

120*90mm

VEVOR®
TOUGH TOOLS, HALF PRICE

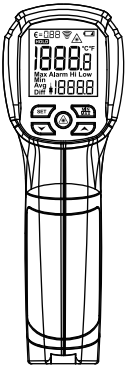
Technical Support and E-Warranty Certificate
www.vevor.com/support

Infrared Thermometer Model:IR05

We continue to be committed to provide you tools with competitive price. "Save Half", "Half Price" or any other similar expressions used by us only represents an estimate of savings you might benefit from buying certain tools with us compared to the major top brands and does not necessarily mean to cover all categories of tools offered by us. You are kindly reminded to verify carefully when you are placing an order with us if you are actually saving half in comparison with the top major brands.

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Model:IR05



Have product questions? Need technical support? Please feel free to contact us: **Technical Support and E-Warranty Certificate**
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This is the original instruction, please read all manual instructions carefully before operating. VEVOR reserves a clear interpretation of our user manual. The appearance of the product shall be subject to the product you received. Please forgive us that we won't inform you again if there are any technology or software updates on our product.

Safety instructions/Attention

1.Safety instructions

- Please read the instructions carefully before using the instrument.

Warning: To reduce the risk of injury, user must read instructions manual carefully.

• Safety symbols:

- Important information tips of danger
- Comply with European CE safety standards.

This instrument meets the following standards:

- EN60825-2014

Warning!

- Do not aim the laser at human eyes or reflective surfaces.**

CAUTION:

- While the product is in operation, be careful not to expose your eyes to the emitting laser beam (red light source). Exposure to a laser beam for an extended time may be hazardous to your eyes.
- Glasses may be supplied in some of the laser tool kits. These are NOT certified safety glasses. These glasses are ONLY used to enhance visibility of beam in brighter environments or at greater distances from the laser.

WARNING:

- The following label/print samples are placed on the product to inform of the laser class for your convenience and safety.

CAUTION
AVOID EXPOSURE - LASER RADIATION
IS EMITTED FROM THIS APERTURE

→ **LASER RADIATION-DO NOT STARE INTO BEAM**
OUTPUT < 1mW 620-690nm
IEC 60825-1:2014MADE IN CHINA



- Do not stare directly into the beam or view directly with optical instruments or set up the laser at eye level.
- Do not disassemble the laser tool. There are no user serviceable parts inside.
- Do not modify the laser in any way. Modifying the tool may result in hazardous Laser Radiation Exposure.
- Do not operate the laser around children or allow children to operate the laser.
- Serious eye injury may result.

- An exposure to the beam of a Class 2 laser is considered safe for a maximum of 0.25 seconds. Eyelid reflexes will normally provide adequate protection.

2.Attention

- When the ambient temperature changes greatly or suddenly, please wait for 20 minutes before using the instrument to make the temperature of the instrument reach a stable state.

- Please avoid electromagnetic fields caused by electric welding and induction heating.

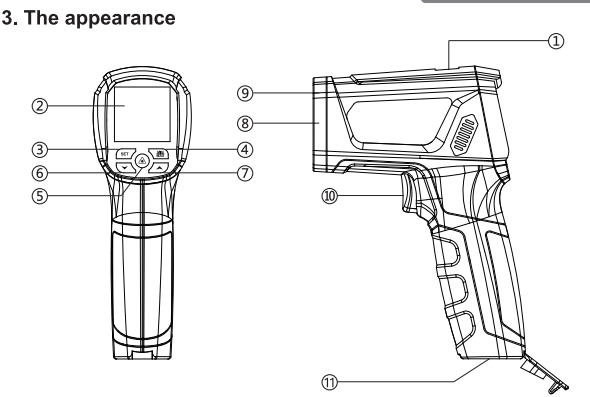
- Please avoid placing the instrument near or on high-temperature objects.
- Please keep the instrument clean and avoid dust from entering the lens barrel.
- Lens cleaning: clean the dust on the lens surface with clean compressed air, and then wipe the surface with a wet cotton swab.
- Do not use solvents to clean the instrument.
- FCC INFORMATION

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment!
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This product may cause harmful interference. (2) This product must accept any interference received, including interference that may cause undesired operation.
WARNING: Changes or modifications to this product not expressly approved by the party responsible for compliance could void the user's authority to operate the product.

Note: This product 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 product 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 product does cause harmful interference to radio or television reception, which can be determined by turning the product 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 distance between the product and receiver.
- Connect the product to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for assistance.

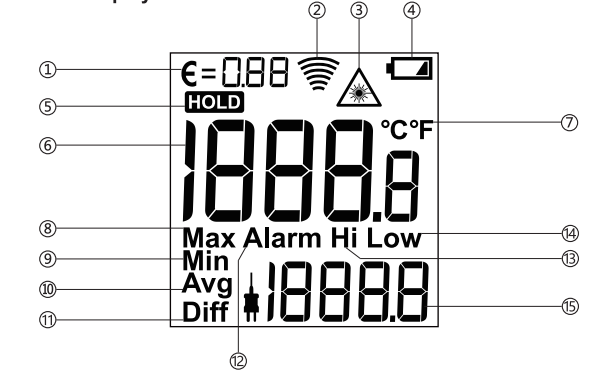
The appearance



- K-type thermocouple socket
- LCD display
- SET key
- Max maximum /Min minimum /Avg average /Diff temperature conversion key
- Laser control key
- Up key ▼
- Down key ▲
- Laser transmitter
- Infrared emitter
- Measurement trigger
- Battery cover

LCD display

4. LCD display



- Emissivity
- Measurement indication
- Laser indication
- Battery undervoltage indication
- Data locking
- Radiation measurement temperature value
- Temperature unit
- Maximum locking
- Minimum locking
- Average value
- Temperature difference value
- Alarm
- High alarm
- Low alarm
- K-thermocouple temperature

Measuring methods

5. Measuring methods

Pull the instrument trigger to light up the screen, long press the SET key to enter the SET mode, and short press the SET key to select Alarm Hi → Alarm Low → (**°C**) emissivity setting → (**°C/°F**) temperature setting.

In SET mode: long press the **▲/▼** key to quickly increase or decrease the set value.

1. Alarm Hi:
Long press the SET key to enter the Alarm Hi by default. When the value flashes, press the **▲/▼** key to set the required alarm value, and pull the trigger to save the setting. The buzzer sounds an alarm when the measured temperature exceeds the set value.

2. Alarm Low:
Long press the SET key to enter the setting, and short press the SET key to change the Alarm Low. When the value flashes, press the **▲/▼** key to set the required alarm value, and pull the trigger to save the setting. The buzzer sounds an alarm when the measured temperature exceeds the set value.

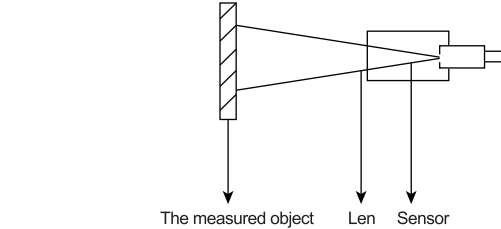
3. Emissivity setting:
Long press the SET key to enter the setting, and short press the SET key to switch to (**°C**) emissivity setting. Then, the instrument emissivity (**°C**) flashes. Please refer to (emissivity parameter table) and short press the **▲/▼** key for setting the required emissivity value, and pull the trigger to save the setting.

4. Temperature unit setting:
Long press the SET key for a long time to enter the setting, and short press the SET key to switch to (**°C/°F**) unit. The unit symbol (**°C/°F**) on the display flashes, press the **▲/▼** key to set the required temperature unit, and pull the trigger to save the setting.]

The target distance ratio (D:S)

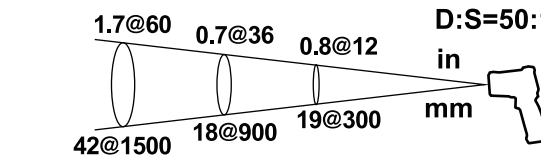
6.The target distance ratio (D:S)

The instrument has a certain visual angle and field of view, as shown in the following figure:



It is necessary to ensure that the measured object fills the field of view of the instrument, that is, the thermometer only "sees" the measured object and "cannot see" other objects. The larger the measured object, the farther the measurement distance, the smaller the measured object and the closer the measurement distance. The ratio of the measuring distance to the measured target size is D:S/50: 1.

As shown in the figure below:



Emissivity

7.Emissivity

Emissivity is the ability of an object surface to radiate infrared rays. The greater the emissivity, the stronger the radiation ability of the object surface.

The emissivity of most organic or metal oxidized surfaces is between 0.85 and 0.98. The emissivity of this thermometer is 0.95 by default. When measuring, set the emissivity of the thermometer consistent with the emissivity of the measured object. Please pay attention to the influence of emissivity on the measurement results during measurement.

Emissivity reference table

Measured surface	Radiance
Metallic aluminum	Oxide 0.2~0.4
	A3003 alloy (oxidation) 0.3
Brass	A3003 alloy (rough) 0.1~0.3
	Polish 0.3
Copper	Oxide 0.5
	Electrical terminal board 0.4~0.8
Hastelloy B-2	0.6
	0.3~0.8
Nickel alloy	Oxide 0.7~0.95
	Sand blast 0.3~0.6
Asbestos	0.95
	Electropolishing 0.15

Emissivity

Iron	Oxide 0.5~0.9
Iron (casting)	Get rusty 0.5~0.7
	Oxide 0.6~0.95
Passivation of iron (forging)ate	Unoxidized 0.1~0.3
	Fuse and cast 0.2
Lead	Oxide 0.2~0.3
	0.9
Nickel alloy	Electrical terminal board 0.4
	Coarse 0.2~0.6
Molybdenum oxidation	Oxide 0.7~0.95
	0.2~0.6
Platinum black	Nickel oxidation 0.2~0.5
	0.9
Steel	Cold rolling 0.7~0.9
	Polished steel plate 0.4~0.6
Zinc (Zn)	Polished steel plate 0.1
	Oxide 0.1
Asphalt	Asbestos 0.95
	0.95
Basalt	0.7
	0.9

Emissivity

Carbon (unoxidized)	0.8~0.9
Graphite	0.7~0.8
Carbonundum	0.9
Pottery and porcelain	0.95
Clay	0.95
Concrete	0.95
Cloth	0.95
Glass plate	0.85
Gravel	0.95
Plaster	0.8~0.95
Ice	0.98
Limestone	0.98
Paper	0.95
Plastic	0.95
Soil	0.9~0.98
Water	0.93
Wood	0.9~0.95

Technical parameters

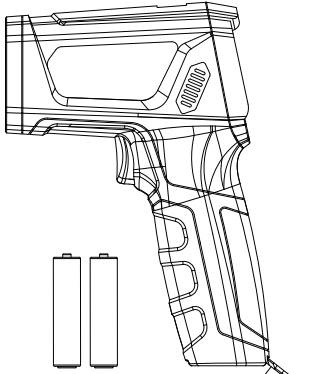
8. Technical parameters

Indicator	VA reverse display color screen
D:S	50 : 1
Spectral response	8~14um
Resolution ratio	0.1°C/0.1°F
Emissivity	0.10 ~ 1.00
Laser	< 1mw620~690 nm Grade 2
Response time	<0.5S
Automatic shut-down	About 35 seconds
Irradiation temperature range	-50°C ~ 1500°C (-58°F~2732°F)
Illumination accuracy	-50°C ~ 0°C ± 3°C/6°F
	0 ~ 800°C ± (1.5%+2°C)
K-type temperature range	800°C ~ 1500°C ± (3%°C)
	-10°C ~ 500°C (14°F ~ 932°F)
K-type accuracy	± (1.5% + 2°C/4°F)
Operational environment	0 ~ 50°C/10% ~ 90%RH
Storage temperature	-20°C ~ 60°C
Size	180x120x60mm
Power Supply	2x1.5V AA battery

Battery replacement

9. Battery replacement

When the battery power is insufficient, the screen displays (**⚡**) undervoltage symbol, and the battery must be replaced. Open the battery cover and replace it with a new 1.5Vx2 AA battery. See the figure below:



Address: Baoshanqu Shuangchenglu 803long 11hao
1602A-1609shi Shanghai
EC REP: SHUNSHUN GmbH, Römerdöcker 9 22021,
76531 Linkenheim-Hochstetten, Germany
UK REP: Pooledas Group Ltd. Unit 5 Albert Edward House,
The Pavilions Preston, United Kingdom
Imported to USA: Sarven Technology Ltd. Suite 250, 9166 Anaheim
Place, Rancho Cucamonga, CA 91730
Made In China

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120*90mm

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Technischer Support und E-Garantie zertifikat
www.vevor.com/support

Infrarot Thermometer Modell:IR05

Wir sind weiterhin bestrebt, Ihnen Werkzeuge zu wettbewerbsfähigen Preisen anzubieten.
„Sparen Sie die Hälfte“, „Halber Preis“ oder andere ähnliche von uns verwendete Ausdrücke stellen nur eine Schätzung der Einsparungen dar, die Sie durch den Kauf bestimmter Werkzeuge bei uns im Vergleich zu den großen Top-Marken erzielen können, und bedeuten nicht unbedingt, dass alle angebotenen Werkzeugkategorien abgedeckt werden von uns. Bitte prüfen Sie bei Ihrer Bestellung sorgfältig, ob Sie im Vergleich zu den Top-Marken tatsächlich die Hälfte sparen.

VEVOR
TOUGH TOOLS, HALF PRICE

Modell:IR05



Haben Sie Fragen zum Produkt? Benötigen Sie technische Unterstützung? Bitte kontaktieren Sie uns:
Technischer Support und E-Garantie zertifikat www.vevor.com/support

Dies ist die Originalanleitung. Bitte lesen Sie alle Bedienungsanleitungen sorgfältig durch, bevor Sie das Gerät in Betrieb nehmen. VEVOR behält sich eine klare Auslegung unserer Bedienungsanleitung vor. Das Aussehen des Produkts hängt von dem Produkt ab, das Sie erhalten haben. Bitte entschuldigen Sie, dass wir Sie nicht erneut informieren, wenn es zu unserem Produkt technische oder Software-Updates gibt.

