ENGLISH

User manual

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1. General description

The Non-Contact Forehead IR Thermometer is specially designed to take the body temperature of a person regardless of room temperature. Depending on various skin types and thickness, there may be temperature difference.

2. Safety Informations

- This device must only be used for the purposes described in this instruction manual
- This device must only be used in an ambient temperature range between **10°C and 40°C**
- Do not expose this thermometer to electric shocks.
- Do not expose this thermometer to extreme temperature conditions of > 50°C or < 0°C
- Do not use the device in relative humidity higher than 85%RH
- Do not use the device near large electromagnetic fields such as found with cordless or celi phones.
- Keep the device away from water and heat, including direct sunlight.
- Do not drop or knock the device, and do not use if damaged .
- It may affect the accuracy of measurements when the forehead is covered by hair, perspiration, cap or scarf.(See Part 10-4)
- Keep the Measuring distance as 5cm-15cm (2in-5.9in).(See Part 10-4)
- When the body infrared thermometer should be left in that room during 15 to 20 minutes before using.
- It may affect the accuracy of measurements when the forehead is covered by perspiration or other factors, please take the temperature behind the ear lobe .(See Part 10-5)
- Clean the glass with a cotton bud lightly moistened with 70% alcohol

IMPORTANT REMARKS:

- Before taking of the temperature make sure to remove hair and perspiration from the forehead .
- Selecting **"Body"** mode to measure the body temperature; Selecting **"Surface"** mode to measure the surface temperature.
- Use of this thermometer is not intended as a substitute tor consultation with your physician .
- Should a problem occur with your device,please contact your retailer. Do not attempt to repair the device yourself.
- According to EMC standard, the medicai electronic products should be maintained specially

3.Features

- Precise non-contact measurements
- User selectable °C or °F
- Selectable Body and Surface temp
- Set Alarm value
- Memorization of the last 32 measurements
- Automatic Data Hold & Auto power off
- Automatic selection range and Display Resolution 0.1°(0.1°F)
- Backlight LCD display

4. General

Non-Contact Forehead IR Thermometer is designed for body surface and forehead temperature measurement for infants and adults without contact to human body.

Non-Contact Forehead IR Thermometer can also be used to measure the temperature of a baby-bottle or bath, or room temperature (by using the Surface Temp function).

NORMAL TEMPERATURES BASED TO MEASUREMENT METHOD

Measurement Method	Temperature (°C)	Temperature (°F)
Rectal	36.6 to 38	97.8 to 100.4
Oral	35.5 to 37.5	95.9 to 99.5
Axillary	34.7 to 37.3	94.4 to 99.1
Ear	35.8 to 38	96.4 to 100.4

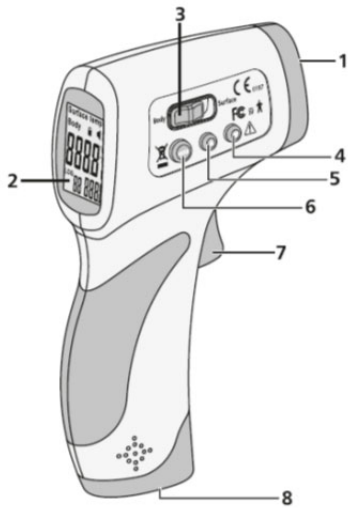
La temperature del corpo umano varia giorno per giorno e può essere influenzata da numerosi fattori esterni: età, sesso, tipo e spessore della pelle, ecc..

NORMAL TEMPERATURES ACCORDING TO AGE

Age	Temperature (°C)	Temperature (°F)
0-2 years	36.4 to 38.0	97.5 to 100.4
3-10 years	36.1 to 37.8	97.0 to 100.0
11-65 years	35 .9 to 37 .6	96.6 to 99.7
> 65 years	35.8 to 37.5	96.4 to 99.5

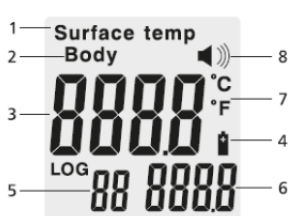
5. Instrument description

CAPTION
1. IR sensor
2. LCD display
3. Mode selection
4. **DOWN** key
5. **UP** key
6. **MODE** key
7. Measurement Trigger
8. Battery cover



6.Display description

CAPTION
1. Surface mode symbol
2. Body mode symbol
3. Result of measurement
4. Low battery indication
5. Memory location number
6. Saved data value
7. Measurement unit (°C/°F)
8. Activated alarm symbol



7 . Description of symbols on the instrument and manual

CE 0197	The device is in accordance with Medicai Device Directive 93/42/ EEC
FC	The device is in accordance with FCC Part 15 subpart B: 2007 /Radio Frequency Devices IC Regulation ICEC-003
3V ⎓	3V DC power supply
	Type B equipment
	In order to protect the environment, please recycle the battery according to the local regulations
Body Surface	Indication of measurement mode
	Medical device manufacturer
EC REP	Authorised Representative in the European Community
	Attention! Read accompanying documents

