Infrared Thermometer
Model :F103

Instructions

Please read this manual thoroughly before use.

Table of contents

1.Introduction & Classification

This is a non-contact infrared thermometer applicable to body & object measurement. The thermometer measures body temperature by collecting heat radiation emitting by forehead. It's simply operational, hygeian, reliable and highly accurate. Users can get precise reading within one second by one touch. This thermometer is widely used in schools, customs, hospitals and for domestic. This thermometer is also capable of measuring object temperature ranging from 0℃~50℃. It applies to the field of agriculture, industry, food, petrochemical industry, etc. This thermometer is a internally- powered equipment. Water proof rating is: IPX0. It's prohibited to use this thermometer in flammable anesthetic gas or gas mixture of air and oxygen or nitrous oxide.

2.Working principle

Any object can generate certain proportion of infrared radiant energy as per its own temperature. The radiant energy and its wavelength distribution are subjected to its surface temperature. Based on this principle, this thermometer is designed to detect 9 infrared radiation at 5~14um by high precise infrared sensor . By adopting this high quality sensor plus special 9 calculation and calibration, this thermometer is able to take accurate body temperature.

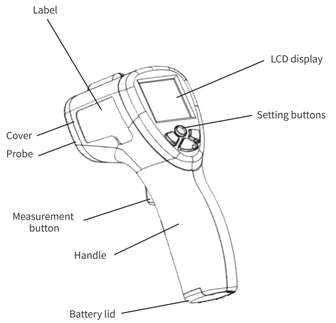
3.Features

- Adopts reliable sensor ;
- All-new & patented probe design ensures high accuracy ;
- Excellent adaption to ambient temperature. Accurate and reliable ;
- even under complicated surrounding ;
- Body mode and object mode available. One switch to change mode ;
- Beeper for high temperature (alarm value can be defined by user) ;
- Automatic recall of last reading ;
- Large LCD with backlight ;
- ℃/℉ reading available ;
- Automatic power off ;

4.Technical parameters

Measurement method	Non-contact	
Effective distance	1~5cm	
Range	Body	32.0℃~42.9℃ (89.6℉~109.2℉)
	Object	0℃~50℃ (32℉~122℉)
Accuracy	Body	±0.2℃/0.4℉
	Object	±1℃/1.8℉
Resolution	0.1℃/℉	
Working condition	10℃~40℃(50℉~104℉)RH≤85% Non-condensing	
Storage condition	-20℃~55℃(-4℉~131℉)RH≤93% Non-condensing	
Power supply	DC3V AAA alkaline battery	
Power consumption	Power off≤10uW	
	Measurement≤30mW	
Power level indicator	Indication for low power level	
Memory	32 groups	
Display	LCD back-light display	
Reading scale	Celsius or Fahrenheit	
Automatic shut off	In 15 seconds	
Dimensions	155x93x51mm	
Net weight	100g	
Standards	FCC 15.107、FCC 15.109、EN60601-1-2:2015、EN61010-1:2010、2011/65/EU and(EU)2015/863	

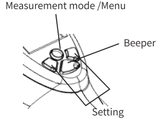
5.Illustration



6.Display & icons

Function definition	Icon	Details	
Battery level		When it is visible	The battery is in low lever, but the thermometer is functional properly. Please replace battery A.S.A.P
		When it Flashes	The battery is exhausted and thermometer can not function properly Please replace battery immediately
		When it is invisible	Battery power is sufficient
Beeper		When it is visible	Beeper is on
		When it is invisible	Beeper is off
Measurement mode	Body temp	Body mode	
	Body temp Don't display	Object mode	
Reading scale	℃	Celsius reading	
	℉	Fahrenheit reading	
Reading display	88.8	Temperature value	
Memory	LOG 88.8	Temperature value of last measurement	

7.Funtion definition of buttons



Buttons	Description
Body/object	To switch measurement mode between human body and object
Menu	Activates menu and save setting
◀	Increases parameter or select relevant parameter when setting parameter
▶	Reduces parameter or select relevant parameter when setting parameter
Beeper	Beeper on/off

8.Setting

User can change reading scale between Celsius or Fahrenheit, switch on or switch off beeper, set alarm value, set deviation value and change measurement mode between human body or object. Please refer to below chart.

Menu	Function	◀	▶	Default	Remarks
F-1	Deviation value setting	Decrease 0.1℃	Increase 0.1℃	0℃	Effective range: ±2℃
F-2	Alarm value setting	Decrease 0.1℃	Increase 0.1℃	38℃	Alarm setting range 35℃-41℃
F-3	Reading scale	℃	℉	℃	
SAVE	Save and automatic power off				

Deviation value setting: F-1
Activates setting menu by pressing " ☼ " button. F-1 will be displayed.
Defaulted deviation value is 0.0℃. When defaulted deviation value is twinkling.
Press "◀" or "▶"to increase or decrease deviation value . Deviation value will be increased or decreased by 0.1℃" step by step .

Alarm value setting: F-2
Press ☼ again to save the setup and F-2 will be displayed.
Defaulted value "38.0℃" will be displayed . Press "◀" or "▶" to increase or decrease alarm value .Value will be increased or decreased by 0.1℃ step by step.