1

Safety instructions/Attention

1.Safety instructions

- Please read the instructions carefully before using the instrument.

Warning: Um das Verletzungsrisiko zu verringern, muss der Benutzer die Bedienungsanleitung sorgfältig lesen.

• Safety symbols:

Important information tips of danger

Comply with European CE safety standards.

Dieses Instrument erfüllt die folgenden Standards:

• EN60825-2:2014

Warning!

Do not aim the laser at human eyes or reflective surfaces.

VORSICHT:

- Achten Sie darauf, dass Ihre Augen während des Betriebs des Produkts nicht dem emittierenden Laserstrahl (rote Lichtquelle) ausgesetzt werden. Wenn Sie einem Laserstrahl über einen längeren Zeitraum ausgesetzt sind, kann dies gefährlich für Ihre Augen sein.

- In einigen Laser-Werkzeugkategorien sind möglicherweise Brillen enthalten. Dies sind KEINE zertifizierten Schutzbrillen. Diese Brillen sind NUR verwendet, um die Sichtbarkeit des Strahls in helleren Umgebungen oder in größeren Entfernungen zu verbessern.

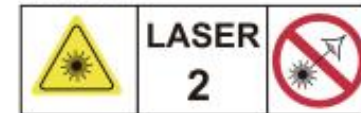
WARNING:

- Die folgenden Etiketten-Druckmuster sind auf dem Produkt angebracht, um zu Ihrer Bequemlichkeit und Sicherheit über die Laserklasse zu informieren.

2

CAUTION AVOID EXPOSURE - LASER RADIATION IS EMITTED FROM THIS APERTURE

→ LASER RADIATION-DO NOT STARE INTO BEAM
OUTPUT < 1mW 620-690nm
IEC 60825-1:2014MADE IN CHINA



- Schauen Sie nicht direkt in den Strahl, schauen Sie nicht direkt mit optischen Instrumenten und stellen Sie den Laser nicht auf Augenhöhe auf.

- Zerlegen Sie das Laserwerkzeug nicht. Im Inneren befinden sich keine vom Benutzer zu wartenden Teile.

- Modifizieren Sie den Laser in keiner Weise. Das Modifizieren des Werkzeugs kann zu einer gefährlichen Laserstrahlungsposition führen.

- Betreiben Sie den Laser nicht in der Nähe von Kindern und erlauben Sie Kindern nicht, den Laser zu bedienen.

- Es kann zu schweren Augenverletzungen kommen.

- Eine Exposition gegenüber dem Strahl eines Lasers der Klasse 2 gilt für maximal 0,25 Sekunden als sicher. Normalerweise bieten Augenschilde einen ausreichenden Schutz.

2.Attention

- When the ambient temperature changes greatly or suddenly, please wait for 20 minutes before using the instrument to make the temperature of the instrument reach a stable state.

- Please avoid electromagnetic fields caused by electric welding and induction heating.

3

- Please avoid placing the instrument near or on high-temperature objects.
- Please keep the instrument clean and avoid dust from entering the lens barrel.
- Lens cleaning: clean the dust on the lens surface with clean compressed air, and then wipe the surface with a wet cotton swab.
- Do not use solvents to clean the instrument.

• FCC-INFORMATIONEN

VORSICHT: Änderungen oder Modifikationen, die nicht ausdrücklich von der für die Einhaltung verantwortlichen Partei genehmigt wurden, können zum Erlöschen der Berechtigung des Benutzers zum Betrieb des Geräts führen!

Dieses Gerät entspricht Teil 15 der FCC-Bestimmungen. Der Betrieb unterliegt den folgenden beiden Bedingungen: (1) Dieses Produkt kann schädliche Störungen verursachen.

(2) Dieses Produkt muss allen empfangenen Störungen standhalten, einschließlich Störungen, die einen unerwünschten Betrieb verursachen können.

WARNUNG: Änderungen oder Modifikationen an diesem Produkt, die nicht ausdrücklich von der für die Einhaltung verantwortlichen Partei genehmigt wurden, können zum Erlöschen der Berechtigung des Benutzers zum Betrieb des Produkts führen.

Hinweis: Dieses Produkt wurde getestet und entspricht den Grenzwerten für ein digitales Gerät der Klasse B gemäß Teil 15 der FCC-Bestimmungen. Diese Grenzwerte sollen einen angemessenen Schutz vor schädlichen Störungen in einer Wohnanlage bieten.

Dieses Produkt erzeugt und verwendet Hochfrequenzenergie und kann diese ausstrahlen. Wenn es nicht gemäß den Anweisungen installiert und verwendet wird, kann es schädliche Störungen der Funkkommunikation verursachen. Es gibt jedoch keine Garantie dafür, dass bei einer bestimmten Installation keine Störungen auftreten. Wenn dieses Produkt schädliche Störungen beim Radio- oder Fernsehempfang verursacht, was durch Aus- und Einschalten des Produkts festgestellt werden kann, wird dem Benutzer empfohlen, zu versuchen, die Störung durch eine oder mehrere der folgenden Maßnahmen zu beheben.

- Reduzieren Sie die Empfangsantenne des Autos oder verschieben Sie sie.
- Erhöhen Sie den Abstand zwischen Produkt und Empfänger.
- Schließen Sie das Produkt an eine Steckdose an, die zu einem anderen Stromkreis gehört. Der Empfänger ist angeschlossen.

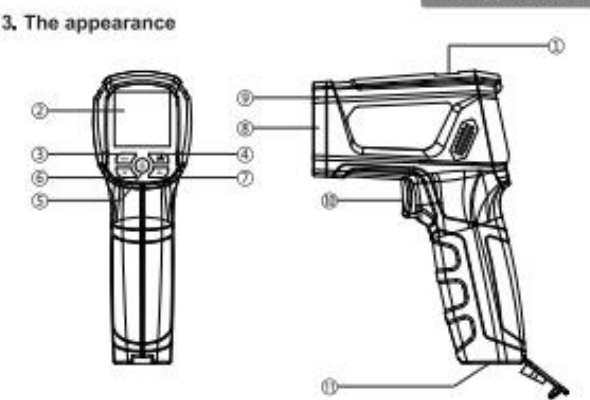
Wenden Sie sich hierzu an den Händler oder einen erfahrenen Radio-TV-Techniker Hilfe.

4

• RICHTIGE ENTSORGUNG

Dieses Produkt unterliegt den Bestimmungen der europäischen Richtlinie 2012/19/EU. Das Symbol einer durchgestrichenen Mülltonne weist darauf hin, dass das Produkt in der Europäischen Union einer getrennten Müllsammung bedarf. Das gilt für das Produkt und alle Zubehörteile, die mit diesem Symbol gekennzeichnet sind. Als solche gekennzeichnete Produkte dürfen nicht über das normale Hausmüll entsorgt werden, sondern müssen an einer Sammelstelle für das Recycling von Elektro- und Elektronikgeräten abgegeben werden.

The appearance



1. K-type thermocouple socket
2. LCD display
3. SET key
4. Max maximum /Min minimum /Avg average /Diff temperature conversion key.
5. Laser control key
6. Up key
7. Down key
8. Laser transmitter
9. Infrared emitter
10. Measurement trigger
11. Battery cover

5

4. LCD display



- 1.Emissivity
- 2.Measurement indication
- 3.Laser indication
- 4.Battery undervoltage indication
- 5.Data locking
- 6.Radiation measurement temperature value
- 7.Temperature unit
- 8.Maximum locking
- 9.Minimum locking
- 10.Average value
- 11.Temperature difference value
- 12.Alarm
- 13.High alarm
- 14.Low alarm
- 15.K-thermocouple temperature

6

Measuring methods

5. Measuring methods

Pull the instrument trigger to light up the screen, long press the SET key to enter the SET mode, and short press the SET key to select Alarm Hi → Alarm Low → () emissivity setting → () temperature setting.

In SET mode: long press the ▲/▼ key to quickly increase or decrease the set value.

1. Alarm Hi:

Long press the SET key to enter the Alarm Hi by default. When the value flashes, press the ▲/▼ key to set the required alarm value, and pull the trigger to save the setting. The buzzer sounds an alarm when the measured temperature exceeds the set value.

2.Alarm Low:

Long press the SET key to enter the setting, and short press the SET key to change the Alarm Low. When the value flashes, press the ▲/▼ key to set the required alarm value, and pull the trigger to save the setting. The buzzer sounds an alarm when the measured temperature exceeds the set value.

3.Emissivity setting:

Long press the SET key to enter the setting, and short press the SET key to switch to () emissivity setting. Then, the instrument emissivity () flashes. Please refer to (emissivity parameter table) and short press the ▲/▼ key for setting the required emissivity value, and pull the trigger to save the setting.

4. Temperature unit setting:

Long press the SET key for a long time to enter the setting, and short press the SET key to switch to () unit. The unit symbol () on the display flashes, press the ▲/▼ key to set the required temperature unit, and pull the trigger to save the setting.]

7

Measuring methods

5. Laser setting:

The laser aiming function can be turned on or off by short pressing () when the instrument screen is on or at the measuring state.

6.MAX maximum measurement:

When the instrument screen is on or at the measurement state, short press the Max key to display the MAX symbol on the screen, and the instrument locks the maximum measurement value .

7.MIN minimum measurement:

When the instrument screen is on or at the measurement state, short press the MIN key until the Min symbol is displayed on the screen. Then, the instrument locks the minimum measurement value.

8.Avg average measurement:

When the instrument screen is on or at the measurement state, short press the MAX key until the Avg symbol is displayed on the screen, and pull the trigger to save the setting. The buzzer sounds an alarm when the measured temperature exceeds the set value.

9.Diff temperature difference measurement:

When the instrument screen is on or at the measurement state, short press the MAX key until the screen displays the Diff symbol. Then, the instrument locks the measured temperature difference value.

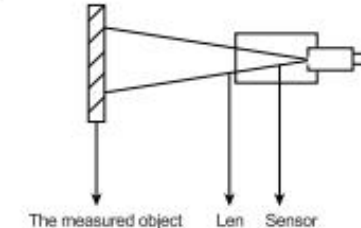
10.K-type thermocouple temperature measurement

Insert the K-type thermocouple plug into the thermocouple socket of the instrument according to the positive and negative signs, and pull the trigger to display the symbol () on the screen. During measurement, the thermocouple probe touches the measured object, and the screen displays the temperature and irradiation temperature of the K-type thermocouple.

8

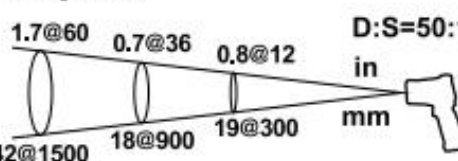
The target distance ratio (D:S)

6.The target distance ratio (D:S)
The instrument has a certain visual angle and field of view, as shown in the following figure:



It is necessary to ensure that the measured object fills the field of view of the instrument, that is, the thermometer only "sees" the measured object and "cannot see" other objects. The larger the measured object, the further the measurement distance, the smaller the measured object and the closer the measurement distance. The ratio of the measuring distance to the measured target size is D:S=50:1.

As shown in the figure below:



9

Emissivity

7.Emissivity

Emissivity is the ability of an object surface to radiate infrared rays. The greater the emissivity, the stronger the radiation ability of the object surface.

The emissivity of most organic or metal oxidized surfaces is between 0.85 and 0.98. The emissivity of this thermometer is 0.95 by default. When measuring, set the emissivity of the thermometer consistent with the emissivity of the measured object. Please pay attention to the influence of emissivity on the measurement results during measurement.

Emissivity reference table

Measured surface	Radiance
Metall aluminum	
Oxide	0.2~0.4
A3003 alloy (oxidation)	0.3
A3003 alloy (rough)	0.1~0.3
Brass	
Polish	0.3
Oxide	0.5
Copper	
Oxide	0.4~0.8
Electrical terminal board	0.6
Hastelloy B-2	
Oxide	0.3~0.8
Oxide	0.7~0.9
Polished steel plate	0.4~0.6
Polished steel plate	0.1
Zinc (Zn)	
Oxide	0.1
Asbestos	0.95
Sand blast	0.95
Electropolishing	0.15
Nickel alloy	
Oxide	0.7~0.95
Sand blast	0.3~0.6
Electropolishing	0.15

10

Emissivity

Iron	Oxide	0.5~0.9
	Get rusty	0.5~0.7
Iron (casting)	Oxide	0.6~0.95
	Unoxidized	0.1~0.3
	Fuse and cast	0.2
	Oxide	0.2~0.3
Passivation of iron (forging plate)		0.9
Lead	Electrical terminal board	0.4
	Coarse	0.2~0.6
Nickel alloy	Oxide	0.7~0.95
Molybdenum oxidation		0.2~0.6
Nickel oxidation		0.2~0.5
Platinum black		0.9
	Cold rolling	0.7~0.9
Steel	Polished steel plate	0.4~0.6
	Polished steel plate	0.1
Zinc (Zn)		0.1
Asbestos		0.95
Sand blast		0.95
Basalt		0.7

11

Emissivity

Carbon (unoxidized)		0.8~0.9
Graphite		0.7~0.8
Carbonundum		0.9
Pottery and porcelain		0.95
Clay		0.95
Concrete		0.95
Cloth		0.95
Glass plate		0.85
Gravel		0.95
Plaster		0.8~0.95
Ice		0.98
Limestone		0.98
Paper		0.95
Plastic		0.95
Soil		0.9~0.98
Water		0.93
Wood		0.9~0.95

