AIRSSENTIAL HOME
Health Care Solutions

LifeTemp® Radient®
Non-Contact Thermometer

Instruction Manual

Read this manual carefully before use to understand all operational and safety information.

This manual contains important information for the safe and effective use of the Airssential LifeTemp Radient Non-Contact Thermometer. Keep this manual in a safe place for future reference. If you do not understand any part of these instructions, contact the Airssential Customer Care Centre on (02) 9708 5560.

Model: AI-RADTH

Contents

Introduction

Congratulations on the purchase of your new Airssential LifeTemp Radient Non-Contact Thermometer. This device is a precision instrument that hygienically and accurately records temperature in a safe and non-invasive manner.

The LifeTemp Radient thermometer integrates advanced technology and ergonomic design to produce an efficient device for temperature monitoring that eliminates the inconvenience associated with other thermometry methods and easily addresses the issue of disobliging patients whether they be infants or adults. The LifeTemp Radient Thermometer is clinically validated for accuracy and provides precise temperature readings in less than 2 seconds. This thermometer has the capacity to store up to 32 measurements in memory.

The LifeTemp Radient Thermometer can be conveniently used for recording either body or ambient surface temperatures (like the temperature of bath water or an infant's feeding bottle) and is Bisphenol-A (BPA) free eliminating any potential health concerns associated with this chemical, during the device's use.

Statement of Intended Use

The LifeTemp Radient Non-Contact Thermometer is intended for the measurement and monitoring of human body temperature. This thermometer has been clinically tested and proven to be accurate and safe to use on all patients, irrespective of age, when used in accordance with this instruction manual. This thermometer is suitable for clinical or home use.

The LifeTemp Radient Non-Contact Thermometer may also be used for the measurement of ambient surface temperatures within the home. It can measure temperature of bath water, infants feeding bottle, air temperature and other applications.

LifeTemp Radient Thermometer
Components & Accessories

Unpacking Your LifeTemp Radient Thermometer

Remove the thermometer from the carton and carefully examine the contents (Radient Thermometer, User manual and two AAA batteries) to ensure all listed items are in the carton and undamaged. Report anything missing or damaged to the point of purchase.

⚠ **Retain carton and packing materials for use in shipping or storing the thermometer.**

⚠ **Caution: This product contains batteries which may be hazardous to small children. Do not let small children handle this product.**

Identification of the Thermometer's Parts

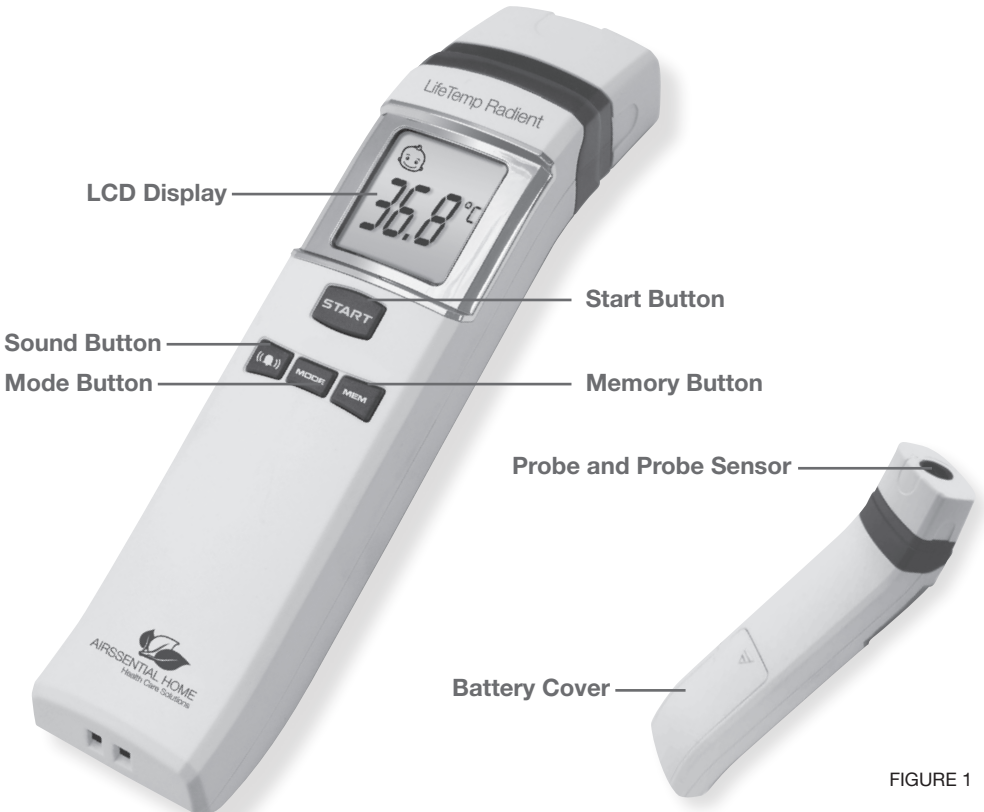Essential parts of the thermometer are described in Figure 1:

LCD Display

Start Button

Sound Button

Mode Button

Memory Button

Probe and Probe Sensor

Battery Cover

FIGURE 1

Thermometer Functions

The functions of the thermometer's essential parts are described in Figure 2.

