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## INTRODUCTION

The Non-Contact Infrared Body Thermometer Operating Instructions intend to provide the necessary information for proper operation of HTD8813C TIE-240 Thermometer model

General knowledge of Infrared Thermometer and an understanding of the features and functions of the HTD8813C Thermometer model are prerequisites for proper use. The Non-Contact Infrared Body Thermometer is a medical device and can be used repeatedly and has a 3-year life expectancy.

Please read the manual first before using it. If the usage is not fully 69 understood, please stop using the the

Do not operate any of the model HTD8813C TIE-240 Thermometer without completely reading and understanding these instructions

NOTE:

Purchase or possession of this device does not carry any express or implied license to use with replacement parts which would, alone or in combination with this device, fall within the scope of one of the relating patents.

# SAFETY INFORMATION

This device may only be used for the purposes described in these instructions. The manufacturer cannot be held liable for damage caused by incorrect application.

The Non-Contact Infrared Body Thermometer is designed to minimize the possibility of hazards from errors in the software program by following sound and light Engineering Design Processes, Risk Analysis and Software Validation.

## WARNING

WARNINGS ARE IDENTIFIED BY THE WARNING SYMBOL SHOWN ABOVE.

- The Non-Contact Infrared Body Thermometer is to be operated by consumers in the home setting and primary care setting as a screening tool. This manual, accessories, direction for use, all precautionary information and specifications should be read before use.
- This product is designed to measure human body temperature on the forehead. DO NOT use it on any other body part. • This product is intended in the home setting and primary care setting as a
- screening tool.
- · DO NOT use the thermometer if it malfunctions or has been damaged in any matter.
- · When the ambient temperature of the thermometer changes too much, such as moving the thermometer from one place of lower temperature to another place of higher temperature, allow the thermometer to remain in a room for 30 minutes where the temperature is between 59°F - 95°F (15°C - 35°C).
- Remove primary batteries if equipment is not likely to be used for a long time. · This product is not waterproof. Do not immerse in water or other liquid for cleaning and disinfection. Please follow the "Care and Storage" section requirements.
- DO NOT touch the sensor of infrared detection with your fingers.
- If a cold compress is used on the forehead when a fever is present or when other measures are used to cool down, the temperature data will be low and will not be accurate when measuring the body temperature.
- · When measuring the human forehead temperature, please select "body" mode For measuring other objects, liquids, food and other temperatures, please select "surface" mode.
- · This product must be operated in a stable environment. Refer to the "Care and Storage" section. • DO NOT use near strong electrostatic or magnetic fields, thus avoiding the impact
- on the accuracy of the measurement data. DO NOT mix old and new batteries to avoid damage to the product.

- The accuracy of the measurement may be affected when the forehead is covered by hair, perspiration, cap or a scarf.
- Measurement results are for reference only. Contact your physician if you have or suspect you have a medical problem.
- A The device should be kept out of the reach of children and pets. When not in use, store the device in a dry room and protect it against extreme moisture, heat, lint, dust and direct sunlight. Never place any heavy objects on top of the thermometer.
- △ DO NOT throw batteries into fire.
- △ Only use recommended batteries. DO NOT use rechargeable batteries
- A This thermometer is not intended to serve as a substitute for the advice of a physician or medical professional.
- △ Do not drop, disassemble or modify the device.
- A Do not use this device if you think it is damaged or notice anything unusual.
- ▲ This device is comprised with sensitive components and must be treated with care. Observe the storage and operating conditions described in the "Technical Specifications" section.
- ▲ While in use, DO NOT touch the battery and the person at the same time.
  ▲ DO NOT use the device if it is damaged, degraded, or loosened in any way. The continuous use of a damaged unit may cause injury, improper results, or serious danger.
- A This equipment needs to be installed and put into service in accordance with the information provided in the ACCOMPANYING DOCUMENTS.

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## **OVERVIEW**

### Intended Use

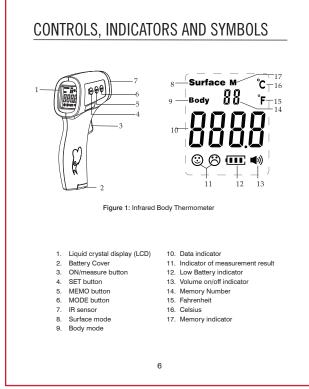
This Non-Contact Infrared Body Thermometer is designed to be used for intermittent measurements and monitoring of the human body temperature by consumers in the home setting and primary care setting as a screening tool.

