



MANUAL

Infrared Thermometer
MODEL: ET-900

Please read the manual before use

Edition : V1. 0



1.Product introduction and classification

The product measures body temperature by adopting the infrared thermal radiation from human forehead. Its operation is simple and sanitary, fast and accurate measurement. User only need to use probe alignment forehead and press the measuring key. A second will be able to quickly and accurately measure the body temperature. Widely used in schools, hospitals, families, customs.

The thermometer can also be used to measure 0 °C - 100 °C temperature of the object, but also widely used in agriculture, industry, food, petrochemical and other industries.

This product is part of an internal power supply equipment, B-type applications department Points, protection class common equipment (IPX0). Not in a flammable anesthetic gases and air, Mixed gas of oxygen or nitrous oxide used for the continuous operation of the equipment. Europe League classified as IIa classes.

2. The basic operating principle

Any object will release the energy of infrared radiation, the surface temperature of the radiant energy directly determines the size and wavelength. Based on this principle, this product is designed to detect people Body release energy wavelengths of infrared radiation 5-14um German high-precision infrared sensors, And through the exact calculation and various compensation correction, accurate measurement of the body temperature.

3. Product Features

- Germany high precision infrared sensor, stable and reliable performance.



- Strong adaptability to ambient temperature, can still be used normally in a complex environment.
- The new proprietary probe structure to ensure more accurate measurements.
- Body temperature and body temperature of two measurement modes, mode switching a key operation, convenient and practical.
- Fever alarm, alarm point can be set fever.
- Automatically saves the last measurement value.
- Large-size LCD screen, high brightness white back light, display clear and soft.
- Celsius and Fahrenheit unit selectable two temperatures.
- Automatic power saving.

4. Technical Parameters

Measuring Range	Body mode:32°C~42.5°C(89.6°F~108.5°F) Surface mode:0°C~100°C(32°F~212°F)
Accuracy	0-31.9°C: ±2.0°C&2%°C / 32-89.4°F: ±3.6°F&2%°F 32-35°C: ±0.3°C / 89.6-95°F: ±0.5°F 35.1-39°C: ±0.2°C / 95.2-102.2°F: ±0.4°F 39.1-42.9°C: ±0.3°C / 102.4-109.2°F: ±0.5°F 43-100°C: ±2.0°C&2% / 109.4-212°F: ±3.6°F &2%°F
Resolution	±0.1°C(32.18°F)
Measuring Time	0.5S
Measuring Distance	5-15cm
Memories	32
Power	DC 3V (2×AAA batteries)
Auto Shut-off	15 Seconds
Dimension	150 X 95 X 44 mm (L x W x H)
Weight	125g(without battery)
Operating Condition Storage Condition	10°C~40°C(50°F~104°F), Relative Humidity≤85% 0°C~50°C(32°F~122°F), Relative Humidity≤85%

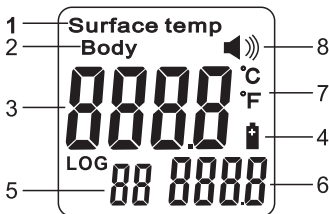
5. Overall construction

- 1-Infrared probe
- 2-LCD screen
- 3-down keys
- 4-up button
- 5-Set button
- 6-measurement switch
- 7-battery compartment cover



6.Display icon definitions

Icon Definition	Icon	Status Description	
Measurement mode	1	Object temperature measurement mode	
	2	Body temperature measurement mode	
Displayed value	3	Measured temperature value	
Low battery symbol	4	show	Low battery status
		not show	Fully charged
Storage location	5	Memory location number of groups	
Storing the data read	6	Show numerical values for the memories	
Temperature unit	7	Celsius	
		Fahrenheit	
Beep symbols	8	show	Buzzer open, a tone
		not show	Buzzer close, no tone



7.Set operation

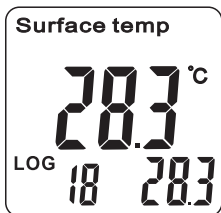
This product provides temperature units, tone switch, temperature alarm, temperature excursion and measurement model and so on five feature set. The measurement mode sets by the set button. Other settings is in the settings menu.