12

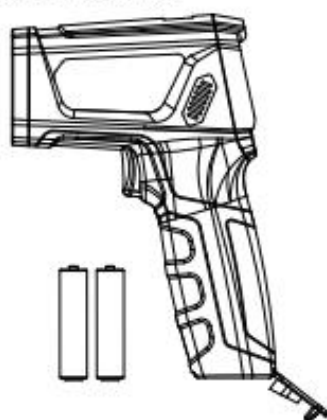
Technical parameters

8. Technical parameters	
Indicator	VA reverse display color screen
D:S	50 : 1
Spectral response	8~14um
Resolution ratio	0.1°C/0.1°F
Emissivity	0.10 ~ 1.00
Laser	< 1mw/620~690 nm Grade 2
Response time	<0.5S
Automatic shut-down	About 35 seconds
Irradiation temperature range	-50°C ~ 1500°C (-58°F~2732°F)
	-50°C ~ 0°C ± 3°C/6°F
	0 ~ 800°C ± (1.5%+2°C)
	800°C ~ 1500°C ± (3%/°C)
Illumination accuracy	
K-type temperature range	-10°C ~ 500°C (14°F ~ 932°F)
K-type accuracy	± (1.5% + 2°C/4°F)
Operational environment	0 ~ 50°C/10% ~ 90%RH
Storage temperature	-20°C ~ 60°C
Size	180x120x60mm
Power Supply	2x1.5V AA battery

13

Battery replacement

9. Battery replacement
When the battery power is insufficient, the screen displays () undervoltage symbol, and the battery must be replaced. Open the battery cover and replace it with a new 1.5Vx2 AA battery. See the figure below:



Address: Baoshanqu Shuangchenglu 803long 11hao 1602A-1609ah
Shanghai
EK-VERTRETER: SHUNSHUN GmbH, Rönnecker 9 22021
70301 Linsenhofen-Hochstetten, Germany
UK-Vertreter: Prodelas Group Ltd, Unit 5 Albert Edward House, The Pavilions
Preston, Vereinigtes Königreich
In de USA Importeur: Savem Technology Ltd, Suite 250, 9166 Anaheim
Place, Rancho Cucamonga, CA 91730
In China hergestellt

14

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Termometro a infrarossi Modello:IR05

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Modello:IR05



Hai domande sul prodotto? Hai bisogno di supporto tecnico? Non esitate a contattarci:
Supporto tecnico e certificato di garanzia elettronica www.vevor.com/support

Queste sono le istruzioni originali, leggere attentamente tutte le istruzioni del manuale prima dell'uso. VEVOR si riserva una chiara interpretazione del nostro manuale d'uso. L'aspetto del prodotto sarà soggetto al prodotto ricevuto. Ti preghiamo di perdonarci se non ti informeremo più se sono presenti aggiornamenti tecnologici o software sul nostro prodotto.

1

Safety instructions/Attention

1.Safety instructions

- Please read the instructions carefully before using the instrument.

Avvertenza: per ridurre il rischio di lesioni, l'utente deve leggere attentamente il manuale di istruzioni.

• Safety symbols:

Important information tips of danger

Comply with European CE safety standards.

Questo strumento soddisfa i seguenti standard:

• EN60825-2014

Warning!

Do not aim the laser at human eyes or reflective surfaces.

ATTENZIONE:

- Mentre il prodotto è in funzione, fare attenzione a non esporre gli occhi al raggio laser emesso (sorgente di luce rossa). L'esposizione a un raggio laser per un periodo prolungato può essere pericolosa per gli occhi.

- Gli occhiali possono essere forniti in alcuni kit di strumenti laser. Questi NON sono occhiali di sicurezza certificati. Questi occhiali vengono utilizzati SOLO per migliorare la visibilità del raggio in ambienti più luminosi o a distanza maggiori

AVVERTIMENTO:

- I seguenti campioni di etichetta/stampa sono posizionati sul prodotto per informare sulla classe del laser per comodità e sicurezza.

2

CAUTION
AVOID EXPOSURE - LASER RADIATION
IS EMITTED FROM THIS APERTURE

→ LASER RADIATION-DO NOT STARE INTO BEAM
OUTPUT < 1mW 620~690nm
IEC 60825-1:2014MADE IN CHINA



- Non fissare direttamente il raggio né guardarlo direttamente con strumenti ottici né posizionare il laser all'altezza degli occhi.
- Non smontare lo strumento laser. Altrimenti non sono presenti parti riparabili dall'utente.

- Non modificare in alcun modo il laser. La modifica dello strumento può comportare un'esposizione pericolosa alle radiazioni laser.

- Non utilizzare il laser in presenza di bambini né consentire ai bambini di utilizzare il laser.

- Potrebbero verificarsi gravi lesioni agli occhi.

- Un'esposizione al raggio di un laser di Classe 2 è considerata sicura per un massimo di 0,25 secondi. I riflessi pupillari normalmente forniscono una protezione adeguata.

2.Attention

- When the ambient temperature changes greatly or suddenly, please wait for 20 minutes before using the instrument to make the temperature of the instrument reach a stable state.

- Please avoid electromagnetic fields caused by electric welding and induction heating.

3

- Please avoid placing the instrument near or on high-temperature objects.
- Please keep the instrument clean and avoid dust from entering the lens barrel.
- Lens cleaning: clean the dust on the lens surface with clean compressed air, and then wipe the surface with a wet cotton swab.
- Do not use solvents to clean the instrument.

• INFORMAZIONI FCC

ATTENZIONE: cambiamenti o modifiche non espressamente approvati dalla parte responsabile della conformità potrebbero invalidare il diritto dell'utente a utilizzare l'apparecchiatura.

Questo dispositivo è conforme alla Parte 15 delle norme FCC. Il funzionamento è soggetto alle due condizioni seguenti: (1) Questo prodotto può causare interferenze dannose. (2) Questo prodotto deve accettare qualsiasi interferenza ricevuta, comprese le interferenze che potrebbero causare un funzionamento indesiderato.

AVVERTENZA: cambiamenti o modifiche a questo prodotto non espressamente approvati dalla parte responsabile della conformità potrebbero annullare l'autorità dell'utente a utilizzare il prodotto.

Nota: questo prodotto è stato testato ed è risultato conforme ai limiti per un dispositivo digitale di Classe B ai sensi della Parte 15 delle norme FCC. Questi limiti sono progettati per fornire una protezione ragionevole contro interferenze dannose in un'installazione residenziale.

Questo prodotto genera, utilizza e può irradiare energia in radiofrequenza e, se non installato e utilizzato in conformità con le istruzioni, può causare interferenze dannose alle comunicazioni radio. Tuttavia, non vi è alcuna garanzia che non si verifichino interferenze in una particolare installazione. Se questo prodotto causa interferenze dannose alla ricezione radiofonica o televisiva, cosa che può essere determinata spegnendo e accendendo il prodotto, si consiglia all'utente di provare a correggere l'interferenza adottando una o più delle seguenti misure.

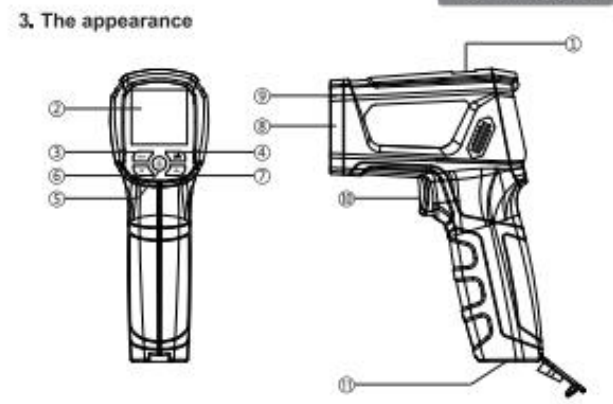
- Reorientare o riposizionare l'antenna ricevente.
- Aumentare la distanza tra il prodotto e il ricevitore.
- Collegare il prodotto ad una presa su un circuito diverso da quello a cui il ricevitore è collegato.
- Consultare il rivenditore o un tecnico radio/TV esperto assistenza.

4

• CORRETTO SMALTIMENTO

Questo prodotto è soggetto alle disposizioni della Direttiva europea 2012/19/UE. Il simbolo del bidone della spazzatura barrato indica che nell'Unione Europea il prodotto richiede la raccolta differenziata dei rifiuti. Ciò vale per il prodotto e tutti gli accessori contrassegnati da questo simbolo. I prodotti contrassegnati come tali non possono essere smaltiti con i normali rifiuti domestici, ma devono essere portati in un punto di raccolta per il riciclaggio di dispositivi elettrici ed elettronici.

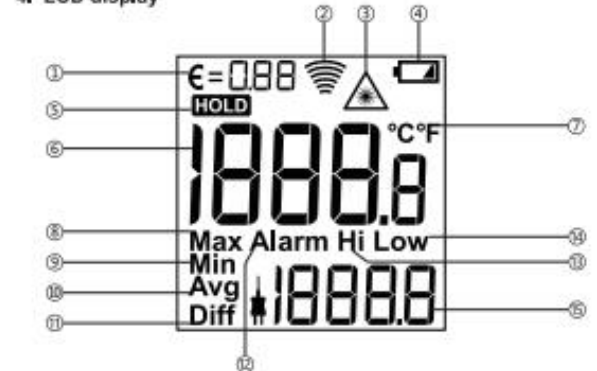
The appearance



1. K-type thermocouple socket
2. LCD display
3. SET key
4. Max maximum /Min minimum /Avg average /Diff temperature conversion key.
5. Laser control key
6. Up key ▼
7. Down key ▲
8. Laser transmitter
9. Infrared emitter
10. Measurement trigger
11. Battery cover

5

4. LCD display



- 1.Emissivity
- 2.Measurement indication
- 3.Laser indication
- 4.Battery undervoltage indication
- 5.Data locking
- 6.Radiation measurement temperature value
- 7.Temperature unit
- 8.Maximum locking
- 9.Minimum locking
- 10.Average value
- 11.Temperature difference value
- 12.Alarm
- 13.High alarm
- 14.Low alarm
- 15.K-thermocouple temperature

6

Measuring methods

5. Measuring methods

Put the instrument trigger to light up the screen, long press the SET key to enter the SET mode, and short press the SET key to select Alarm Hi → Alarm Low → () emissivity setting → () temperature setting.

In SET mode: long press the ▲/▼ key to quickly increase or decrease the set value.

1. Alarm Hi:

Long press the SET key to enter the Alarm Hi by default. When the value flashes, press the ▲/▼ key to set the required alarm value, and pull the trigger to save the setting. The buzzer sounds an alarm when the measured temperature exceeds the set value.

2.Alarm Low:

Long press the SET key to enter the setting, and short press the SET key to change the Alarm Low. When the value flashes, press the ▲/▼ key to set the required alarm value, and pull the trigger to save the setting. The buzzer sounds an alarm when the measured temperature exceeds the set value.

3.Emissivity setting:

Long press the SET key to enter the setting, and short press the SET key to switch to () emissivity setting. Then, the instrument emissivity () flashes. Please refer to (emissivity parameter table) and short press the ▲/▼ key for setting the required emission value, and pull the trigger to save the setting.

4. Temperature unit setting:

Long press the SET key for a long time to enter the setting, and short press the SET key to switch to () unit. The unit symbol () on the display flashes, press the ▲/▼ key to set the required temperature unit, and pull the trigger to save the setting.]

7

Measuring methods

5. Laser setting:

The laser aiming function can be turned on or off by short pressing () when the instrument screen is on or at the measuring state.

6.MAX maximum measurement:

When the instrument screen is on or at the measurement state, short press the Max key to display the MAX symbol on the screen, and the instrument locks the maximum measurement value .

7.MIN minimum measurement:

When the instrument screen is on or at the measurement state, short press the MIN key until the Min symbol is displayed on the screen. Then, the instrument locks the minimum measurement value.

8.Avg average measurement:

When the instrument screen is on or at the measurement state, short press the MAX key until the screen displays the Diff symbol. Then, the instrument locks the measured temperature difference value.

9.K-type thermocouple temperature measurement

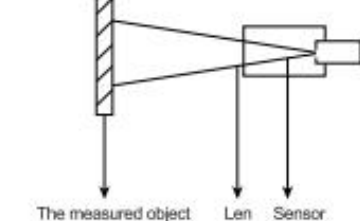
Insert the K-type thermocouple plug into the thermocouple socket of the instrument according to the positive and negative signs, and pull the trigger to display the symbol () on the screen. During measurement, the thermocouple probe touches the measured object, and the screen displays the temperature and irradiation temperature of the K-type thermocouple.

8

The target distance ratio (D:S)

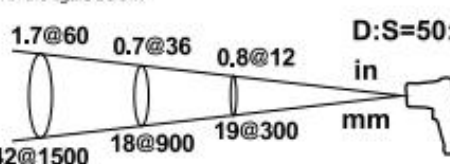
6.The target distance ratio (D:S)

The instrument has a certain visual angle and field of view, as shown in the following figure:



It is necessary to ensure that the measured object fills the field of view of the instrument, that is, the thermometer only "sees" the measured object and "cannot see" other objects. The larger the measured object, the further the measurement distance, the smaller the measured object and the closer the measurement distance. The ratio of the measuring distance to the measured target size is D:S/50: 1.

As shown in the figure below:



9

Emissivity

7.Emissivity

Emissivity is the ability of an object surface to radiate infrared rays. The greater the emissivity, the stronger the radiation ability of the object surface. The emissivity of most organic or metal oxidized surfaces is between 0.85 and 0.98. The emissivity of this thermometer is 0.95 by default. When measuring, set the emissivity of the thermometer consistent with the emissivity of the measured object. Please pay attention to the influence of emissivity on the measurement results during measurement.

