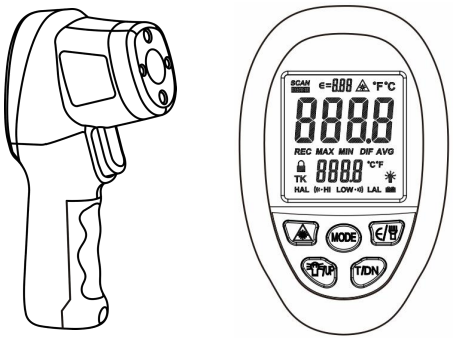
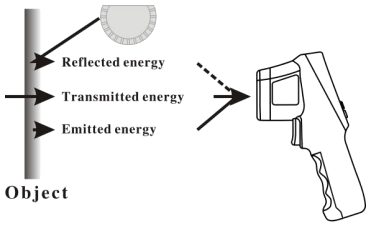
Non-contact infrared thermometer
With APP function
User manual



1、Introduction

Compact, rugged and easy to use. Just aim and push the button, read current surface temperatures in less than a second. Safely measure surface temperatures of hot, hazardous or hard-to-reach objects without contact.



How it works

Infrared thermometer measures the surface temperature of an object. The unit's optics sense emitted, reflected, and transmitted energy which is collect and focused onto a detector. The unit's electronics transmitted energy which is display on the unit. For increased ease and accuracy the laser pointer makes aiming even more precise.

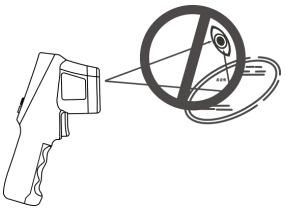
Cautions

Infrared thermometer should be protected for the following:

--EMF(electro-magnetic fields) from arc welders, induction heaters.

--Thermal shock(cause by large or abrupt ambient temperature changes allow 1 hours for unit to stabilize before use).

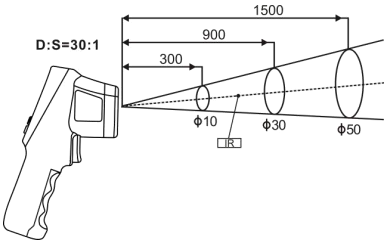
--Do not leave the unit on or near objects of high temperature.



Warning

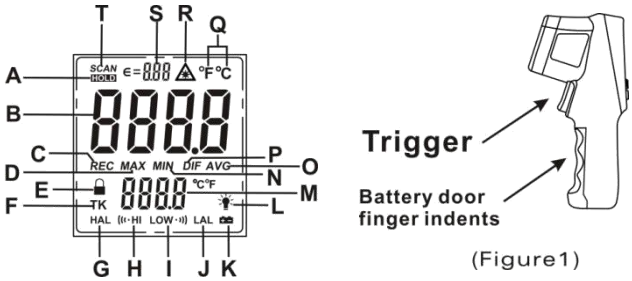
Do not point laser at eye or indirectly off reflective surfaces.

1. When take measurement, point thermometer toward the object to be measured and hold the yellow trigger. The object under test should be large than the spot size calculated by the field of view diagram.
2. Distance & spot size: As the distance from the object increase, the spot size of measuring area becomes large.



3. Field of view: Make sure the target is larger than the unit's spot size. The smaller the target the close measure distance. When accuracy is critical, make sure the target is at least twice as large as the spot size.
4. Emissivity: Most organic materials and painted or oxidized surfaces have an emissivity of 0.95. Inaccurate readings will result from measuring shiny or polished metal surfaces. To compensate, cover the surface to be measured with masking tape or flat black paint. Measure the tape or painted surface when the tape or painted reach the same temperature as the material underneath.
5. When changing from low temperature environment to high temperature environment or from high temperature environment to low temperature environment, please wait for 30 minutes, and then measure after the temperature of the machine is balanced with the ambient temperature.

2、Quick start instruction



(Figure1)

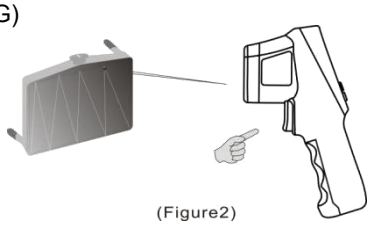
1. Remove the silica gel set, remove the battery cover screw with a screwdriver, and then slide out the battery door, install battery correctly. And Put back to the battery door screws and silica gel .Pull the trigger, LCD display reading & battery icon. Release the trigger and the reading will hold for 10 seconds.The content displayed on the screen will all light up, and after hearing the beep, the startup procedure has been completed.