8. Technical Specifications

General specifications	
Display Resolution	0.1°C (0.1°F)
Operating Temperature	10°C ÷ 40°C (50°F ÷ 104°F)
Storage Temperature	0°C ÷ 50°C (32°F ÷ 122°F)
Humidity Rate	<85%RH
Power supply	3V DC (2 x 1.5V type AA IEC LR06)
Battery life:	4 hours (continue test)
Dimensions (L x W x H)	149 x 77x 43mm / 5.9 x3 x 1.7in
Weight (included batteries)	195g (7 ounces)
Mechanical protection:	IP40

Measurement range	
Body mode	32.0°C ÷42 .5°C (90°F ÷ 108°F)
Surface mode	0°C ÷ 60°C (32°F ÷ 140°F)
Accuracy Surface mode	±0.3°C (0.54°F)
Measurement distance	5cm ÷ 15cm (2in ÷ 5.9in)
Response time	0.5s
Auto Power OFF	7s

Accuracy Body mode

32°C÷35.9°C/ 93.2°F÷96.6°F	±0.3°C/0.5°F	According to ASTM Standard E1965-1998 (2003)
36°C ÷ 39°C / 96.8°F÷102.2°F	± 0.2°C/0.4°F	
39°C÷ 42.5°C/102.2°F÷108.5°F	± 0.3°C/0.5°F	

9. Initial calibration

For stable and reliable results, The thermometer provides a user-correction function, the operation of the method is as follows:

1st step → take the temperature of a person using a conventional thermometer; you will get 37.5°C (99.5°F) for instance

2nd step →take the temperature of the same person using the Non-contact Body Infrared Thermometer keeping the 5 to 15 cm (2 in to 5.9 in) distance between the thermometer and the forehead (Take care to remove any obstacle which could alter the measurement (hair, perspiration ...). If you get 37.5°C (99.5 °F), the Non-contact Body Infrared Thermometer is properly set and ready for use

If you get a lower temperature, 36.4°C (97 .4°F) for example, your difference is 1.1°C (2 .2°F). You should adjust the temperature on the Non-contact Body Infrared Thermometer and add the difference, i.e. 1.1°C (2 .2°F):

- Press **MODE** key for 2 seconds, the screen displays “F1”
- Press **MODE** key again until you get “F3”
- Press **UP** key in order to add the difference (in our example, 1.1°c - 2.2°F)
- To check, take the temperature again using the Non-contact Body mode

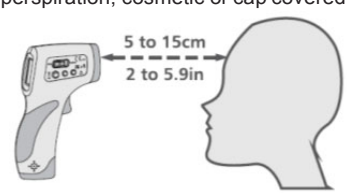
10.Use of instrument

10-1. Insert the batteries

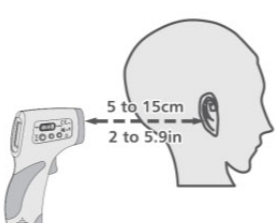
10-2. For the first use or when inserting new batteries wait between **10 minutes** for the warm-up of the apparatus and when inserting the new batteries)

10-3. If the device is not used for a long time, once you turn it on again, the device will test the room temperature first and will delay turning on for one or two seconds.

10-4.Aim towards the forehead (see the diagram below for the positioning), from a distance of 5cm(2in), press the measuring key, the temperature is displayed immediately . Making sure there is no hair, perspiration, cosmetic or cap covered on the forehead.



10-5. When the room temperature is significant difference, or there is perspiration on the forehead, You can take the temperature behind the ear lobe . Making sure there is no hair, perspiration, cosmetic or cap covered



11.Settings

11-1. Unit selection – Function F1

1. Press **MODE** key for 2 seconds, the screen displays “F1”
2. Press **DOWN** key for degrees Celsius or **UP** key for degrees Fahrenheit

11-2. Alarm setup – Function F2

1. Press **MODE** key for 2 seconds, the screen displays “F1”
2. Press twice **MODE** touch to get “F2” . Press **UP** key to increase the threshold by 0.1°C (0.1°F) or **DOWN** key to reduce it by 0.1°C (0.1°F).

   NOTE: The alarm threshold default value is 38°C (100.4°F)

11-3. Temperature adjustment – Function F3

To adjust the total variation of your the Non-contact Body Infrared Thermometer:

1. Press **MODE** key for 2 seconds, the screen displays “F1”
2. Press **"MODE"** button two times until shows the “F3”
3. Press **UP"** to increase the difference by 0.1°C (0.1 °F), **"DOWN"** to reduce it by 0.1°C (0.1 °F)
4. In case of seasonal or environmental changes a verification and adjustment should be carried out.