Emissivity reference table

Measured surface	Radiance
Metallc aluminum	
Oxide	0.2~0.4
A3003 alloy (oxidation)	0.3
A3003 alloy (rough)	0.1~0.3
Brass	
Polish	0.3
Oxide	0.5
Copper	
Oxide	0.4~0.8
Electrical terminal board	0.6
Hastelloy B-2	
Oxide	0.3~0.8
Nickel alloy	
Oxide	0.7~0.95
Sand blast	0.3~0.6
Electropolishing	0.15

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Emissivity

Iron	Oxide	0.5~0.9
	Get rusty	0.5~0.7
Iron (casting)	Oxide	0.6~0.95
	Unoxidized	0.1~0.3
	Fuse and cast	0.2
	Oxide	0.2~0.3
Passivation of iron (forging)plate		0.9
Lead	Electrical terminal board	0.4
	Coarse	0.2~0.6
Nickel alloy	Oxide	0.7~0.95
Molybdenum oxidation		0.2~0.6
Nickel oxidation		0.2~0.5
Platinum black		0.9
	Cold rolling	0.7~0.9
Steel	Polished steel plate	0.4~0.6
	Polished steel plate	0.1
Zinc (Zn)	Oxide	0.1
Asbestos		0.95
Asphalt		0.95
Basalt		0.7

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Emissivity

Carbon (unoxidized)		0.8~0.9
Graphite		0.7~0.8
Carbonundum		0.9
Pottery and porcelain		0.95
Clay		0.95
Concrete		0.95
Cloth		0.95
Glass plate		0.85
Gravel		0.95
Plaster		0.8~0.95
Ice		0.98
Limestone		0.98
Paper		0.95
Plastic		0.95
Soil		0.9~0.98
Water		0.93
Wood		0.9~0.95

12

Technical parameters

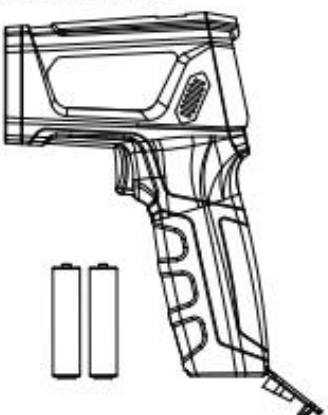
8. Technical parameters	
Indicator	VA reverse display color screen
D:S	50 : 1
Spectral response	8~14um
Resolution ratio	0.1°C/0.1°F
Emissivity	0.10 ~ 1.00
Laser	< 1mw/620~690 nm Grade 2
Response time	<0.5S
Automatic shut-down	About 35 seconds
Irradiation temperature range	-50°C ~ 1500°C(-58°F~2732°F)
	-50°C ~ 0°C ± 3°C/6°F
Illumination accuracy	0 ~ 800°C ± (1.5%+2°C)
	800°C ~ 1500°C ± (3%°C)
K-type temperature range	-10°C ~ 500°C (14°F ~ 932°F)
K-type accuracy	± (1.5% + 2°C/4°F)
Operational environment	0 ~ 50°C/10% ~ 90%RH
Storage temperature	-20°C ~ 60°C
Size	180x120x60mm
Power Supply	2x1.5V AA battery

13

Battery replacement

9. Battery replacement

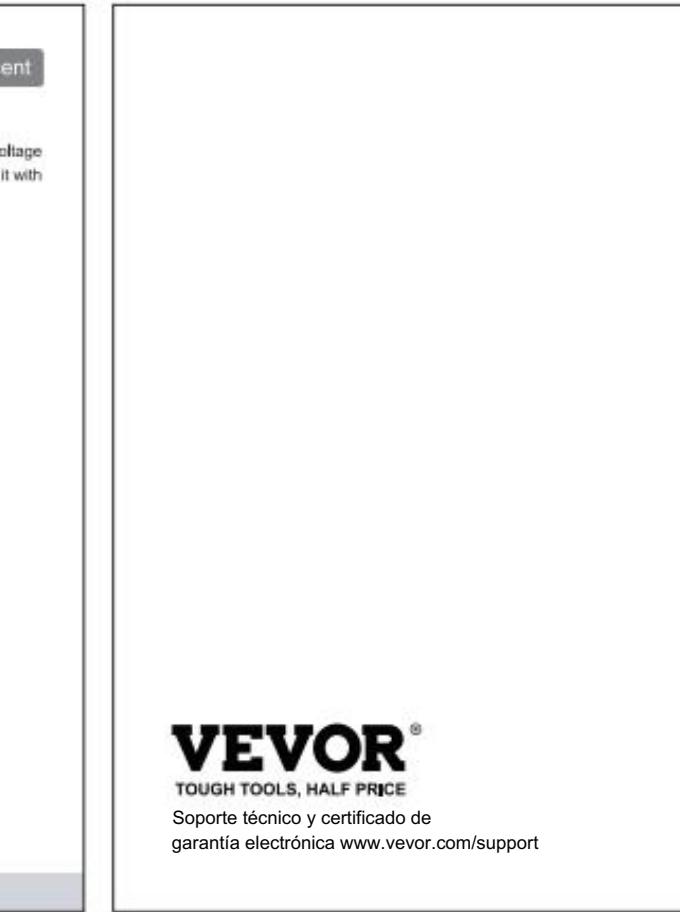
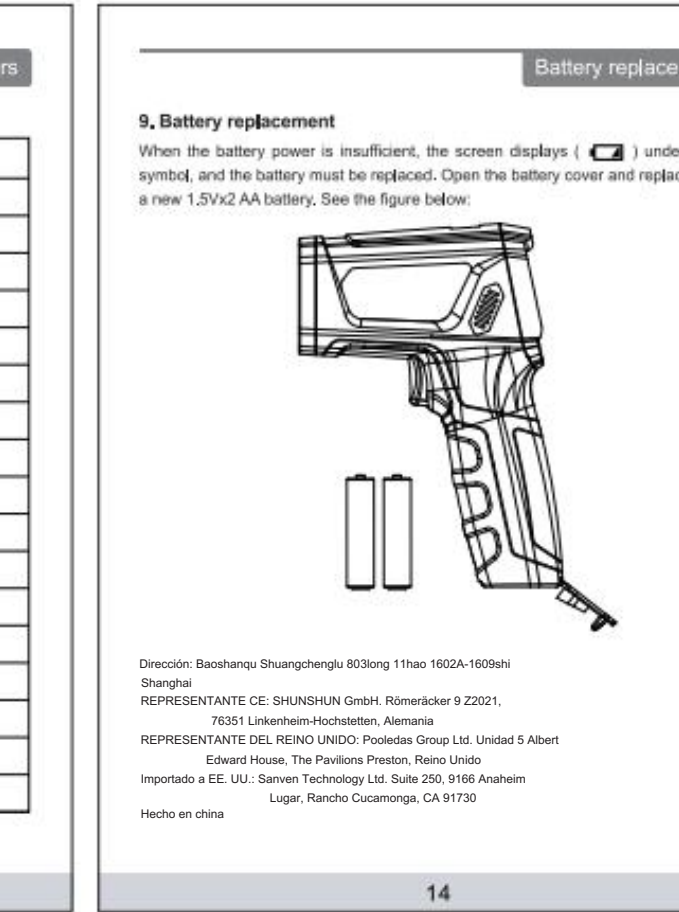
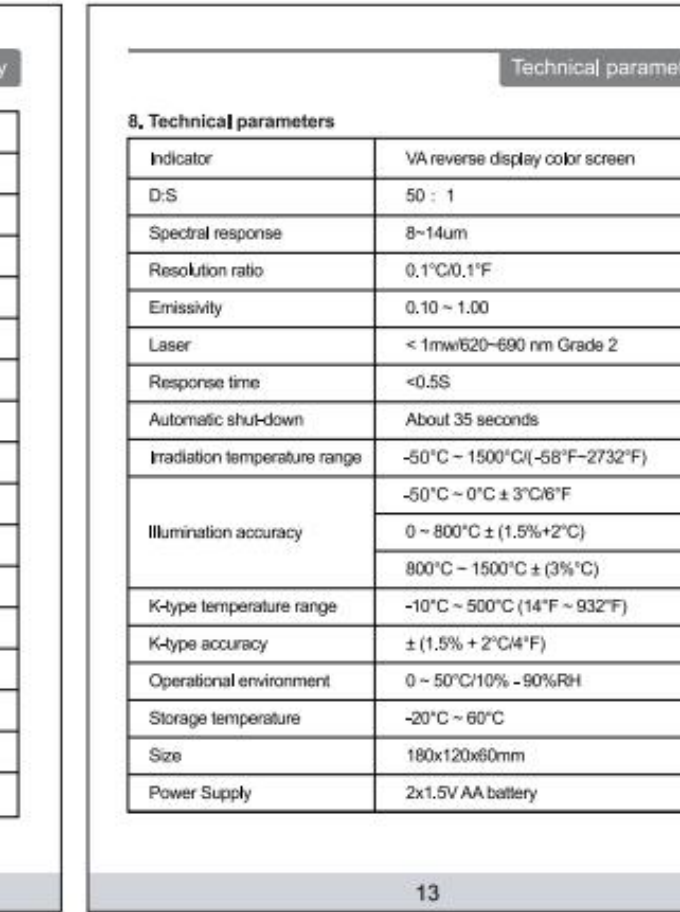
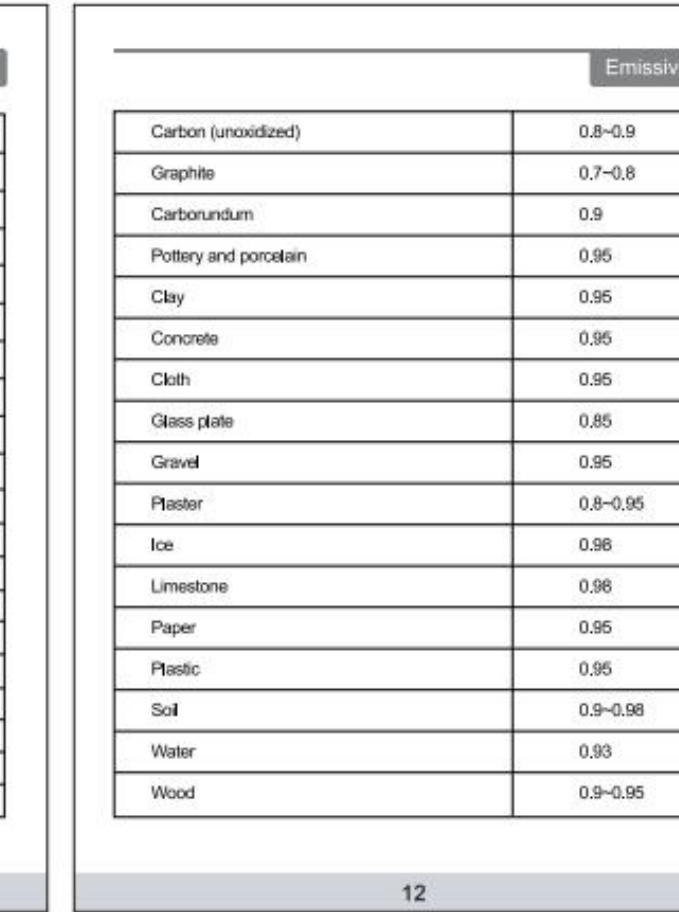
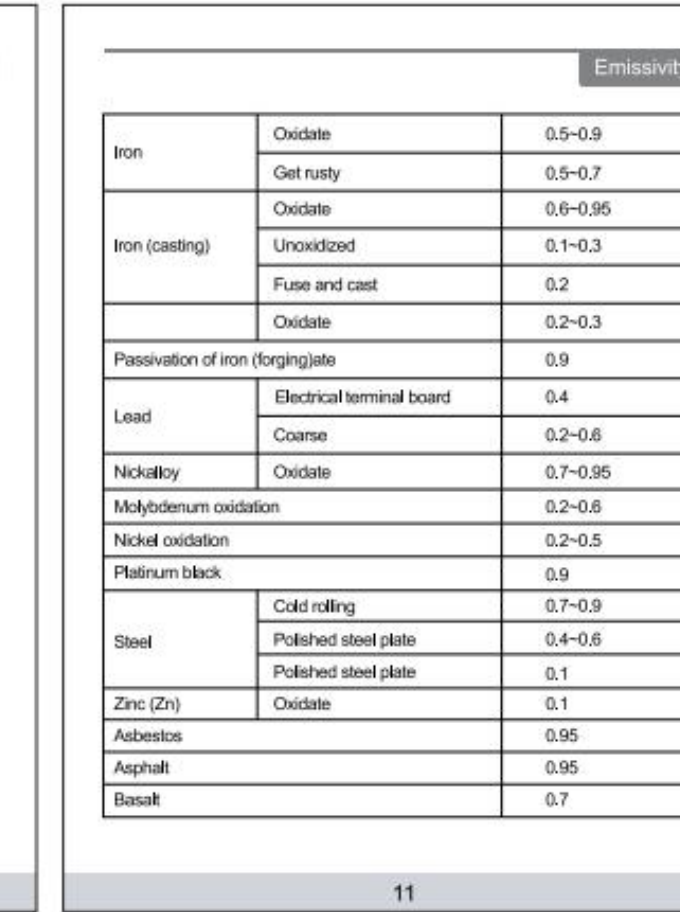
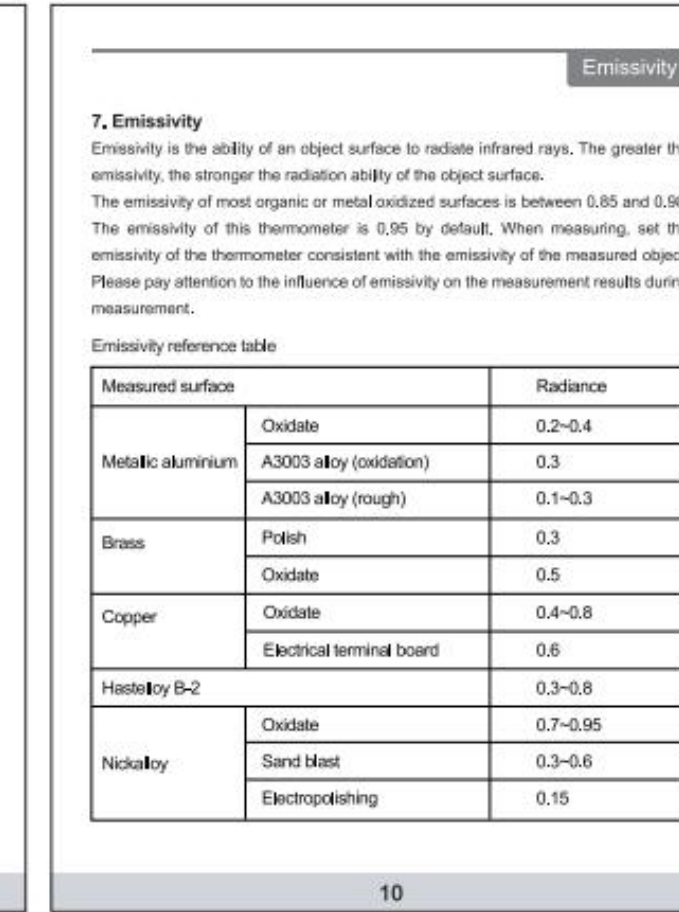
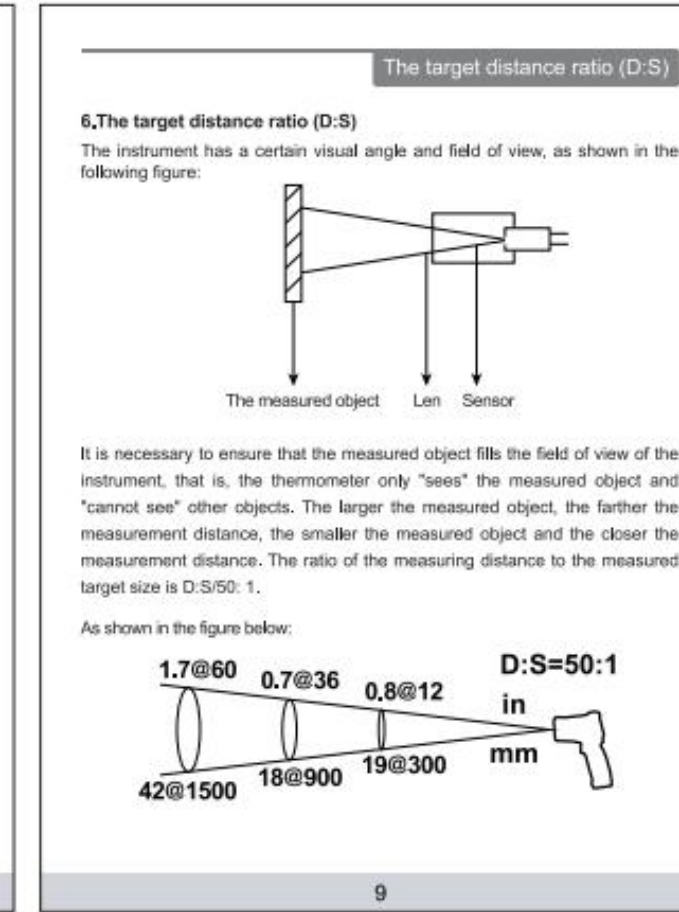
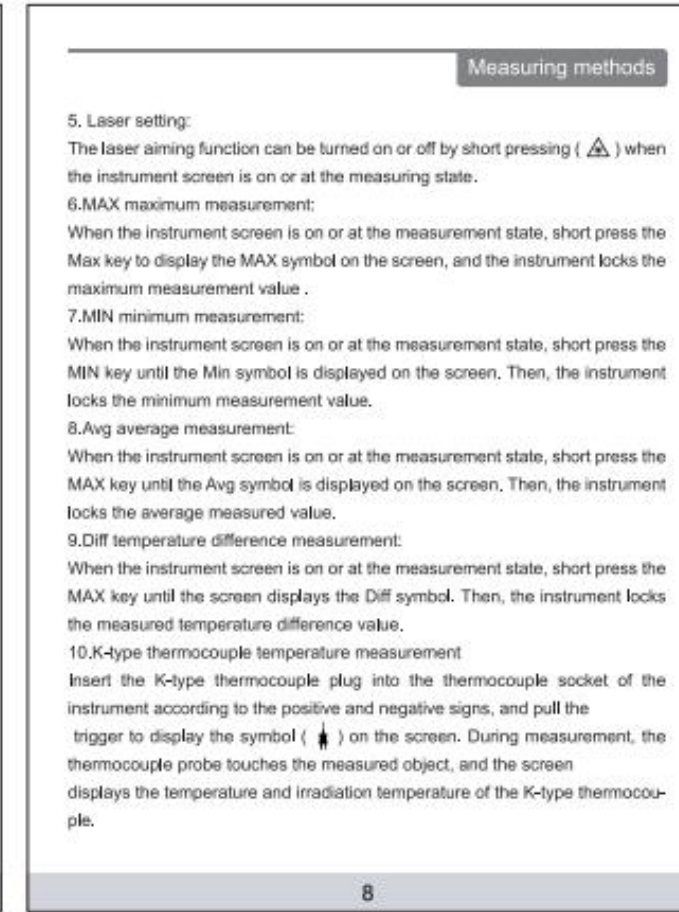
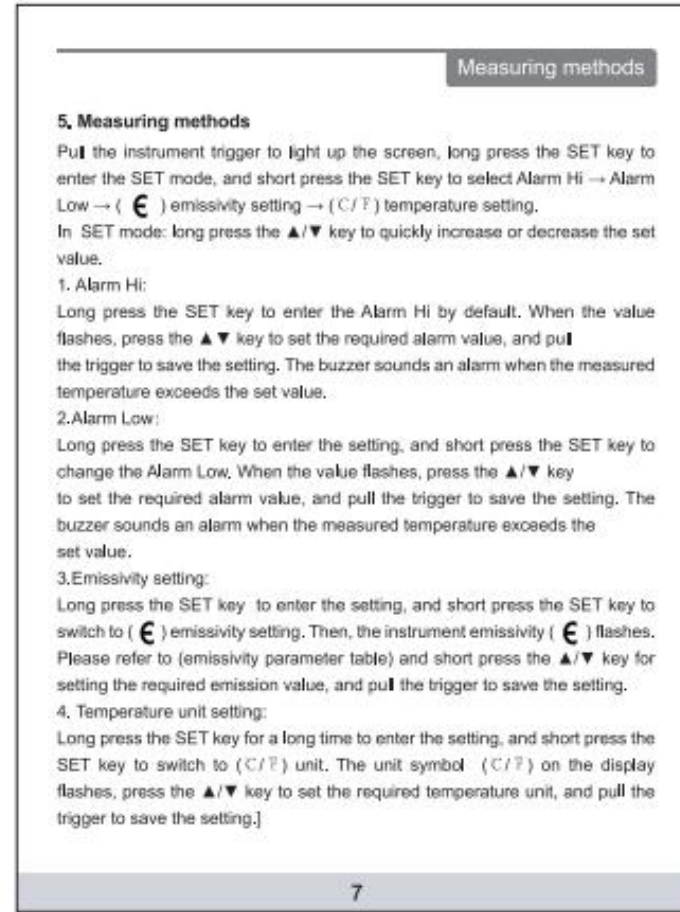
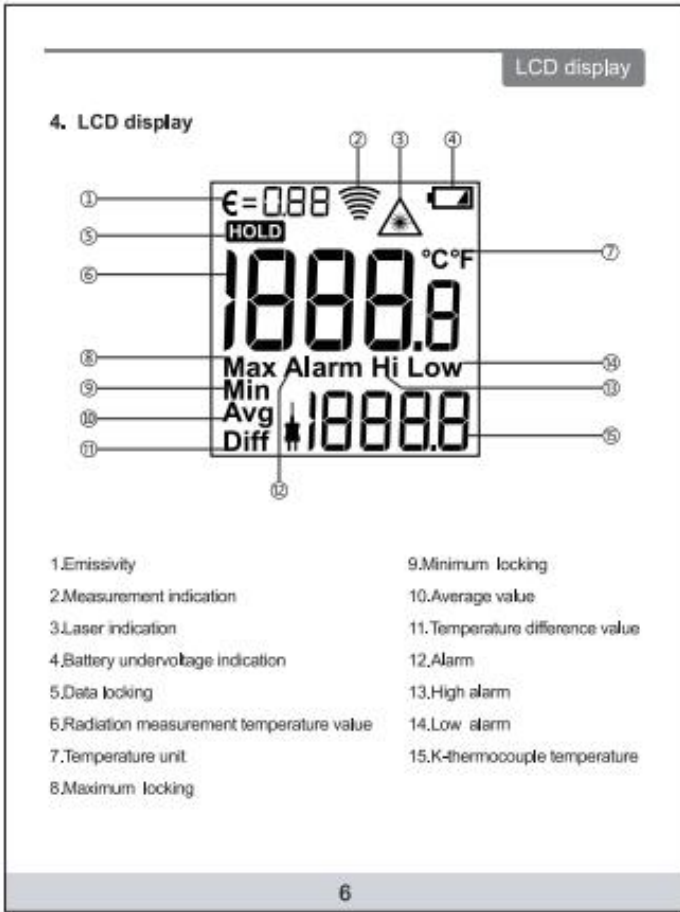
When the battery power is insufficient, the screen displays () undervoltage symbol, and the battery must be replaced. Open the battery cover and replace it with a new 1.5Vx2 AA battery. See the figure below:



Indirizzo: Baoxianqiu Shuangchenglu 803long 11hao 1602A-1609hui
Shanghai
RAPPRESENTANTE CE: SHANGSAUN GmbH, Remmischer 9 22021,
76381 Linsheim-Hochstadt, Germania
REP. DEL REGNO UNITO: Pavlos Group Ltd, Unit 5 Albert Edward House,
The Pavlons Preston, Regno Unito
Importatore negli Stati Uniti: Saven Technology Ltd, Suite 250, 9166 Anaheim
Largo, Rancho Cucamonga, CA 91730
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14

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Termometr na podczerwień
Model: IR05

Nadal dokładamy wszelkich starań, aby zapewnić Państwu naszą dotychczasową cenę. „Zaoszczędź do 50%” to nie jest zwykła reklama, ale obietnica. W rzeczywistości, aby zapewnić Państwu dotychczasową cenę, musimy poświęcić część naszego zysku. W rzeczywistości, aby zapewnić Państwu dotychczasową cenę, musimy poświęcić część naszego zysku. W rzeczywistości, aby zapewnić Państwu dotychczasową cenę, musimy poświęcić część naszego zysku.

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Model: IR05



Masz pytania dotyczące produktu? Potrzebujesz wsparcia technicznego? Prosimy o kontakt:
Wsparcie techniczne i certyfikat e-gwarancji www.vevor.com/support

To jest oryginalna instrukcja. Przed przystąpieniem do obsługi prosimy o dokładne zapoznanie się ze wszystkimi instrukcjami. VEVOR zastrzega sobie jasną interpretację naszej instrukcji obsługi. Wygląd produktu zależy od produktu, który otrzymałeś. Proszę wybaczyć nam, że nie będziemy ponownie informować Państwa, jeśli pojawią się jakieś aktualizacje technologii lub ograniczenia naszego produktu.

Safety instructions/Attention

1.Safety instructions

- Please read the instructions carefully before using the instrument.

Ostrzeżenie: Aby zmniejszyć ryzyko obrażeń, użytkownik musi uważnie przeczytać instrukcję obsługi.

• Safety symbols:

Important information tips of danger
 Comply with European CE safety standards.

Przyrząd ten spełnia następujące standardy:

• EN60825-2014

Warning!

Do not aim the laser at human eyes or reflective surfaces.

OSTROŻNOŚĆ:

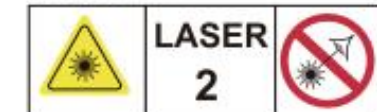
- Podczas pracy produktu należy uważać, aby nie narażać oczu na działanie emitującej wiązki lasera (źródło czerwonego światła). Ekspozycja na wiązkę lasera przez dłuższy czas może być niebezpieczna dla oczu.
- Okulary mogą być dołączone do niektórych zestawów narzędzi do laserowych. NIE są to certyfikowane okulary ochronne. Okulary te służą WYKŁUCZENIU do poprawy widoczności wiązki w jasnym otoczeniu lub przy większych odległościach.

OSTRZEŻENIE:

- Ponieważ próbki etykiet/nadruków umieszczone są na produkcie w celu poinformowania o klasie lasera dla Twojej wygody i bezpieczeństwa.

CAUTION
AVOID EXPOSURE - LASER RADIATION
IS EMITTED FROM THIS APERTURE

→ LASER RADIATION-DO NOT STARE INTO BEAM
OUTPUT < 1mW 620~690nm
IEC 60825-1:2014MADE IN CHINA



- Nie patrz bezpośrednio w wiązkę, nie patrz bezpośrednio za pomocą przyrządów optycznych ani nie ustawiaj lasera na wysokości oczu.

- Nie demontuj narzędzia laserowego. Wewnątrz nie ma żadnych części, które mogłyby naprawiać użytkownik.

- Nie modyfikuj lasera w żaden sposób. Modyfikowanie narzędzia może spowodować niebezpieczne narażenie na promieniowanie laserowe.

- Nie używaj lasera w pobliżu dzieci i nie pozwalaj dzieciom na obsługę lasera.

- Może to spowodować poważne uszkodzenie oczu.

- Ekspozycja na wiązkę lasera klasy 2 jest uważana za bezpieczną przez maksymalnie 0,25 sekundy. Odwróć powłokę zwykle zapewniając odpowiednią ochronę.

2.Attention

- When the ambient temperature changes greatly or suddenly, please wait for 20 minutes before using the instrument to make the temperature of the instrument reach a stable state.

- Please avoid electromagnetic fields caused by electric welding and induction heating.