LCD display:

Display area:36.4×34.6(mm)，character 13.3mm high.

A Data Hold
B Main dislplay value
C Memory storage
D Maximum
E Continuous measurement
F K type temperature symbol (this unit Without this feature)
G High temperature alarm temperature
H Alarm of high temperature prompt
I Alarm of Low temperature prompt
J Low temperature alarm temperature
K Battery voltage Low
L Backlight symbol
M Additional features
N Minimum
O Average
P The maximum and the minimum difference
Q Temperature of the unit
R Laser pointer turn on prompt
S Emissivity symbol(According to the different test objectives, adjust the transmission frequency, there is a detailed parameter table below)
T Measuring the symbol

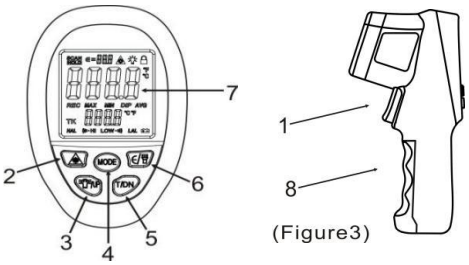
Note: When [HOLD] is displayed, it means that data hold has been turned on, and the displayed value depends on the display mode you choose (MAX/MIN/The maximum and the minimum difference/AVG)



(Figure2)

2. Locating a hot spot aim the thermometer outside the area of interest, then scan across with up and down motions until you locate the hot spot.(please turn on the laser to for accurate measuring)

3. Diagram description



(1) Trigger ： Press for turn on, and then display test result and hold data automatically(display HOLD) after unclamping switch. Trun off automatically after 10 seconds without operate.

(2) Laser pointer button ： use this button to toggle back and forth between the laser being visible and not visible . lasers are visible when the "" display on the LCD,

(3) Back light/UP button ： When product working, press it for turn on back light, press again for turn off. the second functian please see (4)

(4) MODE button：Press MODE button for cycle options MAX – MIN-DIF- AVG - HAL– LAL mode.

A、MAX：Measure maximum data current；

B、MIN：Measure minimum data current；

C、AVG：Calculate the average of all measure data；

D、DIF：The maximum and the minimum difference

E、HAL/LAL：HAL is Alarm of high temperature. LAL is Alarm of low temperature. Option Alarm of temperature mode, press"Back light/UP"button for up alarm temperature. press"T/DN"button for down alarm temperature. When LCD display " HI" means measure result exceeded the alarm temperature；When LCD display " LOW " means measure result under the alarm temperature

(5) T/DN button：When product working, press direct for ℃ / ^{0}F select. second function please see (4).

If for some reason the toggle button does not work, the product is probably NOT in the correct mode. If that is the case, with the meter on, press the "Mode" button and look at the display change. The T/DN button will not work if the meter is in "REC" mode, for "record." Put the meter into a different mode, such as "AVG" and then push the T/DN button and you should see the℉ change to a ℃ and back and forth. The same for the "Light/UP" button, Press "Mode" to put the meter into a different mode, such as "AVG" and then push the "Light/UP" button and you should get the backlight.

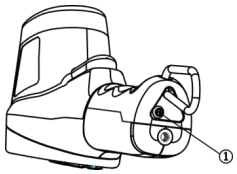
(6) E/ button：When product working, press direct into set Emissivity mode, press"Back light/UP"button for up Emissivity . press"T/DN"button for down Emissivity. Long press the button, the head lamp lighted.

(7) LCD

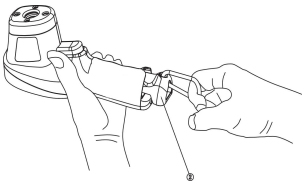
(8) Battery door: When replace battery ,take off the scrrew ,then slide open the battery door.

The diagram below operation：

1. Use the screwdriver to unscrew the bottom screw；



2. Catch the hook and take the cover of battery out from the bottom;



3、Maintenance

1) Lens cleaning: Blow off lose particles using clean compressed air. Gently brush remaining debris away with a moist cotton cloth.
2) Case cleaning: Clean the case with a damp sponge/cloth and mild soap.
3) Please take out the battery when not using for a long time.

Note:

1) Do not use solvent to clean lens.
2) Do not submerge the unit in water.
3) Emissivity will back to the initial value (0.95) after replacing battery,. Should adjust again when use.
4) During the test, if you find that the reading has not changed, please check whether "REC" is displayed on the screen. If so, the product at the recorded reading model .please turn it off and then it will display the measurement readings normally.