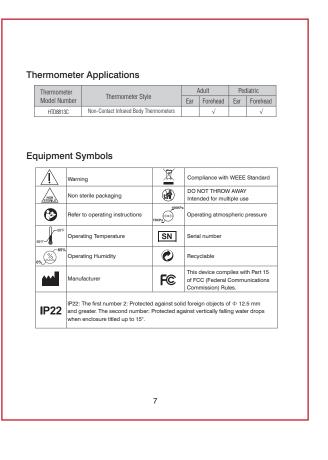
### Description of Non-Contact Infrared Body Thermometer

#### Device principle and introduction

The non-contact thermometer is a hand-held, reusable, battery operated device, which can measure human body temperature on the forehead.

The operation principle is based on Infrared Sensor technology. The IR sensor can output different signals when measuring different object temperature or in different ambient temperature, and the ASIC can turn the signal from IR Sensor to a digital value and display it on the LCD.





# **TECHNICAL SPECIFICATIONS**

| Measurement Unit                       | °C/ °F   |
|--|--|
| Operating mode                         | Adjusted mode(Body mode)<br>Direct mode(surface mode)  |
| Measuring site                         | Forehead   |
| Reference Body Site                    | Axillary   |
| Rated output range                     | Body mode: 35.0°C-42.0°C/95.0°F-107.6°F<br>Surface mode: 0.0°C-100.0°C/32.0°F-212.0°F  |
| Extended output range                  | Body mode: 34.0°C- 34.9°C / 93.2°F-94.8°F, 42.1°C-42.9°C / 107.8°F-109.2°F   |
| Range                                  | Body mode: 34.0°C - 42.9°C / 93.2°F - 109.2°F<br>Surface mode: 0.0°C - 100.0°C / 32°F - 212°F  |
| Accuracy                               | Body mode:<br>34.0°C 34.9°C :±0.3°C / 93.2°F -94.8°F :±0.5°F;<br>35.0°C - 42.0°C :±0.2°C /95.0°F :107.6°F :±0.4°F;<br>42.1°C - 42.9°C :±0.3°C / 107.8°F :109.2°F :±0.5°F;  |
|  | Surface mode:±2.0°C/±3.6°F   |
| Display Resolution                     | 0.1°C/0.1°F  |
| Three-color Backlight<br>(Color Alarm) | 35.5 <sup>7</sup> C : 37.3 <sup>°</sup> C / 95.5 <sup>°</sup> F : 99.1 <sup>°</sup> F : Green (Normal Temperature):<br>37.4 <sup>°</sup> C : 38.0 <sup>°</sup> C (Alarm point) · 93.7 <sup>°</sup> F : 00.4 <sup>°</sup> F : Eldow (Slight Fever)<br>38.1 <sup>°</sup> C - 42.9 <sup>°</sup> C / 100.6 <sup>°</sup> F : 109.2 <sup>°</sup> F : Red/Fligh Fever)<br>Note: L'starfice mode is always with Green backlight.<br>2. In body mode 34.0 <sup>°</sup> C : 35.4 <sup>°</sup> C is with green backlight. |
| Auto Power Off Time                    | ≤18s   |
| Measuring Time                         | ≤2S  |
| Measuring Distance                     | 1CM-5CM(0.4-2in)   |
| Memories                               | 50   |
| Power Supply Requirement               | ~  |
| Batteries                              | 1.5V (AAA) alkaline batteryX2 (IEC Type LR03)  |
| Adaptable Range                        | 2.6V~3.6V  |
| Environmental                          | 2.07-5.07  |
|  |  |
| Operating Condition                    | Operating Temperature: 15.0°C~35.0°C(59.0°F~95.0°F),Relative Humidity ≤85% atmospheric pressure: 70Kpa-106Kpa  |
| Transport and Storage                  | Storage Temperature: -20°C-+55°C / -4 - 131°F, Relative Humidity ≤93%  |