   NOTA: This function is only effective Body

11-4. Buzzer ON/OFF - F4 Menu

1. Press **MODE** key for 2 seconds, the screen displays “F1”
2. Premere il tasto **MODE** fino a visualizzare il messaggio “F4”
3. Press **UP** key to activate the buzzer (a sound icon ”” is displayed on the LCD screen) or press **DOWN** key to disable it (the icon ” ” disappear)

11-5. Exit Setting mode

Press **MODE key** until the screen turns off

11-6. Measurement modes

The instrument is especially designed to take the body temperature of a human being. For this, use the Body mode. Measurement range for Body mode: 32°C to 42.5°C (86°F to 108°F). You can also use the Non-contact Body Infrared Thermometer to measure the temperature of an area or an object, a food, a liquid or a room temperature. For this, use the Surface mode. Measurement range for Surface mode: 0°C to 60°(32°F to 140°F).

IMPORTANT NOTE: The area temperature differs from the internal body temperature. To obtain the internal temperature always use the Body mode. Please make sure to select the Body mode for an internal temperature reading and the Surface mode for an external area reading (bottle, bath, room...)

11-7.Internal memory

Data memory automatically after temperature measurements, which will display at the right corner of LCD. Press **UP** key **or DOWN key** to display the last temperature measurement.

Deleting internal memory

1. **With instrument switched off** press **UP** and **DOWN** keys together tor 2s to display the last temperature measurement
2. Change the order number to "0" and press **MODE** key in order to delete all memory data

11-8. Battery replacement

When the " " symbol is displayed is necessary replace batteries.

1. Open the battery cover
2. Remove the batteries and replace with new ones of the same type (see § 8). Taking great care to respect the correct polarity. **Never use rechargeable batteries. Use only batteries for single usage**. Restore battery cover
3. Remove the battery from the instrument if it is not required tor extended periods of time in order to avoid damage to the thermometer resulting from a leaking battery
4. Do not dispose of used batteries in the environment. Use the appropriate containers for disposal

11-9. Longevity use

The Non-contact Body Infrared Thermometer was conceived for an intense and professional use, its longevity is guaranteed for 40000 takings.

12.Warnings

- The protective glass over the lens is the most important and fragile part of the thermometer, please take great care of it.
- Do not recharge non rechargeable batteries, do not throw in fire.
- Do not expose the thermometer to sunlight or water

13. Maintenance and Cleaning

- The Infrared Sensor is the most precise part, must be protected carefully .
- Clean the device with a cotton bud lightly moistened with 70% alcohol.
- Do not clean the device with corrosive detergent.
- Keep the device away from water or other liquid.
- Store the device in a dry environment, and keep it away from dust and direct sunlight

14. Troubleshooting

If you happen to have one of the following problems while using the non-contact forehead IR thermometer please refer to this breakdown service guide to help resolve the problem. If the problem persists please contact our customer service.

Q → The screen displays the body temperature inferior to 32°C (89 .6°F)

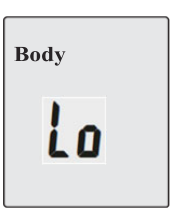
A → If you're on Surface mode the 32°C(89.6 °F) temperature displayed is showing the external temperature that your body releases)

Q → The screen displays the "HI" message

A → When using the Non-contact Body Infrared Thermometer the message **HI** can show on the screen. The analysis is above the measurement range selected, either superior to 42.5°C (108 °F) in Body mode or superior to 60°C (140°F) in Surface mode

Q → The screen displays the "Lo" message

A → When using the Non-contact Body Infrared Thermometer the message “Lo” can show on the screen. The temperature analyzed is under the measuring range selected, either less than 32°C (90°F) in Body mode or less than 0°C (32°F) in Surface mode



List of possible wrong conditions during a measurement

Temperature reading hampered by hair, perspiration. . .	Make sure that there is no obstruction prior to taking a temperature.
Temperature hampered by an air flux.	Make sure there is no air flux as this could interfere with the infrared system.
The measuring distance is too far	Please respect the measuring distance (between 5 to 15cm - 2 to 5.9 in).
From high/low temperature condition to room temperature	Waiting for 10 minutes before taking the body temperature

15. Reference guidelines

The instrument is compliance with the below guidelines::

- EN12470-5 and ASTM E1965-1998
- EN980: Graphical symbols tor use in the labeling of medical devices
- EN1041: Information supplied by the manufacturer with medical devices
- EN60601-1: Medical electrical equipment Part 1: General requirements tor safety (IEC:60601-1 :1998)
- EN60601-1-2: Medical electrical equipment Part 1-2 : General requirements tor safety Collateral standard Electromagnetic compatibility Requirements and test (IEC 60601-1-2:2001)

EMC Directive

This device has been tested and homologated in accordance with EN60601-1-2:2007 tor EMC. This does not guarantee in any way that the device will not be affected by electromagnetic interference. Avoid using the device in high electromagnetic environment.

The MEDICAL DELECTRICAL EQUIPMENT needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in the ACCOMPANYING DOCUMENTS.

The manufacturer reserves the right to alter the specifications of the product without prior notification .

The manufacturer allows himself the right to modify without any preliminary opinion the technical specifications of the product.