4、specifications

Temperature range	-50℃ to 1500℃(-58 to 2732^{0}F)
Accuracy	±4℃/7.2^{0}F, -50℃ to 0℃(-58 to 32^{0}F) ±(2% reading +2℃/3.6^{0}F), 0℃ above
distance spot ratio	30:1
Emissivity	0.1～1.0 adjustable
Resolution	0.1℃(0.1^{0}F)<1000, 1℃(1^{0}F)>1000
Repeatability	1% of reading or 1℃
Response time	<250msec, 95%response
Spectral response	8-14um
Operating temperature	0℃ to ~40℃(32 to 104^{0}F)
Storage temperature	-20~60℃(-4~140^{0}F) without battery
Relative humidity	Operating :10-95%RH; Storage: 10-95%RH
Ambient temp range of guarantee for accuracy	23℃~28℃
Weight/dimensions	160g; 192×95×63mm
Power	9V battery, 6F22 or NEDA 1604
Battery life	Laser models:12hrs

Attached list ：Applicable Emissivity for Different Material (For reference only)

Material	Emissivity	Material	Emissivity
Asphaltum	0.90 to 0.98	Textile（Black）	0.98
Beton	0.94	Human Skin	0.98
Cement	0.96	Soap bubble	0.75 to 0.80
Sand	0.90	Charcoal（powder）	0.96
Soil	0.92 to 0.96	Lacquer	0.80-0.95
Water	0.92 to 0.96	Lacquer （reluster）	0.97
Ice	0.96 to 0.98	Rubber（Black）	0.94
Snow	0.83	Plastic	0.85-0.95
Glass	0.90 to 0.95	Timber	0.90
Ceramic	0.90 to 0.94	Paper	0.70-0.94
Marble	0.94	Chromic oxide	0.81
Gypsum	0.80 to 0.90	Copper Oxide	0.78
Compo	0.89 to 0.91	Iron Oxide	0.78 to 0.82
Brick	0.93 to 0.96	Stainless steel	0.2-0.3

Above picture and content just for your reference. Please be subject to the actual products if anything different or updated. Please pardon for not informing in advance.

CONTACT US

For any problem or concern, welcome to email us for prompt response.

AFTERSALES1010@HOTMAIL.COM

P.S.

To make sure you can receive immediate solution and your requests processed quickly, please email us with these information:

1. Order Number
2. Platform of Your Purchase
3. Full Model Number
4. Description of the Problem(Attaching videos or photos can help us troubleshoot the problems even faster)

Intelligent Meter
Operation manual

Summary

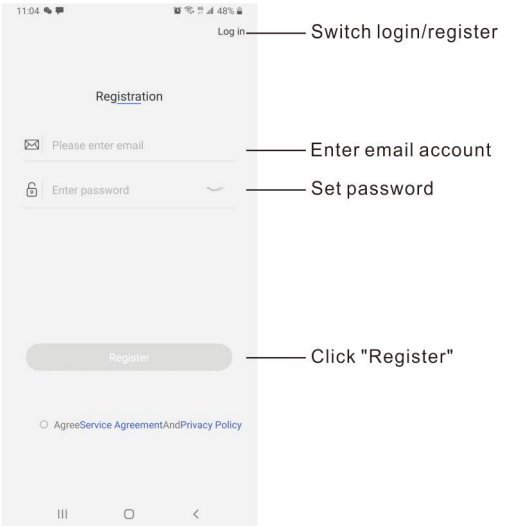
Intelligent Meter is a comprehensive intelligent hardware management platform. Through Intelligent Meter App, you can complete the convenient between mobile phones and intelligent hardware,achieve the interconnection and intercommunication between devices and users. Intelligent Meter supports multiple types of devices, Such as intelligent instrument, electrical instrument, anemometer and infrared thermometer.

APP download and installation

Scan the below QR code to download directly, or search for "Intelligent Meter" in the APP Store, Google Play download and install the "Intelligent Meter".

