

orava

MT-210

Instruction manual

EN



29.01.2021 rev.1.0

CE 0197

**Infrared ear/forehead
thermometer**

1. GENERAL SAFETY INSTRUCTIONS AND WARNINGS

This document contains important safety instructions and warnings for the safe and correct operation and use of the “medical device - body temperature measuring device”. Adherence to it helps the user to avoid risks, increase the reliability and durability of the product.

1.1 General safety instructions



Read these operating instructions carefully before operating the device. Save the instructions for future reference. You can get more detailed information about your body temperature from your doctor.

- The safety instructions and warnings in this manual do not cover all possible conditions and situations that may occur when using the device. The user must understand that personal responsibility is a factor that cannot be incorporated into any of the products and caution. These factors must therefore be ensured by the users operating the device.
- By failing to observe the safety instructions and warnings, the manufacturer is not liable for any damage to health or equipment!
- Before using the device for the first time, make sure that the device is complete and does not show visible signs of damage. If the product is defective or has any visible damage, do not use the product.
- If possible, keep the operating instructions close to the device throughout its service life. Always keep the operating instructions with the device for future reference and use by new users.
- Use the device only for the purpose for which it is intended and in the manner specified by the manufacturer.
- The device is intended for use in the home and similar indoor areas, without special focus.
- This is not a device for professional or commercial use.
- Do not alter the technical parameters and characteristics of the device by unauthorized change or modification of any part of the device.
- The manufacturer is not liable for damage caused during transport, improper use, damage or destruction of the equipment due to adverse weather conditions

1.2 Characteristics of the operating environment

- Do not use the device in an industrial or outdoor environment.
- Always keep the operating and storage environment of the device clean and dry.
- Protect the device from dirt and dust. Do not expose the device to direct sunlight, excessive heat, strong mechanical stress or vibration.
- Do not expose the device to temperatures above 60 °C.
- Characteristics of the operating environment
 1. Ambient temperature: +10 ÷ +40 °C
 2. Humidity: 30 ÷ 85%

1.3 Safety instructions for the power supply - batteries

- The device is powered by its own internal source - the battery.
- The device operates with a safe low voltage.
- Always keep batteries out of the reach of children. If children swallow batteries, seek medical attention immediately.
- Wipe the batteries with a dry cloth before inserting them. This will ensure better electrical contact.
- When inserting the batteries into the device, always carefully check and observe the correct polarity of the battery storage. Insert the batteries so that the "+" and "-" symbols on the batteries and on the inside of the cover match.
- Do not handle batteries with metal tools (e.g. tweezers, etc.). Conductive contact between the two poles of the battery can cause a short circuit.
- If you do not use the device for a long time, it is recommended that you remove the batteries from the device. This protects the device from damage from leaking batteries.
- Dispose of batteries according to local regulations and standards.

Caution!

Improper handling may cause the battery to explode. Do not charge, disassemble or dispose of in fire.

1.4 Personal safety

- The device is intended for use by persons without electrical qualification (by laymen) according to the instructions specified by the manufacturer.
- Only operations such as switching on and off, user manipulation, visual or auditory control and user cleaning are required to operate the device.
- This device is intended for use by children 8 years of age and older and persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, only if they have been given supervision or instruction concerning use of the device safely and understand the dangers involved. .
- The device may only be cleaned by children from 8 years of age and older under the supervision of a responsible person.
- Children must not play with the device.
- Always keep the device out of the reach of children during use and storage.

Attention!

The device contains small parts - batteries, where there is a risk of children swallowing these parts.

1.5 Cleaning and maintenance

- Perform routine user cleaning and maintenance only as recommended in accordance with the instructions and procedures in the “Cleaning, Disinfection, and Maintenance” section.
- Do not disassemble the device.
- Never repair the device yourself. In the event of a fault, leave the repair to an authorized service center.

2. SPECIAL SAFETY INSTRUCTIONS AND WARNINGS

- The device is intended exclusively for private, non-commercial use - measuring the body temperature of people. Verification of the measurement accuracy is possible by comparison with another verified measuring device. The verification interval is recommended every 2 years.
- Never clean the device under running water or soak it in water or any other liquid. Clean the device only with a damp cloth (in a suitable solution) and wipe dry or allow to dry.
- Never overload the device beyond the limits set by the technical parameters and characteristics of the operating environment!
- Never underestimate the possible dangers and take extra care!

Security symbols

- The warning symbols and illustrations in this manual are intended to help you use the product safely and correctly so that you and others will not be harmed.
- The warning symbols and illustrations and their meanings are as follows.