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### Dimension and Weighting

| Weight (without batteries)    | 90g  |
|-------------------------------|--|
| Size                          | L:138mm X W:95mm X H:40mm                                      |
| Compliance                    |  |
| Item                          | Compliant with   |
| Equipment classification      | Safety Standards: EN 60601-1: 2006+A1:2013, EN 60601-1-2: 2007 |
| Type of protection            | Internally powered equipment (on battery power)                |
| Degree of protection          | Non Applied part   |
| Front panel and case labeling | EN ISO15223-1:2012   |
| Temperature                   | EN IS080601-2-56:2012  |
| Home healthcare environment   | EN 60601-1-11:2010   |

# Calculated values of the indicators according to ISO 80601-2-56

| Indicators                             | Calculated value |
|--|------------------|
| Clinical bias, △ <sub>cb</sub>         | -0.027           |
| Standard deviation, $\sigma_j$         | 0.14             |
| Limits of agreement, L                 | 0.26             |
| Clinical repeatability, σ <sub>r</sub> | 0.07             |

Note: the above value is calculated from clinical data of HTD8818A

## Safety classification of ME EQUIPMENT

| Protection against electric shock                                    | Internally powered ME equipment |
|--|---------------------------------|
| Applied part   | Non Applied part                |
| Protection against harmful ingress of water or particulate matter    | IP22                            |
| Mode of operation  | Continuous operation            |
| Note: Not intended to be sterilized. Not for use in an OXYGEN RICH E | NVIRONMENT                      |

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# OPERATION

### Battery installation

- Caution: The Non-Contact Infrared Body Thermometer does not operate with dead batteries and does not input outer power. Install new batteries.
- Pull the battery downward, toward the bottom of the Non-Contact Infrared Body Thermometer and remove the battery access door.
- 2. Install or replace using 2 AAA batteries in the battery compartment according to the "+" and ".".
- 3. Close the battery cover.

## How to Operate

## Before Applying the Thermometer

- Be sure to read and understand all warnings listed in the instructions before use.

  The thermometer is aligned with the middle of the forehead to measure body temperature (between the eyebrows center it above at the forehead level). Keep
- the vertical distance, press the On/Scan button, the temperature will display immediately, see Figure 2.



- Figure 2. Measuring position and distance
- When the ambient temperature of the thermometer changes too much, such as moving the Thermometer from one place of lower temperature to another place of higher temperature, allow the thermometer to remain in a room for 30 minutes where the temperature is between 59°F to 104°F (15°C to 35°C).

- The ambient temperature around the person should be stable, and be away from fan's, air-conditioning vents, and so on.
- When moving the person from one place of lower temperature to another place of higher temperature, the person should remain in the new environment more than 5 minutes, to be consistent with the ambient temperature for the re-measurement.
- Wait at least 1 second for the next measurement. After 5 continuous measurements, it is recommended to wait at least 30 seconds and then continue measurement.
- DO NOT use the thermometer in a place where the sun is strong.
- If for some reason the forehead temperature is low, a body temperature can be taken behind the ears. See Figure 3.

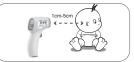


Figure 3: Align behind the ears to take measurement

### General Setup and Use

- To take a measurement
- Turn on the thermometer by pressing the On/measure button. The thermometer will perform a self-test displaying all segments for 2 seconds.
- 2. Align the thermometer with the forehead at the proper distance, and then press the On/measure button to start the measurement.

#### 3. Read the data.

NOTE: You will hear 3 beeps indicating the measurement is complete, and the temperature will be displayed on the screen. The color of the back light will display either red, yellow, or green according to the result. Green - Normal temperature (95.9 - 99.1\*F / 35.5 - 37.3\*C) And the Green means ready for next measurement Yellow - Slight fever (99.2 - 100.4\*F / 37.4 - 38.0\*C) Red - High fever (100.6 - 109.2\*F / 38.1 - 42.9\*C) When the result is a high fever, please consult your doctor or physician.

To ensure the accuracy of the measurement, wait at least 30 seconds after 5 consecutive measurements.

Mode Conversion

When the device is running, pressing the MODE button to cycle between "body" mode and "surface" mode.

"body" mode is used for measuring human body temperature, the "surface " mode is used to measure the surface temperature. (The factory default is "body" mode).

