of with the household waste at the end of its life. 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.



In the European Union, batteries and accumulators must not be treated as domestic waste, but must be disposed of professionally in accordance with Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators. Please dispose of batteries and accumulators 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

Grebbener Str. 7
D-52525 Heinsberg

☎ +49 2452 962-400

☎ +49 2452 962-200

✉ info@trotec.com

www.trotec.com