Reading scale setting: F-3
Press " ☼ " again to save the setup and F–3 will be displayed.
Press "◀" or "▶" to select Fahrenheit 'F as temp unit (icon "F' is twinkling), or press "◀" or "▶" to select centigrade 'C as temp unit (icon "C' is twinkling).

9.Measurements

9.1 Body temperature

- Press measurement button to turn on thermometer and it displays boot screen .
- After POST and one beeps, it will display value of last reading and be ready for measurement.
- Make sure the thermometer is under body mode.
- Keep distance at 1cm to 5cm from upper eyebrows to the probe . Press measurement button and when it gives a "beep measurement is finished and value will be displayed.
- If measurement value is exceeding alarm value(Defaulted value is 37.5℃), it gives " beep. beep. beep. beep." as a indication.
- After measurement, if the thermometer is idle in 15 seconds, it will power off automatically.

Notice:
1.Keep the sensor and probe cavity clean before and after use.
2.To ensure the accuracy of measurement, it is recommended to start measurement after ten minutes when carrying the thermometer to a new environment.

3.Wait for 10 minutes to measure body temperature after measuring extremely high temperature or extremely low temperature objects.
4.Wait for 5 minutes to start a measurement when a measuring target (object or human) is from an environment with enormous.
5.Breeze, water, sweating, cosmetic on forehead may affect difference in temperature measurement. Do not measure body temperature in 30 minutes after exercise, bath or meals.

9.2 Object temperature

- Press measurement button to turn on thermometer.
- Make sure the thermometer is under object mode.
- Keep vertical distance at 5cm to 8cm from object to measurement probe. Press measurement button and when it gives a "beep" measurement is finished and value will be displayed.
- After measurement, if the thermometer is idle in 15 seconds.it will power off automatically.

Notice:
1.The value under this mode is object surface temperature instead of core temperature.
2.The defaulted infrared emissivity is 0.95. The reading will be deviated from the real temperature according to different emissivity. For example, the reading on stainless steel will be obviously lower than real temperature. BE CAUTIOUS FOR SCALDING.

9.3 Exceeding measurement range

Body mode:
- When measurement value is lower than 34.0℃, it displays Lo and gives "beep. beep. beep. beep".
- When measurement value is higher than 42.9℃, it displays Hi and gives "beep. beep. beep. beep".

Object mode:
- When measurement value is lower than 0℃, it displays Lo and gives "beep. beep. beep. beep".
- When measurement value is higher than 50.0 ℃, it displays Hi and gives "beep. beep. beep. beep".

Notice:
When surrounding temperature is lower than 10.0℃ or higher than 40.0 ℃, it displays Err .It's not allowed to measure or accuracy is not assured.

10.Battery replacement

- Open the battery lid and take out exhausted battery.
- Put into AAA alkaline batteries and close up battery lid. After new battery is installed, thermometer will give "Beep.Beep' If there's no beeps, check if the positive and negative pole is correct

Notice:
1.Take out battery in case the thermometer is not used for long period. Don't put the battery to fire.
2.Dispose battery according to local regulations.

11.Maintenance & tips

Make sure the sensor and probe cavity is clean otherwise it will affect accuracy. Cleaning method for probe:
1.Use the cotton stick or soft cloth with water or alcohol to wipe
2.Use the cotton stick or soft cloth with alcohol to wipe the sensor the casing.

surface or probe cavity gently. Don't use thermometer before
- Read this manual thoroughly before use. Make sure battery is well installed.
- It is not allowed to put the thermometer in any liquid or expose to strong sunlight or extremely low temperature
- Strong crash or hit to the product will cause its damage
- Do not dismantle this thermometer by yourself.
- Keep the thermometer from children's reach.
- Do not use the thermometer under circumstance of strong electromagnetic interfere.
- The measurement results are probably fluctuating due to improper measurement ways. Please practice adequate measurements in order to improve your skill.
- The measurement results can not supersede a doctor's diagnosis.
- Special maintenance is unnecessary for this thermometer. Please contact distributor or manufacturer in case of malfunction.

12.Measurements

Description	Solutions
LCD display "LO" or "HI"	1.Breeze, water, sweating, cosmetic on forehead may affect measurement. 2.Check deviation value setting. Defaulted value is 0.0℃ 3.While if the testing environmental temp changes directly from high -temp object to very low—temp so enormously or if the thermometer is used temp one, the measurement difference will happen.The thermometer should be kept in a relative stable environment for 10 minutes to get heat balance before starting a new measurement. 4.Ensure body measurement distance is 1cm to5cm.
No response when pressing measurement button	1.Take out and reassemble battery. 2.Check if the thermometer is under menu setup. In procedure of menu setting, thermometer is unable to measure and therefore no response.
No display or improper display	Take out battery and install batteries again.
No beeper	Check if the beeper is switched off.
Shut off right after switching	Check battery level or take out and install the battery again.

13.Quality commitment & after-sale service

One year guarantee is available since purchasing.
Any damage caused by illegal use or product disassemble will not be covered by guarantee.