- Recalling and Erasing Memory Data The last temperature taken before the thermometer powers off is stored in memory, up to 50 measurements.
- In the boot or shutdown state, short press the MEMO button to view the history of measured values.
- 2. If there are no memories, the display will show "---°F" or "---°C"
- 3. Temperature readings can be stored in memory. Up to 50 temperature readings
- can be stored into the memory cells and automatically overwrite historical data.
- In boot mode, press and hold the MEMO button until the LCD displays "CLR" and you hear a beep. Once deleted, the memories cannot be restored.
- Parameter Setting

The thermometer can be adjusted according to the subjects of different colors and different environments data to meet the different characteristics of populations or individuals. Long press the MODE button to modify the measurement parameters.

# TROUBLESHOOTING

| MESSAGE  | SITUATION   | SOLUTION   |
|----------|---|--|
| anata ic |   |  |
| Hı<br>Lo | Temperature taken in not within typical<br>human temperature range.<br>(34.0~42.9°C or 93.2°F~109.2°F).   | Make sure the forehead thermometer<br>is for forehead measurement, not<br>other human body site.   |
|          | Measured over the distance:1-5 cm(0.4-2in)  | Optimum measurement distance is 1cm  |
|          | Incorrect test position.  | See figure 2 measuring position and distance   |
| Lo       | Subject's forehead hair, Antipyretic<br>stickers, head with sweat, etc.                                   | Subjects sit quietly 5-10 minutes before<br>the test.  |
| LU       | Some people's body temperature is lower than the general population                                       | The main concern fever temperature   |
|          | F4 overall temperature offset is set incorrectly  | Adjust the temperature offset value  |
| Ērr      | Operating temperature exceeds the range<br>of specified temperature.                                      | Move to a room within the operating<br>range wait 30 minutes before taking<br>temperature.   |
|          | The screen flicker, automatic turn off  | Replace battery or the product has been damaged, needs repairs.  |
|          | Battery capacity is too low. Taking temperature is not allowed.   | Install a new battery  |
| P05      | Ambient temperature changes too fast  | Wait until the ambient temperature is stably.  |
|          | Power is off.     Improper battery installation.     The battery is exhausted.     Display remains blank. | 1. Press ON button again.     2. Check the battery polarity.     3. Replace with a new battery.     4. Contact the retailer or service center. |

1. Unit Set-F1

Under the boot mode long press SET button to enter F1, press the MODE or MEMO button to switch Celsius and Fahrenheit temperature units, and press the SET button to confirm the unit settings (factory default is °F).

2. Fever Alert Set-F2

Under F1 state, press SET button to enter the F2, press the MODE button to decrease 0.1 °C, press the MEMO button plus 0.1 °C, long press to accelerate the speed of temperature regulation, and finally press the SET button to save. (The factory default is 38.1°C)

- Prompt Sound Settings-F3 Under F2 state, short press SET button to enter F3, press MODE or MEMO button to set voice switch, and press the SET button to confirm the settings. (The factory default is the voice prompt to open).
- 4. Overall Temperature Offset Value-F4
  - To meet the different colors and characteristics of the population or the environment caused by seasonal tempurature change, is large that need for temperature detection and debugging.
  - Under F3 state, short press the SET button to enter F4, press the MEMO button to plus 0.1 °C, press the MODE button decrease 0.1 °C, long press fast subtraction temperature, and then SET button to confirm the parameter setting. Parameter adjustment range: -5°C and + 5°C (factory default is 0).
- 5. Exit Setting Mode
  - In the F4 mode, press the SET button and the screen will automatically turn off, exit setting.

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# REPLACING THE BATTERIES

- Replace the batteries if the low battery symbol appears on the display, or when
   any button is pressed and nothing appears on the display.
- Open and release battery cover according to the indicator on the surface of the
  battery cover. Before changing the battery be sure the system is powered off.
- Remove the dead batteries and replace with 2 new AAA alkaline batteries. Make
  sure to align properly as indicated inside the battery cover.
- Slide the battery cover back in until it snaps in place.
- DO NOT dispose of used batteries in household waste. Take them to special local collection sites.
- If the device does not turn on, repeat step 1, take the batteries out, wait 30 seconds, then put them back in. If it still does not turn on, refer to the warranty.

## Warning

- DO NOT RECHARGE, DISASSEMBLE OR DISPOSE OF IN FIRE.
- The typical service life of the new and unused batteries is 2000 measurements for an operation time of 18s.
- Only use the recommended batteries, do not recharge non-rechargeable batteries and do not burn them.
- Remove the batteries if the thermometer is not to be used for a long period.
- Clean contacts on battery and in battery compartment with a soft, dry cloth each time you install batteries.
- Batteries are hazardous waste. DO NOT dispose of them together with household garbage.
- DO NOT dispose of battries in fire. Batteries may explode or leak.
- Recycle or dispose of properly in accordance with local, state, province, and country regulations.