- Please avoid placing the instrument near or on high-temperature objects.
- Please keep the instrument clean and avoid dust from entering the lens barrel.
- Lens cleaning: clean the dust on the lens surface with clean compressed air, and then wipe the surface with a wet cotton swab.
- Do not use solvents to clean the instrument.
- INFORMACJE FCC

UWAGA: Zmiany lub modyfikacje, które nie zostały wyraźnie zatwierdzone przez stronę odpowiedzialną za zgodność, mogą uniemożliwić urządzeniu użytkownika do obsługi urządzeń.

To urządzenie jest zgodne z częścią 15 przepisów FCC. Działanie podlega następującym dwóm warunkom: (1) Ten produkt może powodować szkodliwe zakłócenia. (2) Ten produkt musi akceptować wszelkie odbierane zakłócenia, w tym zakłócenia, które mogą powodować niepożądane działanie.

OSTRZEŻENIE: Zmiany lub modyfikacje tego produktu, które nie zostały wyraźnie zatwierdzone przez stronę odpowiedzialną za zgodność, mogą uniemożliwić urządzeniu użytkownika do obsługi produktu.

Uwaga: ten produkt został przetestowany i stwierdzono, że spełnia ograniczenia dla urządzeń cyfrowych klasy B zgodnie z częścią 15 przepisów FCC. Ograniczenia te mają na celu zapewnienie rozsądnej ochrony przed szkodliwymi zakłóceniami w instalacjach domowych.

Ten produkt generuje, wykorzystuje i może emitować energię o częstotliwości radiowej, a jeśli nie zostanie zainstalowany i nie będzie używany zgodnie z instrukcją, może powodować szkodliwe zakłócenia w komunikacji radiowej. Nie ma jednak gwarancji, że w konkretnej instalacji nie wystąpią zakłócenia. Jeśli produkt powoduje szkodliwe zakłócenia w odbiorze radia lub telewizji, co można stwierdzić poprzez wyłączenie i włączenie produktu, zachęca się użytkownika do podjęcia działań korygujących zakłóceń za pomocą jednego lub kilku z poniższych środków.

Zmień orientację lub położenie anteny odbiorczej.
Zwiększ odległość pomiędzy produktem a odbiornikiem.

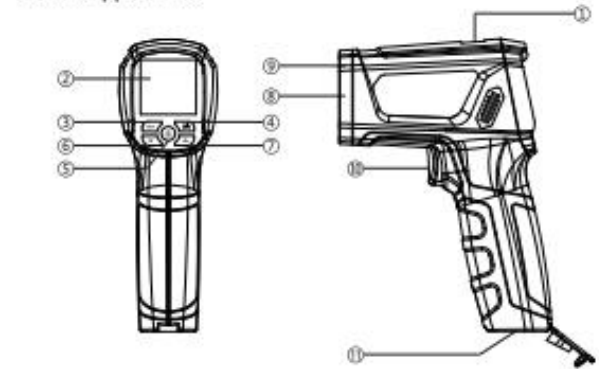
Podłącz produkt do gniazda w innym obwodzie niż ten, do którego jest podłączony odbiornik jest podłączony.

Skonsultuj się ze sprzedawcą lub dołączonym technikiem radiowo-telewizyjnym w sprawie.

4

The appearance

3. The appearance



1. K-type thermocouple socket
2. LCD display
3. SET key
4. Max maximum /Min minimum /Avg average /Diff temperature conversion key
5. Laser control key
6. Up key ▼
7. Down key ▲
8. Laser transmitter
9. Infrared emitter
10. Measurement trigger
11. Battery cover

5

LCD display

4. LCD display



- 1.Emissivity
- 2.Measurement indication
- 3.Laser indication
- 4.Battery undervoltage indication
- 5.Data locking
- 6.Radiation measurement temperature value
- 7.Temperature unit
- 8.Maximum locking
- 9.Minimum locking
- 10.Average value
- 11.Temperature difference value
- 12.Alarm
- 13.High alarm
- 14.Low alarm
- 15.K-thermocouple temperature

6

Measuring methods

5. Measuring methods

Pull the instrument trigger to light up the screen, long press the SET key to enter the SET mode, and short press the SET key to select Alarm Hi → Alarm Low → () emissivity setting → () temperature setting.

In SET mode: long press the key to quickly increase or decrease the set value.

1. Alarm Hi:
Long press the SET key to enter the Alarm Hi by default. When the value flashes, press the key to set the required alarm value, and pull the trigger to save the setting. The buzzer sounds an alarm when the measured temperature exceeds the set value.

2.Alarm Low:
Long press the SET key to enter the setting, and short press the SET key to change the Alarm Low. When the value flashes, press the key to set the required alarm value, and pull the trigger to save the setting. The buzzer sounds an alarm when the measured temperature exceeds the set value.

3.Emissivity setting:
Long press the SET key to enter the setting, and short press the SET key to switch to () emissivity setting. Then, the instrument emissivity () flashes. Please refer to (emissivity parameter table) and short press the key for setting the required emission value, and pull the trigger to save the setting.

4. Temperature unit setting:
Long press the SET key for a long time to enter the setting, and short press the SET key to switch to () unit. The unit symbol () on the display flashes, press the key to set the required temperature unit, and pull the trigger to save the setting.]

7

Measuring methods

5. Laser setting:

The laser aiming function can be turned on or off by short pressing () when the instrument screen is on or at the measuring state.

6.MAX maximum measurement:
When the instrument screen is on or at the measurement state, short press the Max key to display the MAX symbol on the screen, and the instrument locks the maximum measurement value.

7.MIN minimum measurement:
When the instrument screen is on or at the measurement state, short press the MIN key until the Min symbol is displayed on the screen. Then, the instrument locks the minimum measurement value.

8.Avg average measurement:
When the instrument screen is on or at the measurement state, short press the MAX key until the screen displays the Diff symbol. Then, the instrument locks the measured temperature difference value.

9.Diff temperature difference measurement:
When the instrument screen is on or at the measurement state, short press the MAX key until the screen displays the Diff symbol. Then, the instrument locks the measured temperature difference value.

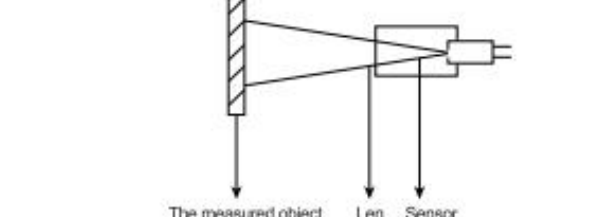
10.K-type thermocouple temperature measurement:
Insert the K-type thermocouple plug into the thermocouple socket of the instrument according to the positive and negative signs, and pull the trigger to display the symbol () on the screen. During measurement, the thermocouple probe touches the measured object, and the screen displays the temperature and irradiation temperature of the K-type thermocouple.

8

The target distance ratio (D:S)

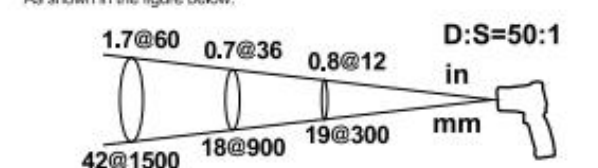
6.The target distance ratio (D:S)

The instrument has a certain visual angle and field of view, as shown in the following figure:



It is necessary to ensure that the measured object fills the field of view of the instrument, that is, the thermometer only "sees" the measured object and "cannot see" other objects. The larger the measured object, the further the measurement distance, the smaller the measured object and the closer the measurement distance. The ratio of the measuring distance to the measured target size is D:S/50:1.

As shown in the figure below:



9

Emissivity

7.Emissivity

Emissivity is the ability of an object surface to radiate infrared rays. The greater the emissivity, the stronger the radiation ability of the object surface.

The emissivity of most organic or metal oxidized surfaces is between 0.85 and 0.98. The emissivity of this thermometer is 0.95 by default. When measuring, set the emissivity of the thermometer consistent with the emissivity of the measured object. Please pay attention to the influence of emissivity on the measurement results during measurement.

Emissivity reference table

Measured surface	Radiance
Metall aluminum	
Oxide	0.2~0.4
A3003 alloy (oxidation)	0.3
A3003 alloy (rough)	0.1~0.3
Brass	
Polish	0.3
Oxide	0.5
Copper	
Oxide	0.4~0.8
Electrical terminal board	0.6
Hastelloy B-2	
Oxide	0.3~0.8
Nickel alloy	
Oxide	0.7~0.95
Sand blast	0.3~0.6
Electropolishing	0.15

10

Emissivity

7.Emissivity

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Electrical terminal board	0.6
Hastelloy B-2	
Oxide	0.3~0.8
Nickel alloy	
Oxide	0.7~0.95
Sand blast	0.3~0.6
Electropolishing	0.15

11

Emissivity

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Electrical terminal board	0.6
Hastelloy B-2	
Oxide	0.3~0.8
Nickel alloy	
Oxide	0.7~0.95
Sand blast	0.3~0.6
Electropolishing	0.15

12

Technical parameters

8. Technical parameters

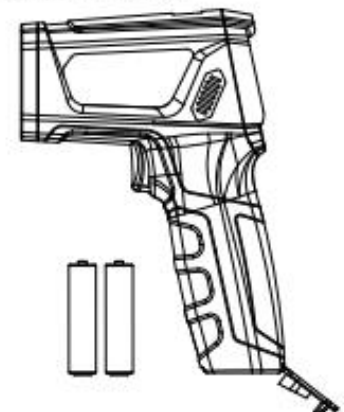
Indicator	VA reverse display color screen
D:S	50 : 1
Spectral response	8~14um
Resolution ratio	0.1°C/0.1°F
Emissivity	0.10 ~ 1.00
Laser	< 1mw/620~690 nm Grade 2
Response time	<0.5S
Automatic shut-down	About 35 seconds
Irradiation temperature range	-50°C ~ 1500°C (-58°F ~ 2732°F)
Illumination accuracy	0 ~ 800°C ± (1.5%+2°C) 800°C ~ 1500°C ± (3%+2°C)
K-type temperature range	-10°C ~ 500°C (14°F ~ 932°F)
K-type accuracy	± (1.5% + 2°C/4°F)
Operational environment	0 ~ 50°C/10% ~ 90%RH
Storage temperature	-20°C ~ 60°C
Size	180x120x60mm
Power Supply	2x1.5V AA battery

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Battery replacement

9. Battery replacement

When the battery power is insufficient, the screen displays () undervoltage symbol, and the battery must be replaced. Open the battery cover and replace it with a new 1.5Vx2 AA battery. See the figure below:



Adres: Baoshang Shuanghenglu 803long 11hao 1602A-1609SH
Szanghaj
Przedstawiciel: WE SHANGHAI GROUP, Room 922021,
70351 Lindeheim-Hochstetter, Niemcy
REPUBLIKA WIELKIEJ Brytania: Poole Group Ltd, Jednostka 5 Albert
Edward House, The Pavilions Preston, Wielka Brytania
Import do USA: Senven Technology Ltd, Suite 250, 9166 Avalon
Place, Rancho Cucamonga, Kalifornia 91730
Współpracownicy w Chinach

14

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TOUGH TOOLS, HALF PRICE
Wsparcie techniczne i certyfikat e-gwarancji
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120*90mm

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Infrarood thermometer
Model: IR05

We blijven ons inzetten om u gereedschap tegen een concurrerende prijs te bieden.
"Bespaar de helft", "Half price" of andere soortgelijke uitdrukkingen die door ons worden gebruikt
verteenwoordigen slechts een schatting van de besparingen die u zou kunnen profiteren als u bepaalde
tools bij ons koopt in vergelijking met de grote toepreken en betekent niet noodzakelijkerwijs dat deze alle
categorieën van aangeboden tools dekken door ons. Wij verzekeren u wereldwijd om bij het
plaatsen van een bestelling bij ons goed na te gaan of u daadwerkelijk de helft bespaart in vergelijking
met de grote toepreken.

VEVOR®
TOUGH TOOLS, HALF PRICE

Model:IR05



Heeft u productvragen? Technische ondersteuning nodig? Neem gerust contact met ons op:
Technische ondersteuning en e-garantiecertificaat www.vevor.com/support

Dit is de originele instructie. Lees alle instructies in de handleiding zorgvuldig door voordat u er mee
aan de slag gaat. VEVOR behoudt zich een duidelijke interpretatie van onze gebruikershandleiding
voor. Het uiterlijk van het product is afhankelijk van het product dat u heeft ontvangen. Vergeet ons alstublist
dat we u niet opnieuw zullen informeren als er technologie- of software-updates zijn voor ons product.

Safety instructions/Attention

1.Safety instructions

• Please read the instructions carefully before using the instrument.

Waarschuwing: Om het risico op letsel te verminderen, moet de gebruiker de
handleiding zorgvuldig lezen.

• Safety symbols:

⚠ Important information tips of danger

CE Comply with European CE safety standards.

Dit instrument voldoet aan de volgende normen:

• EN60825-2014

Warning!

⚠ Do not aim the laser at human eyes or reflective surfaces.

VOORZICHTIGHEID:

• Zorg ervoor dat u uw ogen niet blootstelt aan de uitstralende laserstraal (rode lichtbron) terwijl het product
in werking is. Blootstelling aan een laserstraal gedurende langere tijd kan gevaarlijk zijn voor uw ogen.

• In sommige lasergereedschaps kan een lid worden meegeleverd. Dit is GEEN gecertificeerde
veiligheidsdoel. Deze zal worden ALLEEN gebruikt om de schikbaarheid van de draad te verbeteren in
hetzelfde omgevings of op grote afstanden

WAARSCHUWING:

• Voor uw gemak en veiligheid zijn de volgende label-/afbeeldingen op het product aangebracht om
de laserklassen aan te geven.

CAUTION
AVOID EXPOSURE - LASER RADIATION
IS EMITTED FROM THIS APERTURE

→ LASER RADIATION-DO NOT STARE INTO BEAM
OUTPUT < 1mW 620-690nm
IEC 60825-1:2014MADE IN CHINA



• Kijk niet rechtstreeks in de staal, kijk niet rechtstreeks met optische instrumenten en plaats
de laser niet op ooghoogte.

