

# Infrared Thermometer MDI261




**USER MANUAL**



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## 1. Product introduction

This infrared thermometer uses infrared technology to measure human body temperature inside the ear cavity or on the forehead. Just aim the product's temperature probe at the measuring site and press the [  ] button. The temperature value is displayed within 1 second. The entire measurement process is simple and fast.

## 2. Usage and scope of application

The infrared thermometer measures and displays the temperature inside the ear cavity or on the forehead of the person through thermal radiation.

## 3. Environmental conditions

Ambient temperature: 10°C ~ 40°C

Relative humidity: ≤85%

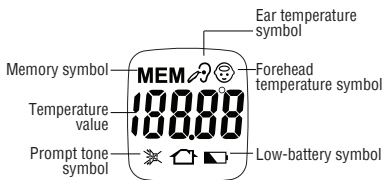
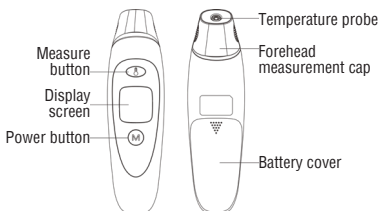
Atmospheric pressure: 70kPa - 106 kPa

## 4. Features

This product allows the user to measure the human body temperature inside the ear cavity or on the forehead with easy and fast operation.

## 5. Product structure

It is composed of housing, circuit board, temperature-measuring component, display screen, power supply, etc.



## 6. Specifications

Product name	Infrared Thermometer
Model	MDI261
Measuring site	Inside ear cavity or on forehead (the user can switch between ear mode and forehead mode by removing or installing the forehead measurement cap)
Temperature unit	°C, °F
Measuring range	32.0-43.0°C (89.6°F~109.4°F)
Resolution	0.1°C/0.1°F
Accuracy	Within 35.0°C~42.0°C, $\pm 0.2^{\circ}\text{C}$ ; beyond 35.0°C~42.0°C, $\pm 0.3^{\circ}\text{C}$
Clinical repeatability	$\pm 0.3^{\circ}\text{C}$
Operating environment	Temperature: 10°C~40°C, Relative humidity: $\leq 85\%$
Storage environment	Temperature: -20°C~55°C, Relative humidity: $\leq 85\%$
Number of records	32 entries
Automatic shutdown	60 $\pm$ 5 seconds without operations
Dimension	162.6 $\pm$ 1.0 * 43 $\pm$ 1.0 * 36 $\pm$ 1.0 mm (Length * Width * Height)
Weight	73g $\pm$ 10g (without battery)
Battery	1.5V AAA, 2pcs
Valid period	5 years
Safety Classification	BF type

## 7. Installation and adjustment

### 1) Battery installation and replacement:

Install or replace the batteries before the first use or when a low-battery prompt is shown on the display screen





How to replace batteries



As shown in the figure above: open the battery cover, and install two 1.5V AAA batteries in the direction indicated by the symbols in the battery cavity, and close the battery cover.



### 2) Function setting:

Setting 1: Switch between °C and °F.

In the power-off state, press and hold the [  ] button for 3 seconds. The LCD will display the [ F - 1 ], and then press the [  ] button to switch between °C or °F. Press the [M] button continuously until the machine is turned off.



Setting 2: Turn on/off the voice

In the power off state, press and hold the [  ] button for 3 seconds. The LCD will display the [ F - 1 ], and then press the [M] button, the LCD will display [ F - 2 ], and then Press the [  ] button to switch between OPEN or CLOSE. Press the [ M ] button continuously until the machine is turned off.



Setting 3: Set the alarm point of the orange backlight.

When the LCD displays [ F - 2 ], Press the [ M ] button to [ F - 3 ], then press the [ 🔔 ] button to set the alarm point [ 37.0 - 39.0 ].



Setting 4: When the LCD displays [ F - 3 ], Press the [ M ] button to [ F - 4 ], then press the [ 🔔 ] button to set the alarm point [ 37.0 - 42.0 ].