# CLEANING, CARE AND STORAGE

- · The lens is very delicate
- · It is very important to protect the lens from dirt and damage
- Use a clean, soft cloth to clean the surface of the device and LCD. DO NOT use solvents or immerse the device into water or other liquids.
- Always keep the thermometer within the storage temperature range (-4°F to 131°F or -20°C to 55°C) and humidity range (≤93% non-condensing).
- It is recommended to store the thermometer in a dry location free from dust.
   DO NOT expose the thermometer to direct sunlight, high temperature/humidity or any extreme environment, otherwise the function will be reduced.
- When the ambient temperature of the thermometer changes too much, such as moving the thermometer from one place of lower temperature to another place of higher temperature, allow the thermometer to remain in a room for 30 minutes where the temperature is between 59°F to 104°F (15°C to 35°C).

## DISPOSAL

- Recycle or dispose of properly in accordance with local, state, province, and country regulations.
- At the end of its life, the appliance should not be disposed of in household rubbish. Inquire about the options for environment-friendly and appropriate disposal. Follow local ordinances.

## CALIBRATION

The thermometer is initially calibrated at the time of manufacture. If this
thermometer is used according to the use instructions, periodic re-adjustment is
not required. If at any time you question the accuracy of temperature
measurements, please contact Consumer Relations.

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# WARRANTY

HoMedics sells its products with the intent that they are free of defects in manufacture and workmanship for a period of one year from the date of original purchase, except as noted below. HoMedics warrants that its products will be free of defects in material and workmanship under normal use and service. This warranty extends only to consumers and does not extend to Retailers.

To obtain warranty service on your HoMedics product, contact a Consumer Relations Representative by telephone for assistance. Please make sure to have the model number of the product available.

the product available. HolMedics does not authorize anyone, including, but not limited to. Retailers, the subsequent consumer purchaser of the product from a Retailer or remote purchasers, to obligate HolMedics in any way beyond the terms set forth herein. This warranty does not cover damage caused by misuse or abuse; accident; the attachment of any unauthorized accessory; alteration to the product; improper installation; unauthorizer drepairs or modifications; improper use of electrical/power supply; loss of power, dropped product; malfunction or damage of an operating part from failure to provide manufacturer's recommended maintenance; transportation damage; theft; neglect; vandalism; or environmental conditions; repair, or any other conditions whatsoever that are beyond the control of HoMedics.

This warranty is effective only if the product is purchased and operated in the country in which the product is purchased. A product that requires modifications or adoption to enable it to operate in any other country than the country for which it was designed, manufactured, approved and/or authorized, or repair of products damaged by these modifications is not covered under this warranty.

COVERED UNDER THIS WARRANT. THE WARRANTY PROVIDED HEREIN SHALL BE THE SOLE AND EXCLUSIVE WARRANTY. THERE SHALL BE NO OTHER WARRANTIES EXPRESS OR IMPULED INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS OR ANY OTHER OBLIGATION ON THE PART OF THE COMPANY WITH RESPECT TO PRODUCTS COVERED BY THIS WARRANTY. HOMEDICS SHALL HAVE NO LIABILITY FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES. IN NO EVENT SHALL THIS WARRANTY. REQUIRE MORE THAN THE REPAR OR REPLACEMENT OF ANY PART OR PARTS WHICH REQUIRE MORE THAN THE REPAR OR REPLACEMENT OF ANY PART OR PARTS WHICH ARE FOUND TO BE DEFECTIVE WITHIN THE EFFECTIVE PERIOD OF THE WARRANTY. NO REFUNDS WILL BE GIVEN. IF REPLACEMENT PARTS FOR DEFECTIVE MATERIALS ARE NOT AVAILABLE, HOMEDICS RESERVES THE RIGHT TO MAKE PRODUCT SUBSTITUTIONS IN LIEU OF REPAIR OR REPLACEMENT.