• Demonteer het lasergereedschap niet. Binnen bevinden zich geen onderdelen die door de gebruiker
onderhouden kunnen worden.

• Wijzig op geen enkele manier de laser. Het aanpassen van het gereedschap kan leiden tot gevaarlijke
blootstelling aan laserstraling.

• Gebruik de laser niet in de buurt van kinderen en laat kinderen de laser niet bedienen.

• Ernstig oogletsel kan het gevolg zijn.

• Een blootstelling aan de straal van een klasse 2-laser wordt als veilig beschouwd gedurende maximaal
0,25 seconde. Oogafleiden worden normaal gesproken voldoende bescherming.

• Ernstig oogletsel kan het gevolg zijn.

• Een blootstelling aan de straal van een klasse 2-laser wordt als veilig beschouwd gedurende maximaal
0,25 seconde. Oogafleiden worden normaal gesproken voldoende bescherming.

2.Attention

• When the ambient temperature changes greatly or suddenly, please wait for
20 minutes before using the instrument to make the temperature of the
instrument reach a stable state.

• Please avoid electromagnetic fields caused by electric welding and induction
heating.

- Please avoid placing the instrument near or on high-temperature objects.
- Please keep the instrument clean and avoid dust from entering the lens
barrel.
- Lens cleaning: clean the dust on the lens surface with clean compressed air,
and then wipe the surface with a wet cotton swab.
- Do not use solvents to clean the instrument.
- FCC-INFORMATIE

LET OP: Wijzigingen of aanpassingen die niet uitdrukkelijk zijn goedgekeurd door de partij die
verantwoordelijk is voor naleving kunnen de beveiliging van de gebruiker om de apparatuur te
bedienen ongediend maken!

Dit apparaat voldoet aan Deel 15 van de FCC-regels. Het gebruik is onderworpen aan de
volgende twee voorwaarden: (1) Dit product kan schadelijke interferentie veroorzaken.
(2) Dit product moet alle ontvangen interferentie accepteren, inclusief interferentie die
een ongewenste werking kan veroorzaken.

WAARSCHUWING: Wijzigingen of aanpassingen aan dit product die niet uitdrukkelijk zijn
goedgekeurd door de partij die verantwoordelijk is voor naleving kunnen de beveiliging van de
gebruiker om het product te bedienen ongediend maken.

Opmerking: Dit product is getest en voldoet aan de limieten voor een digitaal apparaat van Klasse B
overeenkomstig Deel 15 van de FCC-regels. Deze limieten zijn bedoeld om redelijke bescherming te
bieden tegen schadelijke interferentie in een residentiële installatie.

Dit product genereert, gebruikt en kan radiofrequente energie uitzenden, en als het niet wordt
geïnstalleerd en gebruikt in overeenstemming met de instructies, kan het schadelijke
interferentie aan radiocommunicatie veroorzaken. Er is echter geen garantie dat er
geen interferentie zal optreden in een bepaalde installatie. Als dit product schadelijke
interferentie veroorzaakt aan radio- of televisieontvangst, wat kan worden
vastgesteld door het product uit en weer in te schakelen, wordt de gebruiker aangeraden te
proberen de interferentie te corrigeren door een of meer van de volgende maatregelen.

- Herinstalleer of verplaats de ontvangstantenne.
- Verhoog de afstand tussen het product en de ontvanger.
- Sluit het product aan op een stopcontact op een ander circuit dan dat waarop
de ontvanger is aangesloten.

Radpleeg de dealer of een ervaren radio/TV-technicus voor
bijstand.

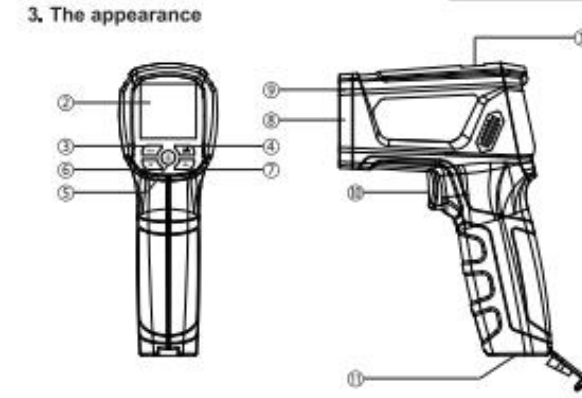
4

• CORRECTE VERWIJDERING

⚠ Dit product valt onder de bepalingen van de Europese Richtlijn 2012/19/EU.
Het symbool met een doorgestreepte afvalcontainer geeft aan dat het product in de
Europese Unie een aparte afvalinzameling vereist. Dit geldt voor het product en alle
accessories die met dit symbool zijn gemarkeerd. Producten die als zodanig zijn gemarkeerd,
mogen niet bij het normale huishoud worden weggegooid, maar moeten worden ingeleverd bij
een inzamelpunt voor recycling van elektrische en elektronische apparaten.

The appearance

3. The appearance



1. K-type thermocouple socket
2. LCD display
3. SET key
4. Max maximum /Min minimum /Avg average /Diff temperature conversion key.
5. Laser control key
6. Up key ▲
7. Down key ▼
8. Laser transmitter
9. Infrared emitter
10. Measurement trigger
11. Battery cover

5

LCD display

4. LCD display



- 1.Emissivity
- 2.Measurement indication
- 3.Laser indication
- 4.Battery undervoltage indication
- 5.Data locking
- 6.Radiation measurement temperature value
- 7.Temperature unit
- 8.Maximum locking
- 9.Minimum locking
- 10.Average value
- 11.Temperature difference value
- 12.Alarm
- 13.High alarm
- 14.Low alarm
- 15.K-thermocouple temperature

6

Measuring methods

5. Measuring methods

Put the instrument trigger to light up the screen, long press the SET key to
enter the SET mode, and short press the SET key to select Alarm Hi → Alarm
Low → (ϵ) emissivity setting → ($^{\circ}C/^{\circ}F$) temperature setting.

In SET mode: long press the $\blacktriangle/\blacktriangledown$ key to quickly increase or decrease the set
value.

1. Alarm Hi:
Long press the SET key to enter the Alarm Hi by default. When the value
flashes, press the $\blacktriangle/\blacktriangledown$ key to set the required alarm value, and pull
the trigger to save the setting. The buzzer sounds an alarm when the measured
temperature exceeds the set value.

2.Alarm Low:
Long press the SET key to enter the setting, and short press the SET key to
change the Alarm Low. When the value flashes, press the $\blacktriangle/\blacktriangledown$ key
to set the required alarm value, and pull the trigger to save the setting. The
buzzer sounds an alarm when the measured temperature exceeds the
set value.

3.Emissivity setting:
Long press the SET key to enter the setting, and short press the SET key to
switch to (ϵ) emissivity setting. Then, the instrument emissivity (ϵ) flashes.
Please refer to (emissivity parameter table) and short press the $\blacktriangle/\blacktriangledown$ key for
setting the required emission value, and pull the trigger to save the setting.

4. Temperature unit setting:
Long press the SET key for a long time to enter the setting, and short press the
SET key to switch to ($^{\circ}C/^{\circ}F$) unit. The unit symbol ($^{\circ}C/^{\circ}F$) on the display
flashes, press the $\blacktriangle/\blacktriangledown$ key to set the required temperature unit, and pull the
trigger to save the setting.]

7

Measuring methods

5. Laser setting:

The laser aiming function can be turned on or off by short pressing ($\triangle$) when
the instrument screen is on or at the measuring state.

6.MAX maximum measurement:
When the instrument screen is on or at the measurement state, short press the
Max key to display the MAX symbol on the screen, and the instrument locks the
maximum measurement value .

7.MIN minimum measurement:
When the instrument screen is on or at the measurement state, short press the
MIN key until the Min symbol is displayed on the screen. Then, the instrument
locks the minimum measurement value.

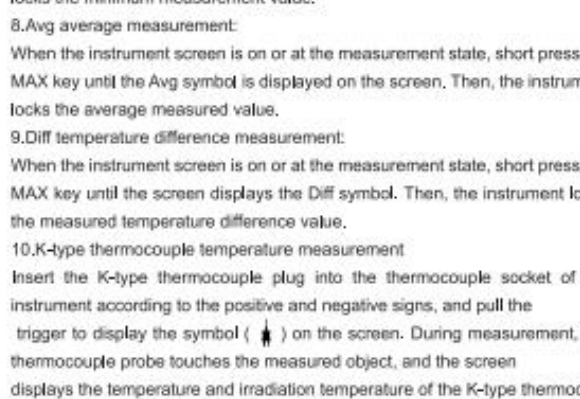
8.Avg average measurement:
When the instrument screen is on or at the measurement state, short press the
MAX key until the Avg symbol is displayed on the screen. Then, the instrument
locks the average measured value.

9.Diff temperature difference measurement:
When the instrument screen is on or at the measurement state, short press the
MAX key until the screen displays the Diff symbol. Then, the instrument locks
the measured temperature difference value.

10.K-type thermocouple temperature measurement
Insert the K-type thermocouple plug into the thermocouple socket of the
instrument according to the positive and negative signs, and pull the
trigger to display the symbol ($\updownarrow$) on the screen. During measurement, the
thermocouple probe touches the measured object, and the screen
displays the temperature and irradiation temperature of the K-type thermocou-
ple.

It is necessary to ensure that the measured object fills the field of view of the
instrument, that is, the thermometer only "sees" the measured object and
"cannot see" other objects. The larger the measured object, the further the
measurement distance, the smaller the measured object and the closer the
measurement distance. The ratio of the measuring distance to the measured
target size is D:S/50:1.

As shown in the figure below:

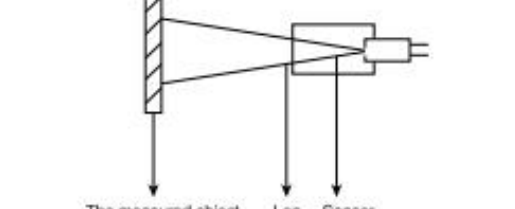


8

The target distance ratio (D:S)

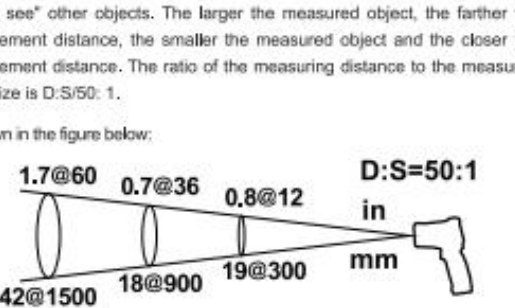
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9

Emissivity

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emissivity of the thermometer consistent with the emissivity of the measured object.
Please pay attention to the influence of emissivity on the measurement results during
measurement.

Emissivity reference table

Measured surface	Radiance
Metallic aluminum	
Oxide	0.2~0.4
A3003 alloy (oxidation)	0.3
A3003 alloy (rough)	0.1~0.3
Brass	
Polish	0.3
Oxide	0.5
Copper	
Oxide	0.4~0.8
Electrical terminal board	0.6
Hastelloy B-2	
Oxide	0.3~0.8
Oxide	0.7~0.9
Polished steel plate	0.4~0.6
Polished steel plate	0.1
Zinc (Zn)	
Oxide	0.1
Asbestos	0.95
Sand blast	0.95
Electropolishing	0.15
Nickel alloy	
Oxide	0.7~0.95
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Sand blast	0.95
Electropolishing	0.15
Nickel alloy	
Oxide	0.7~0.95
Sand blast	0.3~0.6
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Metallic aluminum	
Oxide	0.2~0.4
A3003 alloy (oxidation)	0.3
A3003 alloy (rough)	0.1~0.3
Brass	
Polish	0.3
Oxide	0.5
Copper	
Oxide	0.4~0.8
Electrical terminal board	0.6
Hastelloy B-2	
Oxide	0.3~0.8
Oxide	0.7~0.9
Polished steel plate	0.4~0.6
Polished steel plate	0.1
Zinc (Zn)	
Oxide	0.1
Asbestos	0.95
Sand blast	0.95
Electropolishing	0.15
Nickel alloy	
Oxide	0.7~0.95
Sand blast	0.3~0.6
Electropolishing	0.15

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Technical parameters

8.Technical parameters

Indicator	VA reverse display color screen
D:S	50 : 1
Spectral response	8~14um
Resolution ratio	0.1°C/0.1°F
Emissivity	0.10 ~ 1.00
Laser	< 1mw/620~690 nm Grade 2
Response time	<0.5S
Automatic shut-down	About 35 seconds
Irradiation temperature range	-50°C ~ 1500°C (-58°F~2732°F)
Illumination accuracy	-50°C ~ 0°C ± 3°C/6°F 0 ~ 800°C ± (1.5%+2°C) 800°C ~ 1500°C ± (3%/°C)
K-type temperature range	-10°C ~ 500°C (14°F ~ 932°F)
K-type accuracy	± (1.5% + 2°C/4°F)
Operational environment	0 ~ 50°C/10% ~ 90%RH
Storage temperature	-20°C ~ 60°C
Size	180x120x60mm
Power Supply	2x1.5V AA battery

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Battery replacement

9. Battery replacement

When the battery power is insufficient, the screen displays (BATT) undervoltage
symbol, and the battery must be replaced. Open the battery cover and replace it with
a new 1.5Vx2 AA battery. See the figure below:



Adres: Baoshang Shuangcheng 803ong 11hao 1602A-1609H
Shanghai
EG-REP: SHANSHUN GmbH · Röhrsdorfer 9 22021
76351 Linsenhelm-Hochstetten, Duitsland
VK-REP: Prodesa Group Ltd. Unit 5 Albert Edward House, The Pavilions
Preston, Verenigd Koninkrijk
Geïmporteerd in de VS: Sanven Technology Ltd. Suite 250, 9166 Anaheim
Plaats, Rancho Cucamonga, CA 91730
Gemaakt in China

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garantiecertificaat www.vevor.com/support

120*90mm

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Infraröd termometer Modell: IR05

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Modell: IR05



Har du produktfrågor? Behöver du teknisk support? Kontakta oss gärna: **Teknisk support och e-garantier** www.vevor.com/support

Detta är den ursprungliga instruktionen, läs alla instruktioner noggrant innan du använder den. VEVOR reserverar sig för en tydlig tolkning av vår användarmanual. Utsendend på produkten är beroende av den produkt du fått. Usakta oss att vi inte kommer att informera dig igen om det finns någon teknik eller mjukvaruuppdateringar på vår produkt.