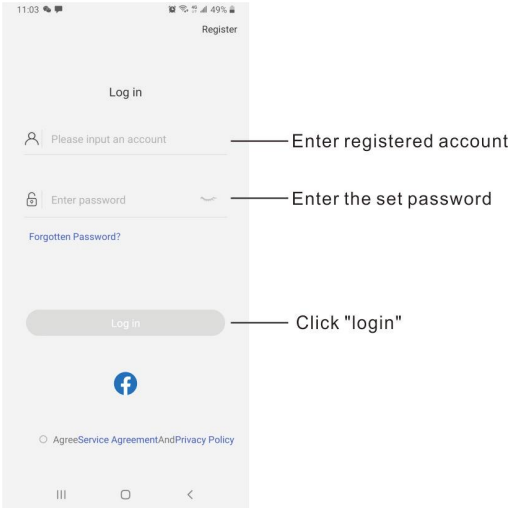
Account registration

To register an email account, enter the email number and password, and click Register. This account is used for future login;



Account login

Enter the account and password and click login



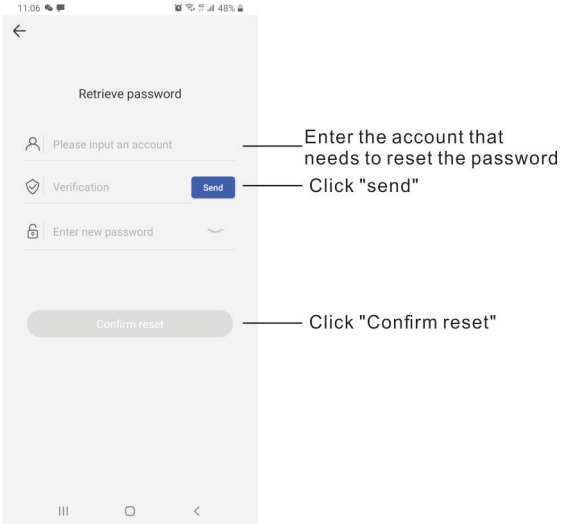
Retrieve password

When the user forgets the login password, the login password can be reset through this function .

1) Enter the account number to retrieve the password;

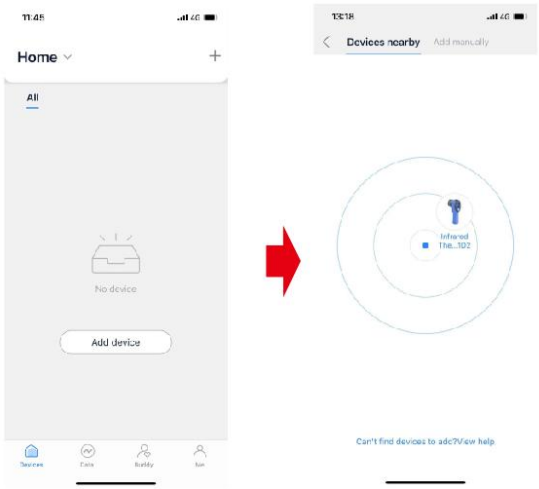
2) Click the "send" button to send the verification code to the email;

3) Enter the verification code, reset the new password, click "submit reset", and then you can log in to the app with the new password .

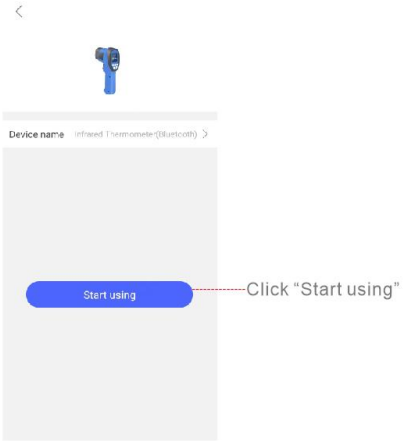


Add device

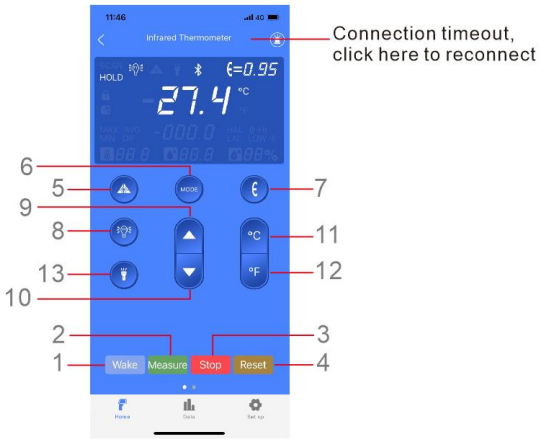
1) Click add equipment, select the equipment to be added, and operate according to the operation instructions to add;



1) Click "start using" to enter the function page.