The settings menu control table as follows:

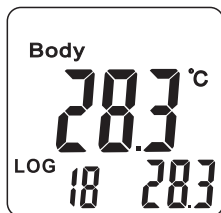
Menu	Function	"-" key	"+" key	Initial value	Remarks
F 1	temperature unit	°C	°F	°C	
F 2	temperature alarm	reduce 0.1°C	add 0.1°C	38°C	range 37°C~42°C
F 3	temperature excursion	down 0.1°C	up 0.1°C	0.8°C	range 0°C~3°C
F 4	tone switch	off	on	on	

Measuring mode setting:

The starting condition, the screen will display the current measuring mode (Figure 7.1), short press set button, select the required measurement mode (Figure 7.2). Settings take effect immediately.



(Figure 7.1)



(Figure 7.2)

Temperature unit setting—F 1

Press the "Set" button for 2 seconds, the screen shows F1 (Figure 7.3), repeatedly press "+"Keys, select (°C) or (°F) temperature units (Figure 7.4) (Figure 7.5).



(Figure7. 3)



(Figure7. 4)



(Figure7. 5)

Temperature alarm setting—F2

Press the "Set" button for 2 seconds, the screen display F1, press the "Set" button 1 times to enter the F2, and then press the "+" button to increase the temperature of 0.1 °C (0.1 °F), reduced according to the "-" keyThe temperature of 0.1 °C (0.1 °F).

Note: the alarm the default value is 38 °C (100.4 °F).

Temperature excursion setting—F3

Press the "Set" button for 2 seconds, the screen display F1, press the "Set" button 2 times to enter the F3, and then press the "+" button to increase the value of 0.1 °C (0.1 °F), according to the "-" key to reduce the difference A value of 0.1 °C (0.1 °F). As the season or climate change, need to check the thermometer And debugging. Note: the alarm the default value is 38 °C (100.4 °F).

Tone switch setting—F4

Press the "Set" button for 2 seconds, the screen display F1, press the "Set" button 3 times to enter the F4, According to the "+" button to open the beep sound (the symbol  appears on the screen) or close the beep sound (the symbol  appears on the screen).



Enter the settings menu operation, such as the need to modify a setting, continuous selection press the menu button.

According to the order after the completion of installation to save the new settings, midway shutdown exit, the new settings will not be saved.

Enter the settings menu, according to the measurement of key is invalid, the thermometer would not be measured.

Note:

1. The body temperature measurement mode uses measuring body temperature, its gets from dynamic compensation of the ambient temperature and forehead.

2. The object temperature measurement mode is use of measuring the forehead surface or the object surface temperature. It does not mean body temperature.

3. according to the factors of environmental temperature, measuring the distance, the individual difference of skin temperature offset value, through target measurement value and the difference between true value, the measurement value can be corrected, modified range is $0-3.0\text{ }^{\circ}\text{C}$, factory set at $0.8\text{ }^{\circ}\text{C}$.

For example, if measured by the thermometer temperature is $36.2\text{ }^{\circ}\text{C}$, the actual temperature of the measured target is $37\text{ }^{\circ}\text{C}$, then enter the F3, the bias adjusted upward of $0.8\text{ }^{\circ}\text{C}$ to $1.6\text{ }^{\circ}\text{C}$ after setup is complete, can be measured with the same actual temperature.

8.measuring method

8. 1 Temperature measuring

A confirmation screen above the measurement mode is the body temperature measurement mode (Body).

The thermometer probe is aligned with the middle of the forehead and maintain the vertical, a distance of about 5-15 cm (Figure 8.1). Press the measure key, about 1 seconds after the "beep" sound, display measured values (Figure 8.2), Measure is



complete. If the measured values over temperature alarm point (default is 38 °C), emit "di. Di Di" five sound alarm tone.



(Figure8. 1)



(Figure8. 2)



(Figure8. 3)

The change of environmental temperature influence to the forehead temperature, please measure the alignment (Figure 8.3).