Safety instructions/Attention

1.Safety instructions

• Please read the instructions carefully before using the instrument.

Warning: För att minska risken för skada måste användaren läsa bruksanvisningen noggrant.

• Safety symbols:

⚠ Important information tips of danger

CE Comply with European CE safety standards.

Detta instrument uppfyller följande standarder:

• EN60825-2014

Warning!

⚠ Do not aim the laser at human eyes or reflective surfaces.

WARNING:

• När produkten är i drift, var försiktig så att du inte utsätter dina ögon för den emitterande laserstrålen (röd ljuskälla). Exponering för en laserstråle under en längre tid kan vara farligt för dina ögon.

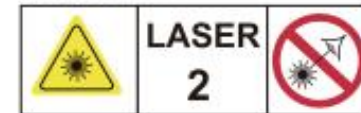
• Glasögon kan levereras i några av laserverktygsalternativen. Dessa är INTE certifierade skyddsglasögon. Dessa glasögon används ENDSAST för att förbättra synligheten av strålen i ljusa miljöer eller på större avstånd från

WARNING:

• Följande etikett/tryckgrover placeras på produkten för att informera om laserklassen för din bekvämlighet och säkerhet.

CAUTION
AVOID EXPOSURE - LASER RADIATION IS EMITTED FROM THIS APERTURE

→ LASER RADIATION-DO NOT STARE INTO BEAM
OUTPUT < 1mW 620~690nm
IEC 60825-1:2014MADE IN CHINA



• Stirra inte direkt in i strålen eller titta direkt med optiska instrument eller still i lasern i ögonhöjd.

• Ta inte isär laserverktyget. Det finns inga delar som användaren kan reparera själv.

• Modifiera inte lasern på något sätt. Modifiering av verktyget kan resultera i farlig exponering för laserstrålning.

• Använd inte lasern i närheten av barn och låt inte barn använda lasern.

• Allvariga ögonskador kan uppstå.

• En exponering för strålen från en klass 2-laser anses vara säker i högst 0,25 sekunder. Ögonlocksreflexer ger normalt tillräckligt skydd.

2.Attention

• When the ambient temperature changes greatly or suddenly, please wait for 20 minutes before using the instrument to make the temperature of the instrument reach a stable state.

• Please avoid electromagnetic fields caused by electric welding and induction heating.

- Please avoid placing the instrument near or on high-temperature objects.
- Please keep the instrument clean and avoid dust from entering the lens barrel.
- Lens cleaning: clean the dust on the lens surface with clean compressed air, and then wipe the surface with a wet cotton swab.
- Do not use solvents to clean the instrument.
- FCC-INFORMATION

FÖRSIKTIGHET: Ändringar eller modifieringar som inte uttyckligen godkänns av den part som ansvarar för efterlevnaden kan upphäva användarens behörighet att använda utrustningen!

Denna enhet uppfyller del 15 av FCC-reglerna. Driften är förenlig för följande två villkor: (1) Denna produkt kan orsaka skadliga störningar. (2) Denna produkt måste acceptera alla mottagna störningar, inklusive störningar som kan orsaka oönskad funktion.

WARNING: Ändringar eller modifieringar av denna produkt som inte uttyckligen godkänns av den part som är ansvarig för efterlevnaden kan upphäva användarens behörighet att använda produkten.

Obs: Denna produkt har testats och bekräftats överensstämma med gränserna för en digital enhet av klass B i enlighet med del 15 av FCC-reglerna. Dessa gränser är utformade för att ge rimligt skydd mot skadliga störningar i en bostadsinstallation.

Denna produkt genererar, använder och kan utstråla radiofrekvensenergi, och om den inte installeras och används i enlighet med instruktionerna kan den orsaka skadliga störningar på radiokommunikation. Det finns dock ingen garanti för att störningar inte kommer att inträffa i en viss installation. Om denna produkt orsakar skadliga störningar på radio- eller tv-mottagning, vilket kan fastställas genom att stänga av och på produkten, uppmanas användaren att försöka korrigera störningen med en eller flera av följande åtgärder.

• Rika om eller flytta mottagningsantennen.

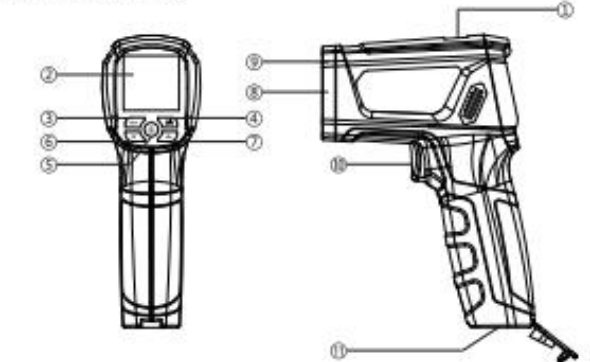
• Öka avståndet mellan produkten och mottagaren.

• Anslut produkten till ett uttag på en annan krets än den till vilken mottagaren är ansluten.

• Rikadiga återförslagen eller en erfaren radio-TV-tekniker för bestånd.

The appearance

3. The appearance



1. K-type thermocouple socket
2. LCD display
3. SET key
4. Max maximum /Min minimum /Avg average /Diff temperature conversion key.
5. Laser control key
6. Up key ▼
7. Down key ▲
8. Laser transmitter
9. Infrared emitter
10. Measurement trigger
11. Battery cover

LCD display

4. LCD display



- 1.Emissivity
- 2.Measurement indication
- 3.Laser indication
- 4.Battery undervoltage indication
- 5.Data locking
- 6.Radiation measurement temperature value
- 7.Temperature unit
- 8.Maximum locking
- 9.Minimum locking
- 10.Average value
- 11.Temperature difference value
- 12.Alarm
- 13.High alarm
- 14.Low alarm
- 15.K-thermocouple temperature

Measuring methods

5. Measuring methods

Put the instrument trigger to light up the screen, long press the SET key to enter the SET mode, and short press the SET key to select Alarm Hi → Alarm Low → () emissivity setting → () temperature setting.

In SET mode: long press the ▲/▼ key to quickly increase or decrease the set value.

1. Alarm Hi: Long press the SET key to enter the Alarm Hi by default. When the value flashes, press the ▲/▼ key to set the required alarm value, and pull the trigger to save the setting. The buzzer sounds an alarm when the measured temperature exceeds the set value.

2.Alarm Low: Long press the SET key to enter the setting, and short press the SET key to change the Alarm Low. When the value flashes, press the ▲/▼ key to set the required alarm value, and pull the trigger to save the setting. The buzzer sounds an alarm when the measured temperature exceeds the set value.

3.Emissivity setting: Long press the SET key to enter the setting, and short press the SET key to switch to () emissivity setting. Then, the instrument emissivity () flashes. Please refer to (emissivity parameter table) and short press the ▲/▼ key for setting the required emissivity value, and pull the trigger to save the setting.

4. Temperature unit setting: Long press the SET key for a long time to enter the setting, and short press the SET key to switch to () unit. The unit symbol () on the display flashes, press the ▲/▼ key to set the required temperature unit, and pull the trigger to save the setting.]

Measuring methods

5. Laser setting:

The laser aiming function can be turned on or off by short pressing () when the instrument screen is on or at the measuring state.

6.MAX maximum measurement: When the instrument screen is on or at the measurement state, short press the Max key to display the MAX symbol on the screen, and the instrument locks the maximum measurement value .

7.MIN minimum measurement: When the instrument screen is on or at the measurement state, short press the MIN key until the Min symbol is displayed on the screen. Then, the instrument locks the minimum measurement value.

8.Avg average measurement: When the instrument screen is on or at the measurement state, short press the MAX key until the screen displays the Diff symbol. Then, the instrument locks the measured temperature difference value.

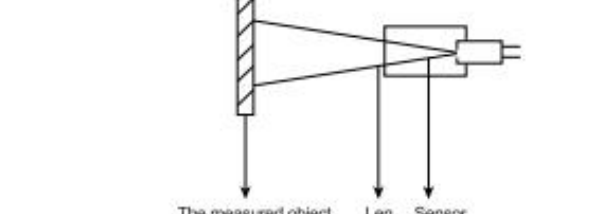
9.Diff temperature difference measurement: When the instrument screen is on or at the measurement state, short press the MAX key until the screen displays the Diff symbol. Then, the instrument locks the measured temperature difference value.

10.K-type thermocouple temperature measurement: Insert the K-type thermocouple plug into the thermocouple socket of the instrument according to the positive and negative signs, and pull the trigger to display the symbol () on the screen. During measurement, the thermocouple probe touches the measured object, and the screen displays the temperature and irradiation temperature of the K-type thermocouple.

The target distance ratio (D:S)

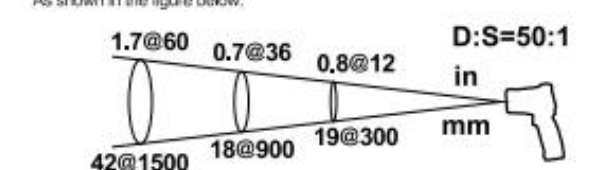
6.The target distance ratio (D:S)

The instrument has a certain visual angle and field of view, as shown in the following figure:



It is necessary to ensure that the measured object fills the field of view of the instrument, that is, the thermometer only "sees" the measured object and "cannot see" other objects. The larger the measured object, the further the measurement distance, the smaller the measured object and the closer the measurement distance. The ratio of the measuring distance to the measured target size is D:S=50:1.

As shown in the figure below:



Emissivity

7.Emissivity

Emissivity is the ability of an object surface to radiate infrared rays. The greater the emissivity, the stronger the radiation ability of the object surface.

The emissivity of most organic or metal oxidized surfaces is between 0.85 and 0.98. The emissivity of this thermometer is 0.95 by default. When measuring, set the emissivity of the thermometer consistent with the emissivity of the measured object. Please pay attention to the influence of emissivity on the measurement results during measurement.

Emissivity reference table

Measured surface	Radiance
Metallic aluminum	
Oxide	0.2~0.4
A3003 alloy (oxidation)	0.3
A3003 alloy (rough)	0.1~0.3
Brass	
Polish	0.3
Oxide	0.5
Copper	
Oxide	0.4~0.8
Electrical terminal board	0.6
Hastelloy B-2	
Oxide	0.3~0.8
Oxide	0.7~0.9
Polished steel plate	0.4~0.6
Polished steel plate	0.1
Zinc (Zn)	
Oxide	0.1
Asbestos	0.95
Sand blast	0.95
Electropolishing	0.15

Emissivity

8.Emissivity

Iron	Oxide	0.5~0.9
	Get rusty	0.5~0.7
Iron (casting)	Oxide	0.6~0.95
	Unoxidized	0.1~0.3
	Fuse and cast	0.2
	Oxide	0.2~0.3
Passivation of iron (forging)plate		0.9
Lead	Electrical terminal board	0.4
	Coarse	0.2~0.6
Nickelalloy	Oxide	0.7~0.95
Molybdenum oxidation		0.2~0.6
Nickel oxidation		0.2~0.5
Platinum black		0.9
	Cold rolling	0.7~0.9
Steel	Polished steel plate	0.4~0.6
	Polished steel plate	0.1
Zinc (Zn)		0.1
Asbestos		0.95
Asphalt		0.95
Basalt		0.7

Emissivity

9.Emissivity

Carbon (unoxidized)		0.8~0.9
Graphite		0.7~0.8
Carbonundum		0.9
Pottery and porcelain		0.95
Clay		0.95
Concrete		0.95
Cloth		0.95
Glass plate		0.85
Gravel		0.95
Plaster		0.8~0.95
Ice		0.98
Limestone		0.98
Paper		0.95
Plastic		0.95
Soil		0.9~0.98
Water		0.93
Wood		0.9~0.95

Technical parameters

8.Technical parameters

Indicator	VA reverse display color screen
D:S	50 : 1
Spectral response	8~14um
Resolution ratio	0.1°C/0.1°F
Emissivity	0.10 ~ 1.00
Laser	< 1mw/620~690 nm Grade 2
Response time	<0.5S
Automatic shut-down	About 35 seconds
Irradiation temperature range	-50°C ~ 1500°C (-58°F ~ 2732°F)
	-50°C ~ 0°C ± 3°C/6°F
	0 ~ 800°C ± (1.5%+2°C)
	800°C ~ 1500°C ± (3%°C)
Illumination accuracy	-10°C ~ 500°C (14°F ~ 932°F)
K-type temperature range	± (1.5% + 2°C/4°F)
K-type accuracy	0 ~ 50°C/10% - 90%RH
Operational environment	-20°C ~ 60°C
Storage temperature	180x120x60mm
Size	2x1.5V AA battery
Power Supply	

Battery replacement

9. Battery replacement

When the battery power is insufficient, the screen displays () undervoltage symbol, and the battery must be replaced. Open the battery cover and replace it with a new 1.5Vx2 AA battery. See the figure below:



Address: Baoshanqu Shuangchenglu 803long 11hao
1602A-1609uh Shanghai
EC REP: SHUNSHUN GmbH, Römeracker 9 22021,
70531 Lindeheim-Hochstetten, Tyskland
UK REP: Pooleas Group Ltd, Enhet 5 Albert Edward House, The
Pavilions Preston, Storbritannien
Importör i USA: Saven Technology Ltd, Suite 250, 9166 Anaheim
Place, Rancho Cucamonga, CA 91730
Tillverkad i Kina

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