

# EN

OPERATING MANUAL  
FOOD THERMOMETER



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**Notes regarding the operating manual**


**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.

**Note**  
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 operating manual must be observed.

You can download the current version of the operating manual 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 remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in legible condition.
  - Do not open the device.
  - 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 from the device. 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.

To use the device for its intended use, only use accessories and spare parts which have been approved by Trotec.

### 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 qualifications

People who use this device must:

- have read and understood the operating manual, 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.

### Note

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

### Note

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

## Information about the device

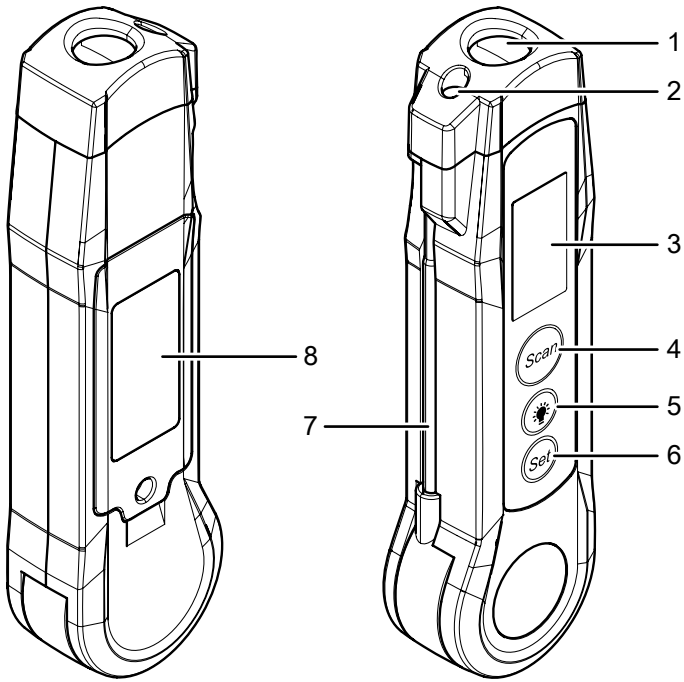
### Device description

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.

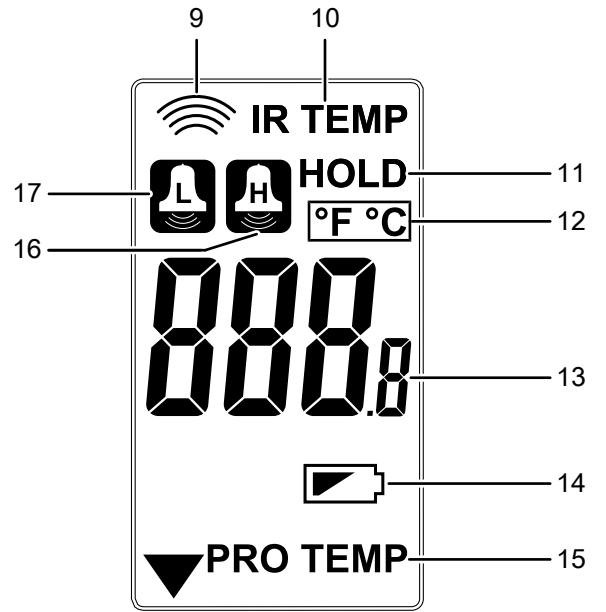
To easily monitor whether or not the safe temperature range is complied with, the device is equipped with adjustable MIN and MAX alarm limits.

**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	Measured value will be held indication
12	Temperature unit indication
13	Measurement value indication
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
<b>Temperature probe</b>	
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)
<b>Infrared sensor</b>	
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
Power supply	2 x 1.5 V batteries, type AAA
Weight	150 g
Length temperature probe	75 mm
Dimensions (length x width x height)	140 mm x 24 mm x 38 mm

## Scope of delivery

- 1 x Device BP2F
- 2 x 1.5 V battery AAA
- 1 x Quick guide

## Transport and storage

### Note

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
- the storage temperature complies with the values specified in the Technical data
- Remove the batteries from the device.