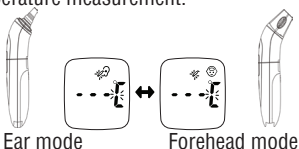
3) Conversion of ear temperature measurement mode and frontal temperature measurement mode:

Remove the forehead cap and the machine enters into the ear mode. Switch on the machine, the LCD screen shows all the ICONS about 2 seconds, then the LCD display about 2 seconds after the last measurement record values, buzzer “beep” sound short, products entering the ear temperature measurement model, the temperature measuring head into the ear canal, volume key measurement, “beep” sound prompt, complete measurement and measurement results show, when temperature is  $< 37.5^{\circ}\text{C}$ ——the backlight is green color, when the temperature is like this  $37.5^{\circ}\text{C} \leq \text{temperature} < 38.0^{\circ}\text{C}$ ——backlight is orange, when the temperature  $< 38.0^{\circ}\text{C}$ ——backlight is red, as the picture below :



Remove or put on the forehead cap, the thermometer can automatically switch

between ear mode or forehead mode for temperature measurement.



4) Query and clear of measurement memory value:

In the state of power off, press the [ ] button, the prompt sound system to display the measurement record values in turn as shown in the figure above.



Under shutdown condition, long-press (6 seconds) the [ ] button to clear memory value. The LCD will display as below.



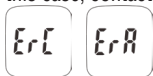
5) Calibration mode (Object mode):

When the machine is off. Press the [ ] button for 6 seconds and the machine enters into object mode. When the LCD dims, short press the [ ] button to measure the object.



6) Self-test procedure:

If the hardware or sensor of this product is damaged, a prompt is shown as below. In this case, contact the manufacturer.



## 8. Operations

### 1) Measuring ear temperature

Remove the forehead measurement cap from the product to enter the ear mode.



Press the [M] button to turn on the product. The LCD is lit for 2 seconds, and then the last measurement value is displayed for 2 seconds. After a “beep” sound, the product is ready to take ear temperature. Insert the temperature probe into the ear canal gently, and press the [ ] button once. A “beep” sound indicates the measurement is completed, with the measurement result displayed on the screen.

If the body temperature is less than 37.5°C, the screen has green backlight; if the body temperature is equal to or greater than 37.5°C but less than 38.0 °C, the screen has orange backlight; if the body temperature is equal to or greater than 38.0°C, the screen has red backlight, as shown in the figure below:



Note:




To take the temperature of infants under one year old, gently pull the auricle backward and downward and hold there to expose the tympanic membrane to the temperature probe.

To take the temperature of children above one year old or the adults, gently pull the auricle backward and upward and hold there to straighten the ear canal, so as to expose the tympanic membrane to the temperature probe.

## 2) Measuring forehead temperature

To switch the product to forehead mode, install the forehead temperature cap to the top of the product.



Press the [ M ] button to turn on the product. The LCD is lit for 2 seconds, and then the last measurement value is displayed for 2 seconds. After a “beep” sound, the product is ready to take forehead temperature. Aim the temperature probe to the target person’s forehead, and press the [  ] button once. A “beep” sound indicates the measurement is completed, with the measurement result displayed on the screen (If you press and hold the [  ] button, after multiple “beep” sounds, the product enters scanning measurement mode. Release the [  ] button to complete the measurement).

If the body temperature is less than 37.5°C, the screen has green backlight; if the body temperature is equal to or greater than 37.5°C but less than 38.0 °C, the screen has orange backlight; if the body temperature is equal to or greater than 38.0°C, the screen has red backlight, as shown in the figure below:









Note: Aim the temperature probe at the center of the forehead to measure the person’s body temperature, keeping a distance of 0.5-1.5 inch.

## 3) Switching off

short press the [ M ] button to turn off the product. If there is no operation in 60s, the product will shut down automatically.

## 9. Troubleshooting

Symptom	Cause	Solution
	The ambient temperature is higher than 40°C or lower than 10°C.	Use the product in an appropriate environment.
	Body temperature is higher than 43.0°C.	1. Use the product according to this user manual. 2. Contact the manufacturer.
	Body temperature is lower than 32.0°C.	1. Use the product according to this user manual. 2. Contact the manufacturer.
	Low batteries.	Replace batteries.
 	Sensor or hardware damage.	Contact the manufacturer.