Warning! Alert Summary:

- The symbol • indicates points that need attention.
- Warning indicates a general warning.
- Pay attention to the text where prohibited activities are mentioned.
- Disassembly of the device is not permitted.
- The device is equipped with a BF type attachment.
- The device is resistant to water and moisture.
- Read the instructions before use.
- The packaging of the device complies with the requirements for environmental protection.
- The material and the product itself are made from renewable materials that allow recycling, which has a positive impact on the environment and the planet.
- Do not dispose of the device as normal municipal waste.
- IP classification: IP22

Cautions

- The measured values must be consulted with a qualified doctor.
- The product is intended exclusively for measuring the temperature of the human body.

- Please do not use the product for any purpose other than measuring the temperature of the human body, subjects.
- The use of mobile phones in the immediate vicinity of the product is prohibited.
- Please do not use devices that generate electromagnetic fields in the immediate vicinity of the product.
- Do not disassemble the device or attempt to repair it yourself with spare parts.
- Do not attempt to bend or stretch the device.
- Protect the product from falls and strong impacts.
- The device is intended only for measuring the temperature of the human body and cannot be used to diagnose the disease, in emergencies or for long-term measurement during surgery.
- Keep the product out of the reach of children. Children under the age of 12 may only use the product under parental supervision.
- Based on the results of the measured temperature, patients must not diagnose the disease themselves or treat themselves. We strongly recommend that you seek medical help.
- Children under the age of 12 must not use the product alone.
- This product should not be used by people who suffer from inflammation of the external sound canal, eardrum inflammation or other ear diseases.

If you use or store the device outside the specified temperature and humidity range, it may not work exactly as specified.

Operating environment:

Temperature: from +10 ° C to +40 °C, humidity: from 15% to 93% relative humidity

Storage environment:

Temperature: from -25 ° C to +55 °C, humidity: from 0% to 93% relative humidity

Device information

Purpose of use

The infrared forehead thermometer is designed to determine the temperature of the human body by measuring in the ear canal or on the forehead.

Scope of use

It is suitable for displaying the temperature of the human body by measuring the radiated heat in the ear canal or on the forehead.

Features:

- Non-contact infrared temperature measurement in the ear/ forehead
- Different colors and backlights of the display: white, green, orange and red

- Possibility to store up to 9 measured temperature values
- Switch between degrees Fahrenheit (°F) and degrees Celsius (°C) (default setting: degrees Celsius °C)
- Immediate measurement for 1 second
- Comfortable and economical design without the use of earbuds and without additional operating costs
- Audio on/off function
- If you do not use the unit for more than 30 seconds, it will turn off automatically.

Advice

The results of the measurements are for reference only and cannot under any circumstances be considered as a substitute for a medical diagnosis made by a qualified doctor. If you have any questions about the measurement results, please contact your doctor.

User security

Warnings!

- 1 Always seek medical help as it would be dangerous to make a diagnosis and perform treatment based on the results of the measurement.
- Determining one's own diagnosis could lead to worsening of the patient's condition.
- 2 Do not touch or blow into the infrared sensor.
- A dirty or damaged infrared sensor could cause abnormal measurement results.
- 3 If there is a difference between the temperature of the thermometer's storage location and the temperature of the measurement location, please place the thermometer in a room temperature location (measurement location) approximately 30 minutes before performing the measurement.
- A difference in temperature could result in incorrect measurement results.
- 4 Keep the product out of the reach of children.
- Children could be injured if they manipulate the thermometer or try to measure the temperature. If a child swallows a battery or transparent cover, seek medical attention immediately.
- 5 Do not attempt to measure the temperature of the human body near the air conditioner.
- Make sure that the measurement accuracy is not adversely affected.
- 6 Before and after each use, wipe the surface of the probe with a cotton swab dipped in 95% absolute alcohol (if on an infrared sensor). If you notice smudges, fog or water, gently wipe it with a cotton swab dipped in anhydrous alcohol at a concentration of 95%.
- If you clean the infrared sensor with toilet paper or paper towels, it may be scratched, which may affect the measurement results.

- Avoid cross-contamination and affect measurement accuracy.
- 7 Protect the product from mechanical damage.
- Damage to the product could lead to inaccurate measurement results.
- 8 If you accidentally immerse the product in water or if you splash water on it, make sure that the product is completely dried up. Remove water from the surface of the sensor with a clean cotton brush.
- Avoid accidents and affect measurement accuracy.