This warranty does not extend to the purchase of opened, used, repaired, repackaged and/or resealed products, including but not limited to sale of such products on Internet auction sites and/or sales of such products by surplus or bulk resellers. Any and all warranties or guarantees shall immediately cease and terminate as to any products or parts thereof which are repaired, replaced, altered, or modified, without the prior express and written consent of HoMedics. This warranty provides you with specific legal rights. You may have additional rights which may vary from state to state. Because of individual state regulations, some of the above limitations and exclusions may not apply to you.

For more information regarding our product line in the USA, please visit: www.homedics.com

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# EMC DECLARATION

 This equipment needs to be installed and put into service in accordance with the information provided in the ACCOMPANYING DOCUMENTS;

This product needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided, and this unit can be affected by portable and mobile RF communications equipment.

- DO NOT use a mobile phone or other devices that emit electromagnetic fields, near the unit. This may result in incorrect operation of the unit.
- CAUTION: this unit has been thoroughly tested and inspected to assure proper performance and operation!
- CAUTION: this machine should not be used adjacent to or stacked with other equipment and that if adjacent or stacked use is necessary, this machine should be observed to verify normal operation in the configuration in which it will be used.

| Guida   | nce and manufactu | re's declaration - electromagnetic emission  |
|---|-------------------|--|
|   | low. The customer | er is intended for use in the electromagnetic<br>of the user of the Non-Contact Infrared Body<br>I such an environment.  |
| Emission test   | Compliance        | Electromagnetic environment – guidance   |
| RF emissions CISPR 11                                       | Group 1           | The Non-Contact Infrared Body Thermometer use RF<br>energy only for its internal function. Therefore, its RF<br>emissions are very low and are not likely to cause any<br>interference in nearby electronic equipment. |
| RF emission CISPR 11  | Class B           |  |
| Harmonic emissions<br>IEC 61000-3-2                         | Not applicable    | The Non-Contact Infrared Body Thermometer is suitable<br>for use in all establishments, other than domestic and<br>those directly connected to the public low-voltage power  |
| Voltage fluctuations/<br>flicker emissions<br>IEC 61000-3-3 | Not applicable    | supply network that supplies buildings used for domestic<br>purposes.  |

|  | act Infrared Body The  | ermometer is ir            | electromagnetic immunity<br>itended for use in the electromagnetic   |
|--|--|----------------------------|--|
|  | cified below. The custon<br>at it is used in such an en  |                            | f Non Contact Infrared Body Thermometer  |
| Immunity test  | IEC 60601 test level   | Compliance level           | Electromagnetic environment - guidance   |
| Electrostatic<br>discharge (ESD)<br>IEC 61000-4-2  | ±6 kV contact<br>±8 kV air   | ±6 kV contact<br>±8 kV air | Floors should be wood, concrete or cerami<br>tile. If floor are covered with synthetic materia<br>the relative humidity should be at least 30%.  |
| Electrical fast<br>transient/burst<br>IEC 61000-4-4  | ±2 kV for power supply lines<br>±1 kV for input/output lines   | Not applicable             | Mains power quality should be that of a typica<br>commercial or hospital environment.  |
| Surge<br>IEC 61000-4-5   | ± 1 kV line(s) to line(s)<br>± 2 kV line(s) to earth   | Not applicable             | Mains power quality should be that of a typica<br>commercial or hospital environment.  |
| Voltage dips, short<br>interruptions and<br>voltage variations<br>on power supply<br>input lines<br>IEC 61000-4-11 | $\begin{array}{l} <5\% \ U_{\gamma} \left( >95\% \ dip \ in \ U_{\gamma} \right) \\ for 0.5 \ cycle \\ 40\% \ U_{\gamma} (60\% \ dip \ in \ U_{\gamma}) \\ for 5 \ cycles \\ 70\% \ U_{\gamma} (30\% \ dip \ in \ U_{\gamma}) \\ for 25 \ cycles \\ <5\% \ U_{\gamma} \left( >95\% \ dip \ in \ U_{\gamma} \right) \\ for 5 \ sec \end{array}$ | Not applicable             | Mains power quality should be that of<br>typical commercial or hospital environmen<br>If the user of the Nor-Contact Infrared Bod<br>Thermometer requires continued operatio<br>during power mains interruptions. It i<br>recommended that the Non-Contact Infrare<br>Body Thermometer be powered from a<br>uninterruptible power supply or a battery. |
| Power frequency<br>(50Hz/60Hz)<br>magnetic field<br>IEC 61000-4-8  | 3 A/m  | 3 A/m                      | Power frequency magnetic fields should b<br>at levels characteristic of a typical locatio<br>in a typical commercial or hospitz<br>environment.  |