Button	Function(s)
START	Switching the device on / starting temperature measurement
((🔔))	Setting the accoustic signal (On/Off)
MODE	Setting the measurement method
MEM	Displaying stored measurements (max 32)
MODE + **MEM**	Setting the measurement units (°C/°F)

Display	Meaning
👶	In body temperature mode
🌡	In object temperature mode
📋	Memory mode
🔋	Low battery indicator - change the batteries immediately

FIGURE 2

User Precautions

1. This thermometer has been clinically tested and found to be accurate and safe, when used in accordance with this instruction manual, for all patients irrespective of age. To avoid any harmful situation, this device should not be operated unsupervised by children and used only for the purposes described in this instruction manual.

2. This thermometer is unsuitable for use in the presence of flammable anaesthetics or oxygen.

3. The thermometer should be stored at an ambient temperature between 15°C-40°C (59°F-104°F) and be protected from direct sunlight, dust and pollutants.

    If the thermometer is not stored within the specified ambient temperature range, allow the thermometer 30 minutes to equilibrate with room temperature before use.

    WAIT 30 MINS

4. The probe sensor is the most delicate part of this thermometer (See Figure 1) and must be kept clean and undamaged to ensure accuracy. Do not drop this instrument.

5. Do not insert any foreign objects inside the thermometer's probe sensor as this will cause a malfunction. Do not touch the probe's lens with your fingers.

6. Never splash or soak this device in any liquid including water.

7. Should a fault occur with the thermometer, do not disassemble or attempt to repair the device as this will void the warranty. Please contact the Airssential Customer Service Centre on (02) 9708 5560 for service.

Preparing for First Use

Before using this thermometer, please follow the instructions below to insert the supplied batteries and adjust the device's settings to your requirements.

Installing Batteries

To install fresh batteries in this thermometer:

1. Open the battery compartment on the back of the thermometer, by sliding down the battery compartment lid, as shown in Figure 3.

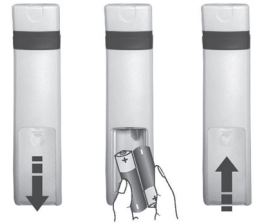2. Remove the old batteries and ensure their proper disposal.

FIGURE 3

⚠ **Used Batteries are hazardous waste and should not be disposed of with normal household waste.**

3. Insert two new AAA (LR03) batteries into the thermometer, ensuring that their polarities are correctly positioned, as illustrated inside the battery compartment. Close the battery compartment.

4. If the thermometer is to be unused for extended periods remove the batteries. Leaky batteries can damage your thermometer.

⚠ **Caution: This product contains batteries which may be hazardous to small children. Do not let small children handle this product.**

Setting Thermometer Parameters

Starting the Thermometer

To activate the thermometer, briefly press the **START** or **MODE** button.

The thermometer will perform a self test routine and display all digital segments on the LCD screen. Within two seconds, the display changes to show three dashes indicating that the thermometer is now ready for use.

⚠ **The thermometer always starts in body temperature mode as depicted by the baby face icon [icon] in the top left hand corner of the LCD screen.**

Setting the Measurement Unit

The Radient Thermometer provides temperature measurement in either the: Celsius (°C) or Fahrenheit (°F) scales as preferred. The initial reading will be in Celsius (°C). To change temperature scale, press the **MODE** and **MEM** buttons simultaneously until the thermometer beeps (approx. 4 seconds).

⚠ **The thermometer will change to measure in the alternate temperature scale and will maintain the new setting until again altered.**

Setting the Measurement Completion Sound

To silence the measurement completion sound (the beep), press the Sound ((🔔)) button when the thermometer is on. Each time the sound button is pressed, the measurement completion sound will be switched on or off.

After pressing the Sound button, if the LCD screen displays the On symbol, the thermometer will emit the measurement completion sound.

Alternatively, after pressing the Sound button, if the LCD screen displays the OFF symbol, the thermometer will be in silent mode.

⚠ **The thermometer will not maintain this setting change. The measurement completion sound will be restored to "on" when the thermometer is next activated.**

Using the LifeTemp Radient Non Contact Thermometer

Measuring Body Temperature

Start the thermometer, by pressing either the START or MODE button.