Warning:

- 1 People who suffer from inflammation of the external sound canal, eardrum or other ear diseases should not attempt to use this product.
- The condition of the affected area may deteriorate.
- 2 Do not use the product immediately after swimming, bathing or if you have water in your ears.
- The measured temperature may be low.
- 3 Do not expose the battery to damage.
- The battery may be damaged and broken.
- 4 When measuring the temperature in the ear canal, the product must be switched to ear temperature measurement mode.
- The measured value may be incorrect.

Recommendations

- 1 When reporting the measured values to your doctor, emphasize that the temperatures were measured with an ear thermometer.
- 2 Do not intentionally expose the product to shocks, falls, trampling, or shock.
- 3 Do not attempt to disassemble, repair, or modify the product.
- 4 Make sure that no liquids (alcohol, water drops, hot water, etc.) enter the body of the product, as the product is not waterproof.
- 5 The product must be kept clean and stored in a dry place.
- 6 If you experience any problems with the product, contact the sales department. Do not attempt to repair the product yourself.
- 7 Do not use the product in an environment where electromagnetic interference occurs.
- 8 Dispose of the product at the end of its life in accordance with local laws and regulations.

Tips for measuring temperature

Comparison of different measurement methods

The measured values differ when using different measurement methods. The World Health Organization (WHO) provides reference values for normal human body temperature values, specific temperature differences can be found in the overview below.

Method of measurement	Normal body temperature
Rectal temperature	36,6 °C - 38 °C
Oral temperature	35,5 °C - 37,5 °C
Underarm temperature	34,7 °C - 37,3 °C
Ear temperature	35,8 °C - 38 °C

Changes in human body temperature

Man belongs to animal species with a constant temperature.

Body temperature is basically constant, but not completely constant.

The temperature of the human body changes during the day, as follows:

At night (lowest)

Body temperature is lowest at night due to sleep and reduced physical activity.

Morning (higher)

When we move from a heated bed to a lower temperature room in the morning, the muscles in the body begin to contract and generate heat.

At noon (highest)

The human body reaches its highest temperature at noon to allow the body to adapt naturally.

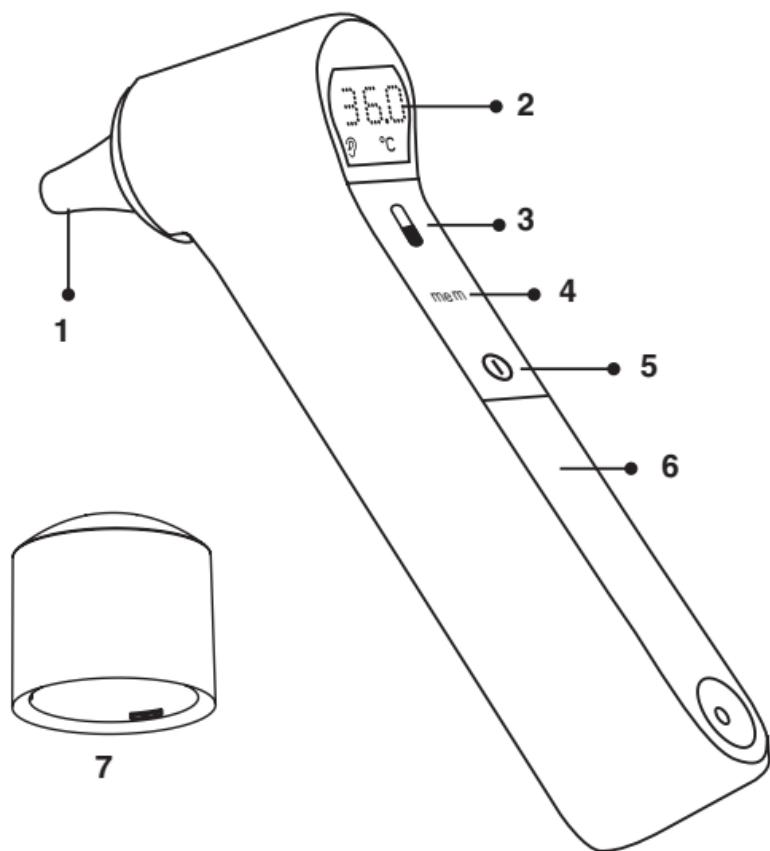
15:00 - 16:00 afternoon (lower)

For physical exertion and reduced blood sugar.

Evening (lowest)

Due to the sunset and lower room temperature.