| The Non-Cont   | act Infrared Body The  | ermometer is inter   | ided for use in the electromagnetic environment   |
|--|--|--|---|
|  | w. The customer or the<br>in such an environme   |  | ontact Infrared Body Thermometer should assure  |
|  | IEC 60601 test level   | 1  | Electromagnetic environment - guidance  |
| Conducted RF<br>IEC 61000-4-6  | 3 Vrms<br>150 kHz to 80 MHz  | Not applicable   | Portable and mobile RF communications equipment<br>should be used no closer to any part of the Non-Conta<br>Infrancel BocyThermometer, including cables, than the<br>recommended separation distance calculated from the<br>equation application to the frequency of the transmittee<br>Recommended separation distance<br>$d=1.2\sqrt{p}$ 80 MHz to 800 MHz<br>$d=2.2\sqrt{p}$ 80 MHz to 25 GHz  |
| Radiated RF<br>IEC 61000-4-3   | 3 V/m<br>80 MHz to 2.5 GHz   | 3 V/m  | Where P is the maximum output power rating of the<br>tunsmitter in value (N) according to the transmitter<br>manufacturer and d is the recommended separatio<br>distance in metres (m).<br>Field strengthe from faced RF transmitters, a<br>determined by an electromagnetic site survey should<br>be less than the compliance level in each frequency<br>range <sup>6</sup><br>Interference may occur in the vicinity of equipment<br>marked with the following symbol: <sup>6</sup> |
|  | 1<br>30 MHz and 800 MHz,<br>rse guidelines may not   |  | icy range applies.<br>ions. Electromagnetic propagation is affected by  |
|  | l reflection from struc  |  |   |
| and land mob<br>predicted theo<br>transmitters, a<br>location in wh<br>compliance lev<br>normal operati<br>re-orienting or | ile radios, amateur r<br>pretically with accura<br>n electromagnetic site<br>nich the Non-Contact<br>vel above, the Non-Co<br>ion. If abnormal perfor<br>relocating the Non Co | radio, AM and FM<br>acy. To assess the<br>e survey should be<br>Infrared Body TI<br>ontact Infrared Bo<br>rmance is observe-<br>ontact Infrared Bo | *   |
| h. Over the free   | uency range 150 kHz  | to 80 MHz, field st  | rengths should be less than 3 V/m.  |

| radiated RF disturbances are<br>can help prevent electromage                   | controlled. The customer or<br>tetic interference by maintain<br>(transmitters) and the Non | ed for use in an electromagn<br>the user of the Non-Contact I<br>ing a minimum distance betw<br>Contact Infrared Body Therr<br>munications equipment. | nfrared Body Thermometer<br>een portable and mobile RF |
|--|---|---|--|
| Rated maximum output   | Separation distance   | according to frequency of   | transmitter (m)  |
| power of transmitter(W)  | 150 KHz to 80 MHz<br>d=1,2√p  | 80 MHz to 800 MHz<br>d=1,2√p  | 800 MHz to 2.5 GHz<br>d=2,3√p                          |
| 0.01   | 0.12  | 0.12  | 0.23   |
| 0.1  | 0.38  | 0.38  | 0.73   |
| 1  | 1.2   | 1.2   | 2.3  |
| 10   | 3.8   | 3.8   | 7.3  |
| 100  | 12  | 12  | 23   |
| the transmitter manufactu<br>NOTE 1 At 80 MHz and 8                            | rer.<br>00 MHz, the separation di<br>s may not apply in all situ                            | -<br>stance for the higher freque<br>lations. Electromagnetic pr  |  |
| the transmitter manufactu<br>NOTE 1 At 80 MHz and 8<br>NOTE 2 These guideline: | rer.<br>00 MHz, the separation di<br>s may not apply in all situ                            | -<br>stance for the higher freque<br>lations. Electromagnetic pr  | ency range applies.                                    |
| the transmitter manufactu<br>NOTE 1 At 80 MHz and 8<br>NOTE 2 These guideline: | rer.<br>00 MHz, the separation di<br>s may not apply in all situ                            | -<br>stance for the higher freque<br>lations. Electromagnetic pr  | ency range applies.                                    |
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