## 10. Precautions

- 1) Read the User Manual carefully before use. Improper use may cause product performance degradation or incorrect measurement readings.
- 2) Do not use the ear mode when the ear canal is wet or suffering from an ear disease.
- 3) Earwax, local lesions (such as inflammation, trauma, and post-operation scar), and other foreign objects at the measurement site will affect the measurement accuracy.
- 4) The product has been calibrated before shipment. It does not need recalibration if it is used according to the User manual.
- 5) NEVER force the temperature measuring probe into the ear canal.
- 6) This product cannot be used as a substitute of medical diagnosis and treatment, and the medication must be treated by the doctor.
- 7) Do not take a shower or have sports before measurement. The person and the infrared thermometer should stay in the same environment for more than 30 minutes before taking measurement.
- 8) Use the product under the operating environment specified in this manual.
- 9) Do not drop or impact the infrared thermometer to avoid damage.
10. When the product is not in use for a long time (more than 1 month), take out the batteries and put the product in the package box.
- 11) Do not store the product in an environment with direct sunlight, high temperature, high humidity, dust or corrosive gas.










12) Do not use a leaking or moldy battery. Keep the battery away from any fire source to avoid explosion. Do not reverse the positive and negative poles when installing the battery.

13) Dispose of the batteries, infrared thermometer and their packaging material in accordance with local regulations.

14) Do not clean the infrared thermometer with toxic liquids, volatile oil, thinner or gasoline.

15) Statement: The company can provide information such as circuit diagrams, component lists, and calibration rules upon request. We can also provide necessary information for qualified maintenance personnel for repairing of this product, but we recommend that the user return the product to the manufacturer for better service.

16) Graphic description:

No	Icon	Description
1		Note: personal injury and property damage may occur in case of misuse.
2		Read the User Manual before using this product.
3		Dispose of the product properly in accordance with local regulations.
4		Type BF device with internal power supply.
5		Fragile item. Handle carefully.
6		Keep dry.
7		Temperature limits for storage and transportation.
8		Use no hooks.
9		Keep away from direct sunlight.

## 11. Maintenance

- 1) Always keep the surface of the product clean and tidy, which helps to extend its service life.
- 2) Take out the batteries when the product is not in use for a long time. Put the product in the package, and store it in a dry environment (about 25°C).
- 3) If the product gets dirty, wipe it clean with a dry soft cloth. If the dirt still remains, damp the cloth with water or neutral detergent and wipe the product clean.
- 4) The temperature probe should be kept clean, without taints or scratching. If there is any foreign matter stuck to it, clean it up with a cotton swab.
- 5) For disinfection, use 75% medical alcohol to wipe the surface of the product.

## 12. Transportation and storage

Transportation and storage environment:

Temperature: -20°C~55°C

Relative humidity: ≤85%

Precautions for transportation and storage:

Handle with care. Do not drop or impact the product. Keep the product away from insects and rats.

## 13. Unpacking and inspection

Unpacking the product: open the box along the tuck flap of the carton box. Keep the box for future use.

Inspection after unpacking: this product is shipped with User Manual (including a warranty card) and Certificate of Conformity. Check whether any item is missing.

Note: dispose of the packaging materials according to local regulations.

## 14. EMC

### Electromagnetic compatibility



#### Note:

- The product meets the requirements on electromagnetic compatibility in standard YY0505;
- The user should install and use the product according to the electromagnetic compatibility information provided in the accompanying documents;
- Portable and mobile RF communication equipment may affect the performance of infrared thermometers. When using the product, keep away from strong interference sources, such as mobile phones, microwave ovens, etc.;
- See the appendix for the guidelines and manufacturer's declaration.



#### Warning:

- The product should not be used close to or stacked with other equipment; if it must be used in such setting, observe and make sure it operates normally first;
- Class A equipment is intended to be used in industrial environment. Due to the radiation disturbance, there may be potential difficulties in ensuring electromagnetic compatibility in other environments;
- Except for the cables that come as spare parts of this product, other accessories and cables may cause an increase in the infrared emission or a decrease in electromagnetic immunity.