Description of parts



1 Measuring probe

2 Display

3 Measurement start button

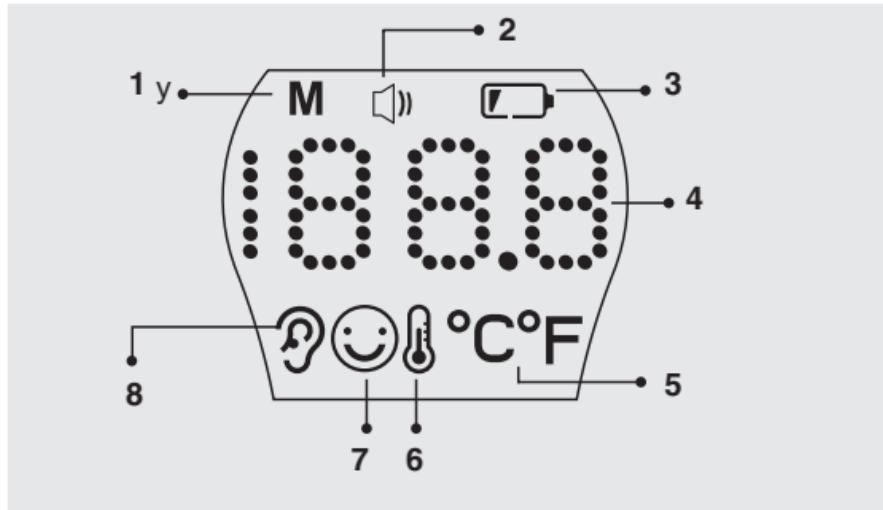
4 MEM button

5 Power switch 

6 Battery compartment cover

7 Head cover for measuring the temperature from the front

Description of symbols on the display



1 Device memory symbol

2 Audio on/off icon

3 Battery status icon

4 Measurement result

5 Temperature units (°F or °C)

6 Object temperature measurement icon

7 Front measurement icon

8 Ear temperature measurement icon

Power supply

The device is powered by two 1.5 V AAA batteries, which are not supplied.

Batteries must be inserted before using the device.

1 Squeeze the battery cover and open the battery compartment.

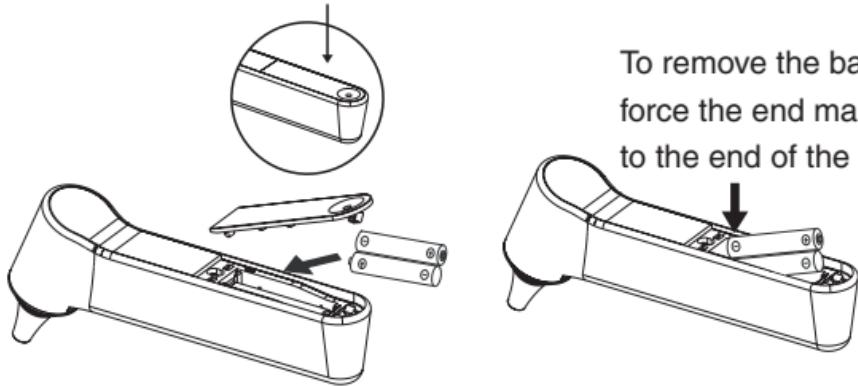
2 Insert 2 AAA batteries (2x 1.5 V) into the battery compartment.

Observe the correct polarity of the inserted + and - batteries.

Improperly inserted batteries can cause serious damage to the device.

3 Close the battery cover until it clicks.

Push the battery cover to open it.



When to replace the batteries

When the illuminated battery icon appears on the display together with the text "LO", it means that the device cannot function properly and that the batteries need to be replaced immediately.

Note

Always remove the batteries from the device when you will not be using the device for a long time to prevent damage to the thermometer due to electrolyte leakage from the batteries.

Battery warnings

- We recommend using alkaline batteries.
- Keep new and discharged batteries out of the reach of children. If the battery compartment cannot be closed properly, do not continue to use the product and keep it out of the reach of children.
- If the battery is swallowed or otherwise enters the body, seek medical attention immediately.
- If the battery leaks, avoid contact with skin, eyes and mucous membranes. Immediately flush affected areas with clean water and seek medical attention immediately.
- Warning! Batteries may explode if inserted incorrectly. Therefore, be sure to observe the correct polarity (+/-) when inserting the batteries.
- Use only the same or equivalent type of batteries. Never mix 2 different types of batteries or mix a new battery with an old one.

- Do not disassemble, throw into fire or short-circuit batteries. Dispose of used batteries in an environmentally friendly manner in accordance with national or local regulations.
- Protect batteries from excessive heat. Remove the batteries from the device after discharging them or before using the product for a long time. This will prevent damage from battery leakage.