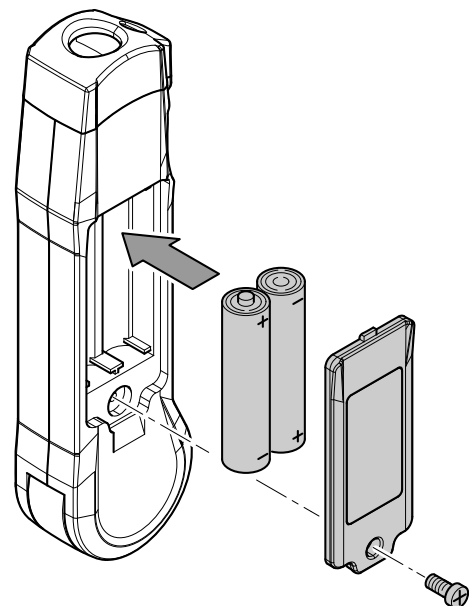
## Operation

### Note

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

## Inserting the battery

1. Remove the screw from the battery compartment.
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.



**Note:**

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.

**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.



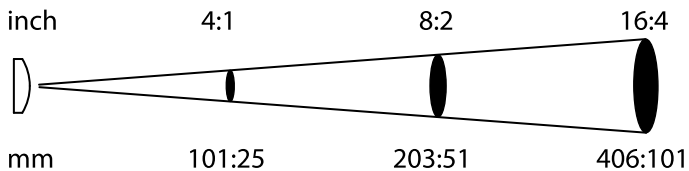
**Info**

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 degree of emission.



**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. Point the device at the object to be measured and hold down the *Scan button* (4).
  - ⇒ The currently measured value is indicated.
  - ⇒ The IR measurement indication flashes.
  - ⇒ The IR temperature indication appears on the display.
2. Let go of the *Scan button* (4) to terminate the measurement.
  - ⇒ The most recent measured value is frozen and indicated on the display for approx. 7 s.
  - ⇒ The *Hold* indication is shown on the display.
  - ⇒ The IR measurement indication disappears.

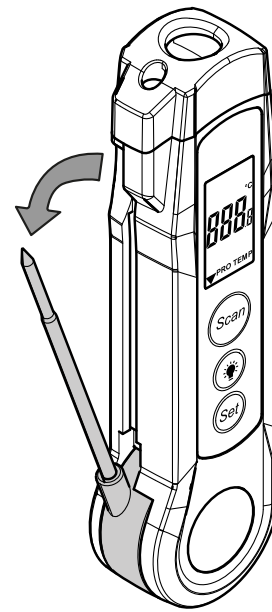
**Temperature measurement with temperature probe**



**Caution**

Risk of contamination of product being measured! Disinfect the probe before using it in food. Use a disinfectant suitable for stainless steel and food.

1. Fold out the temperature probe (7).
2. Insert the temperature probe into the material to be measured by approx. 1 cm.
  - ⇒ The currently measured value is indicated.
  - ⇒ The probe temperature indication (15) appears on the display.



**Note**

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.

**Changing the unit °C / °F indication**

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 °C/°F indication flashes.
2. Press the *Scan* (4) or *LED* (5) button to set the desired unit.
3. Press the *SET* button (6) again to save the setting.

## Setting the alarm limits

1. Press the *SET* button (6) once until the upper alarm limit indication (16) flashes.
2. Press the *Scan* (4) or *LED* (5) button to set the upper alarm limit.
3. Press the *SET* button (6) again.
  - ⇒ *ON* or *OFF* will flash in the measurement value indication (13).
  - ⇒ The indication for the upper alarm limit (16) flashes.
4. Press the *Scan* (4) or *LED* (5) button to enable or disable the upper alarm limit.
  - ⇒ *ON* indicates that the upper alarm threshold is enabled.
  - ⇒ *OFF* indicates that the upper alarm threshold is disabled.
5. Press the *SET* button (6) again.
  - ⇒ The indication for the lower alarm limit (17) flashes.
6. Press the *Scan* (4) or *LED* (5) button to set the lower alarm limit.
  - ⇒ *ON* or *OFF* will flash in the measurement value indication (13).
  - ⇒ The indication for the lower alarm limit (17) flashes.
7. Press the *Scan* (4) or *LED* (5) button to enable or disable the lower alarm limit.
  - ⇒ *ON* indicates that the lower alarm threshold is enabled.
  - ⇒ *OFF* indicates that the lower alarm threshold is disabled.
8. Press the *SET* button (6) twice to exit the settings.
  - ⇒ The alarm limits and the settings are saved.

## Settings overview

<b>SET button</b>	<b>Function</b>
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

## Maintenance and repair

### Battery change

A battery change is required when the battery status indication 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.

### 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.

<b>Fault</b>	<b>Remedy</b>
Display segments are only faintly visible or flicker.	The battery voltage is too low. Exchange the batteries immediately.
The device displays implausible measured values.	

## 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 stipulates that this equipment 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.

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