## Appendix:

Guidance and manufacturer's declaration – electromagnetic emission		
This product is intended for use in the electromagnetic environment specified below. The customer or the user of the product should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The product uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The product is suitable for use in all non-domestic establishments and those not directly connected to the public low-voltage power supply network.
Harmonic emissions IEC 61000-3-2	N/A	
Voltage fluctuations /flicker emissions IEC 61000-3-3	N/A	

Guidance and manufacturer's declaration –electromagnetic immunity


This product is intended for use in the electromagnetic environment specified below. The customer or the user of the product should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±6 kV contact ±8 kV air	±6 kV contact ±8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/burst IEC 61000-4-4	±2kV for power supply lines ±1kV for input/output lines	N/A	N/A
Surge IEC 61000-4-5	±1 kV differential mode ±2 kV common mode	N/A	N/A
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5% UT (>95% dip in UT) for 0.5 cycle 40% UT (60% dip in UT) for 5 cycles 70% UT (30% dip in UT) for 25 cycles <5% UT (>95% dip in UT) for 5 Sec	N/A	N/A
Power frequency (50/60Hz) magnetic field IEC 61000-4-8	3A/m	3A/m, 50/60Hz	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

Note: UT is the a.c. mains voltage prior to application of the test level.

Guidance and manufacturer's declaration –electromagnetic immunity

This product is intended for use in the electromagnetic environment specified below. The customer or the user of the product should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
<p>Conducted RF IEC 61000-4-6</p> <p>Radiated RF IEC 61000-4-3</p>	<p>3 V 150 kHz~ 80 MHz</p> <p>3 V/m 80 MHz~ 2.5 GHz</p>	<p>N/A</p> <p>3 V/m</p>	<p>Portable and mobile RF communications equipment should be used no closer to any part of this equipment, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance:</p> <p><math>d = 1.2\sqrt{P}</math>  <math>d = 1.2\sqrt{P}</math> 80 MHz~800 MHz  <math>d = 2.3\sqrt{P}</math> 800 MHz~2.5 GHz</p> <p>Where P is the maximum output power rating of the transmitter in watts(W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m).                      Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey should be less than the compliance level in each frequency range.                      Interference may occur in the vicinity of equipment marked with the following symbol.</p> 

Note1: At 80 MHz and 800 MHz, the higher frequency range applies.  
 Note2: These guidelines may not apply in all situations.  
 Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

A Field strengths from fixed transmitters, such as base stations for radio(cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the product is used exceeds the applicable RF compliance level above, the product should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the product.

B Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Separation distance between this product and portable/mobile RF communication equipment

This product is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the product can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communication equipment (transmitters) and the product as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter(W)	Separation distance according to frequency of transmitter (m)		
	150 kHz ~ 80 MHz $d = 1.2\sqrt{P}$	80 MHz ~ 800 MHz $d = 1.2\sqrt{P}$	800 MHz ~ 2.5 GHz $d = 2.3\sqrt{P}$
0.01	Not Applicable	0.12	0.23
0.1	Not Applicable	0.38	0.73
1	Not Applicable	1.2	2.3
10	Not Applicable	3.8	7.3
100	Not Applicable	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance  $d$  in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where  $P$  is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.  
 NOTE 1: At 80MHz and 800MHz, the separation distance for the higher frequency range applies.  
 NOTE 2: These guidelines may not apply in all situations.  
 Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

## 15. Hazardous substances and their content in the product

Hazardous substance Part	Pb	Hg	Cd	Cr(VI)	PBB	PBDE
Housing	0	0	0	0	0	0
Probe	0	0	0	0	0	0
Panel	0	0	0	0	0	0
LCD	0	0	0	0	0	0
PCB	X	0	0	0	0	0
Sensor	0	0	0	0	0	0

This form is made in accordance with SJ/T 11364.

0 Indicates that the said hazardous substance contained in all of the homogenous materials for this part is below the limit requirement of SJ/T 11364.

X Indicates that the said hazardous substance contained in at least one of the homogenous materials used for this part is above the limit requirement of SJ/T 11364. (Note: some hazardous substances or elements contained in this product cannot be replaced with substitutes under current technical conditions. The part containing hazardous substance in one homogenous material above the limit specified in SJ/T 11364 meet the conditions for exemption in RoHS directive 2002/95/EC.)

The date of production is printed on the outer package.



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Made in China

Dec.2022.VER.1.0

**UK  
CA**

**CE** 0123





尺寸：60\*145±1mm

材质：80g 书写纸，封面铜  
版纸，封底空白页

黑白印刷

20230309

V1.0