Description of basic functions

Turn on/off the beep

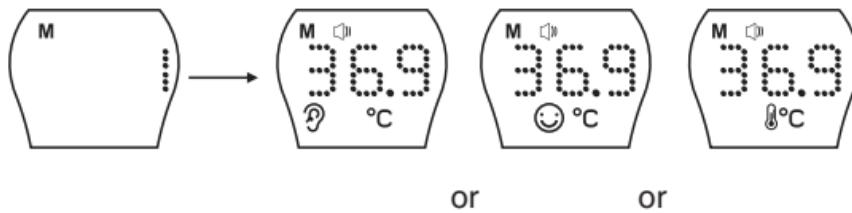
- 1 In the power on mode, you can turn the beep on or off by pressing the „mem“ button.
- 2 When you press the “mem” button, the speaker icon will appear and a short beep will sound to indicate that the beep mode is activated.
- 3 When the “mem” button is pressed again, the speaker icon disappears, indicating that the beep is deactivated and the device is in silent mode.

Switching temperature units between °F and °C

In power off mode, press and hold „mem“ for about 6 seconds. The display of the units starts flashing and you briefly press the „mem“ button to switch the required ones units of temperature in degrees Fahrenheit or Celsius (°F or °C). After 8 seconds, the device switches off automatically and the settings are saved, or you can switch off the device immediately by pressing switch .

Memory function

In the power off mode, press the “mem” button - the device has access to the last 9 measurement results in the order from the newest to the oldest (see the picture below). After 30 seconds of inactivity, the device switches off automatically, or you can switch it off immediately by pressing switch .



Backlight function

When the measurement results show a temperature below 34 °C, the text LO will appear on the display with a red backlight. When the measurement results capture normal body temperature (34 - 37.1 °C), this temperature is shown on the green backlit display.

When the measurement results show a slightly elevated body temperature (37.2 - 38.1 °C), this temperature is shown on the orange backlit display.

When the measurement results capture a high body temperature (38.2 - 43.0 °C), this temperature is shown in the display backlit in red.

When the measurement results show a temperature higher than 43.0 °C, the text HI will appear on the display with a red backlight.

Tip: This feature is for reference purposes only.

Methods of measuring temperature



Children under 1 year of age - pull the ear backwards.



Children older than 1 year and adults - pull the ear back and up.



The center of the forehead

Ear temperature

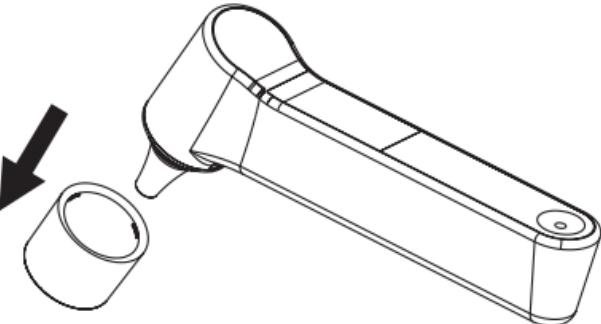
Ear temperature

Head temperature

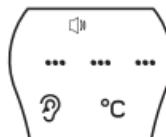
Ear temperature measurement

Advice

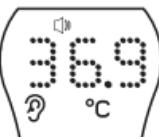
Before measuring the temperature in the ear, remove the temperature probe cover to measure the temperature at the forehead.



- 1 After taking off the probe cover, turn on the device by pressing the power switch . When the ear temperature measurement mode is turned on, the last measurement result is displayed. Insert the thermometer in your ear and start measuring the temperature by pressing the button .
- 2 After 1 second, the measurement result is displayed.



A flashing display indicates that the device is preparing for measurement.



Measurement result



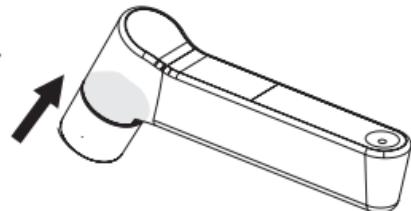
Note

The measurement was not completed until an audible signal sound. The measuring probe can be removed from the ear only after an acoustic signal. (If the beeper is off, the beep will not sound.)

Head temperature measurement

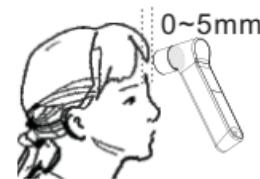
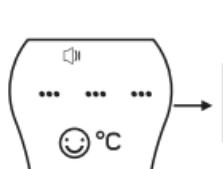
Advise

Install the probe temperature cover to measure the forehead temperature.