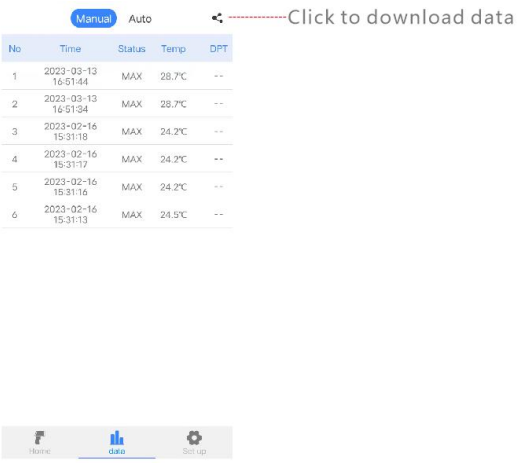


2）Function introduction

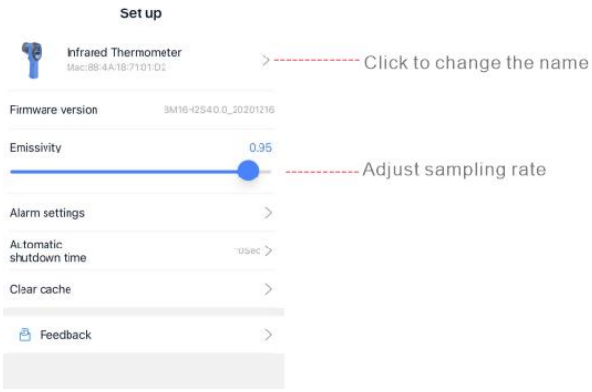


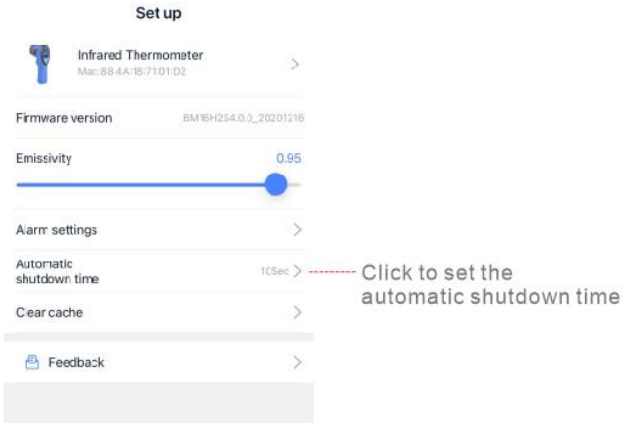
1. Wake up function button: infrared thermometer app is connected to the mobile phone. When infrared thermometer app is automatically closed or the mobile phone program is closed, you can wake up the infrared thermometer through this button.（When the infrared thermometer and the mobile phone are not in the same place, the infrared thermometer can be turned on by remote control, and the distance in the open place can reach 80m）
2. Measurement button: press the button,the infrared thermometer can carry out for continuous measurement.
3. Stop button: press the button to stop the continuous measurement. And stop recording data.
4. Reset button: press the button to reset the temperature value of the main interface.
5, 6, 7, 8, 9, 10, 11, 12 and 13 are the keys corresponding to the infrared thermometer. You can use the keys on the mobile app to operate and control the infrared thermometer.

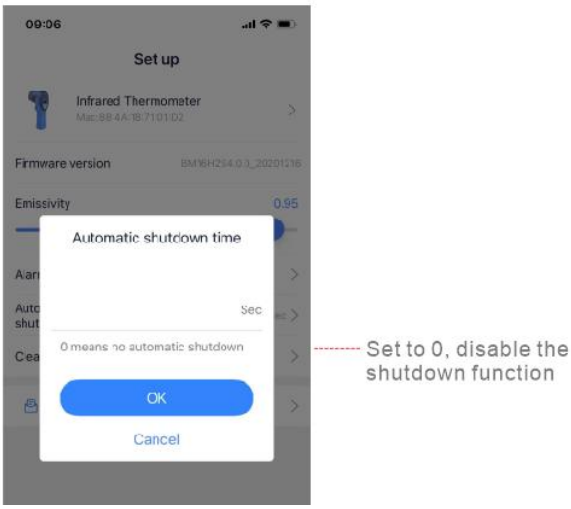
3)Click the "data" button to view the historical recording time and historical recording data, and press the button in the upper right corner to download the data.



4）Click the settings button to view the software version, set the sampling rate or auto shutdown time.







※ After using this product, if it is no longer used for a long time, it is recommended to remove the battery, otherwise the battery will be consumed all the time.

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P.S.

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2.Platform of Your Purchase

3.Full Model Number

4.Description of the Problem(Attaching videos or photos can help us troubleshoot the problems even faster)

FCC Caution:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception,
which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different
from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.