Prompt

1. Before and after use, please keep the sensor and probe of cavity clean.
2. Please put the thermometer placed in a stable temperature environment. When the environment temperature changes greatly (such as from indoor to outdoor), please place after about ten minutes measuring.
3. Do not in the measurement of extreme hot or cold temperature of the object, measured immediately Body temperature, please place after about ten minutes measuring.
4. When the measured object from the local measurement environment temperature difference is larger, should be at least in the test environment for five minutes or more.
5. Don't try to measure in the forehead hair, water, sweating, applying cosmetics case. In the exercise, take a bath, after the meal 30 minutes not to measure body temperature.

8. 2 measuring object temperation

A confirmation screen above the measurement mode is the object temperature measurement mode (Surface temp).

The thermometer probe alignment measurement target and maintain the vertical, a distance of about 5-15 cm. Press the measure key, about 1 second, about a second after the "beep" sound, display temperature, measurement is completed (Figure 8.4).



(Figure 8. 4)

Prompt:

1. This function is the measurement of the surface temperature, does not represent the core temperature of the object.

2. Different emissivity of the material may not be the same, please refer to the material emissivity, the default emission rate of 0.95. emission rate is different, the measured temperature and the actual temperature deviation. For example, the stainless steel material, the measured temperature will be much lower than the actual temperature, please avoid scald.

3. When the LCD display is HI, This shows that over the range of measurement, Or the body temperature measurement mode to measure the temperature over 42.5 °C (108°F), Or the surface temperature over 60°C(108°F)(Figure 8.5).

4. When the LCD display s LO, This show has been lower than the measurement range, Or the body temperature measurement mode to measure the temperature lower than 32 °C (90 °F) or the surface temperature over 0 °C (32 °F) (Figure 8.6).



(Figure8. 5)



(Figure8. 6)

9. Replace the battery

When the LCD display , the battery is in low power state.
Operation:

Open the battery cover, battery replacement.

Do not use a long time remove the batteries to extend the service life, prevent the battery leakage caused damage to the product.

Please note that the polarity of battery, place the mistake may cause damage to the product.

Prohibit the use of rechargeable batteries, can only use a single purpose battery.

10.Maintenance and matters needing attention

Please keep the sensor and probe of cavity clean, otherwise it will affect the measurement accuracy.

Cleaning method:

1. Surface cleaning: wipe the dirt with a clean soft cloth or cotton stick stick a little alcohol or water.
2. The sensor and probe the cavity clean: use a clean soft cloth or cotton swab dipped a little alcohol wipe gently probe of cavity or the top of sensor. Be used to completely volatilized alcohol.

Before use, please read this instruction manual, please make sure the battery has been installed.

Prohibit the product in any liquid, no long time in high or low temperature environment.

No collision, falling and sharp objects mix, forbidden to disassemble.

Please do not use in strong electromagnetic interference environment.

The thermometer is placed in the position of the child not to touch.

Recommended practice to get familiar with the measurement methods, try not to change the product factory settings.

The measurement results can not replace the physician diagnosis.

No special maintenance required the use of the process, fault please contact the vendor or manufacturer.



11. Debugging

Fault description	Disposal method
LCD display “LO” or “HI”	1. Check the measurement object. Unable to ensure the measurement of the forehead hair, water, sweating, applying cosmetics case. 2. Check the temperature offset value is set, the factory is set to 0.8. 3. Check the operating environment. Environmental change has great effect on the measurement. If the environment temperature change is too large, or just measuring instrument of ultra high temperature object directly to the measurement of low temperature object, measure the differences occur, should be in a relatively stable environment, place about 10 minutes after getting a heat balance testing new after use. 4. Check the distance measurement (3-5cm).
The key has no response	1. Reinstall the battery. 2. Check whether the operation in the settings menu.
No tone	1. Reinstall the battery.
No show or display abnormal	1. Check the tone set off.
Shut down after the boot	1. Check the battery, reinstall the battery.

12. Quality Promises and after-sale service

This product provides one year free repair service.

Note: the user individual causes any damage caused by fault or unauthorized disassembly will not provide free repair service.



For aftersales service:

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