After fitting the measuring probe cover, switch on the device with the pressed switch . When the forehead temperature measurement mode is switched on, the last measurement result is displayed. Aim the thermometer at the middle of the forehead and keep it at a distance of 0 - 5 mm from the white. Start measuring the temperature by pressing the button .

After setting for 1 second, the measurement result is displayed.



A flashing display indicates that the device is preparing for measurement.

The result measurements

Note

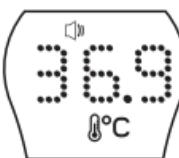
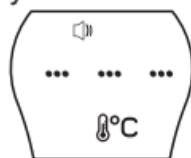
The measurement was not completed until an audible signal sounds. The measuring probe can be sent from the front until an acoustic signal sounds. (If the beeper is off, the beep will not sound.)

Measuring the temperature of an object

Advise

Attaching/not fitting the probe used when measuring the temperature on the forehead has no effect on the result of measuring the temperature of the object.

- 1 Press and hold switch  for about 6 seconds to activate the object temperature measurement mode. Aim the thermometer at the object and start measuring the temperature by pressing the button .
- 2 After a sample of 1 second, the measurement result is displayed.



A flashing display indicates that the device is preparing for measurement.

The result measurements

Note

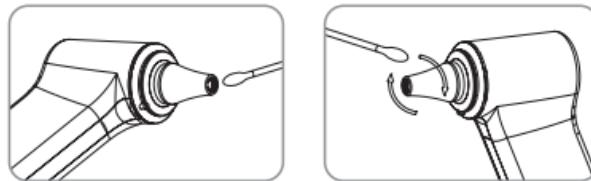
The measurement was not completed until an audible signal sound. Aim the measuring probe from the object only after an acoustic signal. (If the beeper is off, the beep will not sound.)

Cleaning and maintenance

In order for the device to work properly, it is recommended to clean the measuring probe after each measurement.

- 1 Clean the measuring probe after each measurement with a cotton swab moistened with alcohol. This will prevent contamination.
- 2 Wipe the thermometer body with a soft, dry cloth. Never use any means that could scratch the device. Never clean the device with water or other cleaning fluids.

- Never wash the device under running water or immerse it in water.
- Clean the surface of the device and accessories with a soft, dry cloth or a slightly damp cloth in water. Do not use solvents or harsh cleaners for cleaning.
- The appliance must remain completely dry after cleaning.



Advice

Why is it necessary to clean the device after each measurement?

The infrared thermometer uses a high-sensitivity technique to measure the temperature of the target object. Earwax or impurities affect the accuracy of the measurement and at the same time increase the likelihood of bacterial infection. We recommend cleaning the product after each use as shown above.

Troubleshooting

See this table for the following displays.

Information on the display	The reason	The solution
Hi	When the temperature of the target object is higher than the measurement range in the ear temperature measurement mode, i.e. higher than 43.0 °C, the information „Hi“ appears on the display.	1 If the measuring probe is not correctly positioned in the ear canal during the measuring process or if the distance is very long, the measurement result may be very low. 2 If the measuring probe is dirty, the measured value may be very low. Wipe the measuring probe with a cotton swab moistened with alcohol.
Lo	When the temperature of the target object is lower than the measurement range in the ear temperature measurement mode, ie lower than 34.0 °C, the information „Lo“ appears on the display.	
Er.H	The device has an upper operating temperature limit of 40 °C. When the ambient temperature exceeds this temperature, the error message „Er.H“ appears on the display.	The ambient temperature must not exceed 40 °C when using the product.
Er.L	The device has a lower operating temperature limit of 10 °C. When the ambient temperature is lower, the error message „Er.L“ appears on the display.	The ambient temperature must not be lower than 10 °C when using the product.

Err	When the ambient temperature changes rapidly by about 5 °C in the object temperature measurement mode, the error message „Err“ is displayed and the device turns off automatically.	. If the error message „Err“ is displayed, leave the device out of operation for approx. 30 minutes before the next measurement.
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A beep will also sound if any problem occurs and an audible alarm is active.

If you encounter any issues with this device, try resolving them using this report. If precautions do not help, do not attempt to disassemble or repair the device yourself. There is a risk of losing the warranty.

Problem	Cause	Solution
The display does not turn on when the power is turned on.	The batteries are empty.	Replace the batteries.
The measured temperature is low.	Incorrect battery polarity.	Observe the correct polarity of the batteries as indicated in the battery compartment.
	The measuring position is incorrect.	Follow the instructions to measure the temperature.
	Dirt in the ear canal or on the measuring probe.	Remove impurities before starting the measurement.
Significant temperature fluctuations during long-term measurement.	Measurement intervals are very short.	The interval between measurements should be longer than 10 seconds.

Technical specifications

Product Name:	Infrared ear/forehead thermometer
Model:	MT-210
Dimensions:	31 x 175 x 72 mm
Weight: approx.	77 g (without batteries)
Measuring range body temperature:	34.0 - 43.0 ° C
Measuring range surface temperature (objects):	0 - 93.2 ° C
Resolution:	0.1 ° C
Accuracy:	± 0.2 ° C (35.0 - 42.0 ° C), ± 0.3 ° C (other temp.)
Operating temperature:	10.0 - 40.0 ° C
Operating humidity:	15 - 93%
Atmospheric pressure:	70 - 106 kPa
Storage temperature:	-25 - +55 ° C
Storage humidity:	0 - 93%
Atmospheric pressure:	50 - 106 kPa
Display:	LCD display, 4 digits and special symbols
Sound:	If an audible signal is activated, a short beep sounds to indicate that the product is ready for measurement. When the measurement is completed, a long beep sound.
System error or fault:	3 short beeps in a row
Temperature warning:	10 short beeps in a row
Memory:	up to 9 can be stored measured values
Automatic shut - off: during 30	If the thermometer does not use for seconds, it switches off automatically.
Batteries:	2x 1.5 V AAA batteries (recommended use alkaline batteries)
Shelf life:	approx. 5 years
Measurement mode on the front 1603:	
Clinical bias, Dcb: 0.078	
Limits of agreement of repeated measurements, LA: 0.243	
Clinical repeatability, Delta r: 0.069	
Reference point on the body:	forehead
Measuring point:	forehead
Supplied items:	thermometer, operating instructions

Addition 1 Manufacturer ,s recommendations and declarations - charts

Manufacturer's recommendations and declarations - electromagnetic radiation		
The MT-210 is intended for use in the electromagnetic environment specified below. The customer or the user must ensure that the MT-210 infrared thermometer model is used in such an environment.		
Emissions	Compliance	Electromagnetic environment - recommendations
RF emissions CISPR 11	group 1	The thermometer uses high-frequency energy only for its internal functions. High frequency radiation waves are therefore very low and is not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	class B	The thermometer is intended for household use and is powered by a DC voltage of 3 V.
Harmonic emissions IEC 61000-3-2	not relevant	
Voltage / vibration emission fluctuations IEC 61000-3-3	not relevant	

Manufacturer's recommendations and declarations

- electromagnetic immunity

The MT-210 model of the infrared thermometer is intended for use in the electromagnetic environment specified below. The customer or the user must ensure that the MT-210 infrared thermometer model is used in such an environment.

Immunity Test	level IEC 60601	Compliance level	Electro-magnetic environment - recommendations
discharge of electrostatic charge (ESD) IEC 61000-4-2	±8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air	±8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air	air floor must be wooden, concrete or made of ceramic tiles. If the floor is covered with synthetic material, the relative humidity must not fall below 30%.
magnetic network field frequency powering it frequency (50/60 Hz) should IEC 61000-4-8	30 A/m, 50/60 Hz	30 A/m, 50/60 Hz	Comply values common for typical office or hospital environment.
NOTE U _T U is the voltage of the power supply before the test application			

The MT-210 is intended for use in the electromagnetic environment specified below. The customer or the user must ensure that the MT-210 infrared thermometer model is used in such an environment.

Resistance test level	level IEC 60601	Compliance level	Electromagnetic environment - recommendations
conductive VF signal IEC 61000-4-6	3 Vrms 150 kHz up to 80 MHz 6 Vrms 150 kHz up to 80 MHz conductive RF signal IEC 61000-4-6	not relevant	Do not use portable and mobile high-frequency devices in close proximity to the MT-210 infrared thermometer model (including cables) than the recommended minimum separation distance calculated from the transmitter frequency equation.
VF signal propagated by radiation IEC 61000-4-3	10 V/m 80 MHZ to 2,7 GHz	10 V/m	<p>Recommended separator. distance</p> $d = \left[\frac{3.5}{V_i} \right] \sqrt{P}$ $d = \left[\frac{3.5}{E_i} \right] \sqrt{P} \quad \text{80 MHz to 800 MHz}$ $d = \left[\frac{7}{E_i} \right] \sqrt{P} \quad \text{80 MHz to 2,7GHz}$ <p>where P is the maximum output power of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended distance in meters (m). The intensity of the field emitted by fixed high-frequency transmitters, as determined by a survey of the electromagnetic radiation of site a) should be lower than the stated safe value (level of compliance) for each frequency range; and b) interference may occur in the vicinity of the radiation marked with the following symbol: </p>

NOTE 1

At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2

These recommendations may not apply in every situation.

The propagation of electromagnetic waves is affected by absorption and reflection from structures, objects and people.

ISM bands (industrial, scientific and medical use) in the range 0.15 MHz and 80 MHz are 6.765 MHz to 6.795 MHz; 13.553 MHz to 13.567 MHz; 26.957 MHz to 27.283 MHz and 40.66 MHz to 40.70 MHz.

The bands for amateur radio waves in the range 0.15 MHz and 80 MHz are 1.8 MHz to 2.0 MHz; 3.5 MHz to 4.0 MHz; 5.3 MHz to 5.4 MHz, 7 MHz to 7.3 MHz, 10.1 MHz to 10.15 MHz, 14 MHz to 14.2 MHz, 18.07 MHz to 18.17 MHz, 21.0 MHz to 21.4 MHz, 24.89 MHz to 24.99 MHz, 28.0 MHz up to 29.7 MHz and 50.0 MHz to 54.0 MHz.

Compliance levels in the ISM frequency bands from 150 kHz to 80 MHz and in the frequency range 80 MHz to 2.5 GHz aim to reduce the likelihood of interference caused by mobile / portable communication devices that are inadvertently used in patient areas. Therefore, an additional factor of 10/3 is used when calculating the recommended separation distance for transmitters in these frequency ranges.

Electromagnetic field strengths of fixed transmitters, such as terrestrial stations for radio telephones (mobile / cordless) and terrestrial mobile radio stations, amateur radio stations, radio broadcasting AM and FM, it is not possible to predict exactly theoretically. If it is necessary to evaluate the electromagnetic environment in a given location with respect to for fixed RF transmitters, consider performing electromagnetic measurements at the site. If the field strength measured in the vicinity of the MT-210 infrared thermometer model exceeds the above permissible limits, carefully check the operation of the infrared thermometer model.

MT-210. If the function of the infrared thermometer model The MT-210 is not normal, additional measures may be necessary, such as relocating or rotating it.

Above the frequency range 150 kHz to 80 MHz, the field strength should be below 3 V/m.

Recommended separation distance between portable and mobile high frequency devices and an MT-210 infrared thermometer

Model MT-210 is designed for use in electromagnetic environments, where any interfering RF radiation is regulated. The customer or the user of the MT-210 infrared thermometer model can reduce electromagnetic interference by maintaining a minimum distance between portable and mobile RF devices and the MT-210 infrared thermometer model as recommended below, depending on the maximum output power of the communication device.

Maximum rated power of the transmitter (W)	Distance according to the frequency of the transmitter (m)		
	150 kHz to 80 MHz $d = \left[\frac{3.5}{V_1} \right] \sqrt{P}$	80 MHz to 800 MHz $d = \left[\frac{3.5}{E_1} \right] \sqrt{P}$	800 MHz to 2,7 kHz $d = \left[\frac{7}{E_1} \right] \sqrt{P}$
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23

For transmitters with a specified maximum output power not listed above, the recommended distance d in meters (m) can be estimated using the transmitter frequency equation, where P is the maximum transmitter output power in watts (W) specified by the transmitter manufacturer.

NOTE 1

At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2

These recommendations may not apply in every situation.

The propagation of electromagnetic waves is affected by absorption and reflection from structures, objects and people.

BATTERY DISPOSAL



Batteries contain substances that are harmful to the environment and should not be disposed of with normal household waste. Dispose of them in accordance with the applicable regulations and standards at the collection points.

DISPOSAL OF USED ELECTRICAL AND ELECTRONIC EQUIPMENT



The symbol on the product or on its packaging indicates that this product does not belong to household waste. It is necessary to take it to a collection point for electrical recycling and electronic equipment.

By ensuring proper disposal of this product, you will help prevent negative consequences to the environment and human health that would otherwise be caused by inappropriate disposal of this product. For more detailed information about recycling of this product, please contact your local authority, your household waste disposal service or the shop where you purchased the product.



This device meets the requirements of European Directive 93/42/EEC.



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