⚠ **The thermometer always starts in body temperature mode as confirmed by the baby face icon 😊 in the top left hand corner of the LCD screen.**

With the thermometer now on, bring it to a distance of 2cm to 3cm from the patients skin, and press the START button. Maintain this distance until the measurement completion sound is heard. If the thermometer is in silent mode maintain the distance for approximately 2 seconds. The ideal temperature measuring point is the temporal artery, between the hairline and eyebrow. See Figure 4.
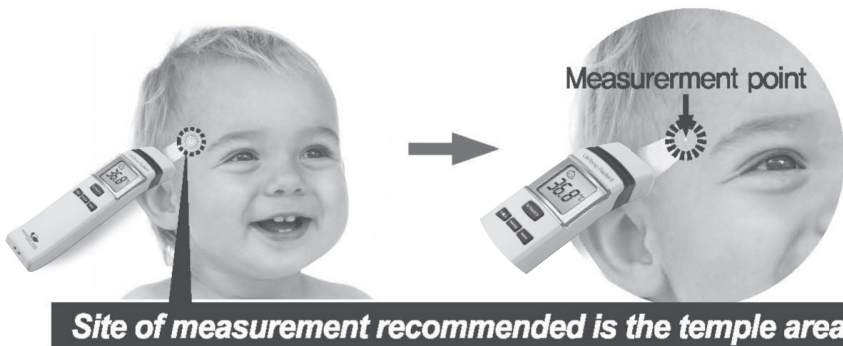

Measurerment point

Site of measurement recommended is the temple area

FIGURE 4

⚠️ **If there is perspiration on the forehead wipe the area dry before taking a temperature measurement.**

Do not take temperature readings on areas where scars or skin disorders (eczema, dermatitis, etc) are evident.

During temperatures measurement it is important that patients remain still. Movement during the measurement procedure can result in an inaccurate reading.

Temperature measurements vary according to the measurement site. If several readings are taken consecutively at different points on the forehead the manufacturer recommends accepting the highest reading as correct.

If consecutive readings are to be taken, please wait 5 seconds between readings to ensure the thermometer resets itself. Also ensure that the thermometer maintains a 2cm - 3cm distance from the temple while the reading is being taken, otherwise room temperature will be combined into the measurement and provide inaccurate readings.

Once the measurement is completed, the LCD screen illuminates and the result is displayed, on either a green or a red background. The recorded body temperature is automatically stored in memory.

A recorded body temperature, displayed on a green illuminated screen indicates the result is inside the thermometer's operational range of 22°C - 37.9°C (71.6°F - 100.2°F).

A recorded body temperature, displayed on a red illuminated screen indicates the result is outside the above range. If the recorded body temperature is between 38°C and 42.5°C it will display on a red illuminated screen. If it is above 42.5°C it will display on the red illuminated screen as only the Hi symbol. If it is below 22°C it will display on the red illuminated screen as only the Lo symbol.

In object mode, an illuminated red screen displays when the thermometer, records a temperature outside its operating temperature range of 10°C - 80°C (50°F - 176°F).

⚠️ **The thermometer should be stored at 15°C - 40°C (59°F - 104°F) to be within its operating temperature range. If the thermometer's temperature is outside this temperature range the Err icon will display. Allow the thermometer 30 minutes to equilibrate with room temperature before use.**

Normal Body Temperature

Normal body temperature is unique to each individual and varies within an individual range. The normal ranges for temperature measurements, taken from the ear canal, vary with age as follows:

0 to 2 years ....36.4°C to 38.0°C
3 to 10 years ....36.1°C to 37.8°C
11 to 65 years...................35.9°C to 37.6°C
Over 65 years ....35.8°C to 37.5°C

Each person's normal temperature may be defined by measuring body temperature several times during a day when illness is absent. Record these readings for future reference to use for comparison when a fever may be suspected.

Seek medical help, regarding the fever, when:

• The child is less than 6 months old
• The child refuses to drink
• The fever rises above 38.5°C or persists for more than 48 hours
• Other symptoms appear, including difficulty in swallowing, ear tugging, rash, etc.

As temperature varies according to the site used to take the measurement, readings taken from different body sites cannot be directly compared.

Measuring Object Temperature

Press the **START** or **MODE** button to start the device. As the thermometer always starts in the body temperature setting press the **MODE** button and the thermometer will switch to object temperature mode.

FIGURE 5

The appearance of the object icon on the screen, confirms that the thermometer has switched to the object temperature mode. See Figure 5.

Hold the thermometer 2 to 3cm from the desired object and press the **START** button. Maintain the distance until the measurement completion beep sounds, or for approximately 2 seconds if the thermometer is in silent mode. See Figure 6.

FIGURE 6

The temperature is now visible on the LCD display. See Figure 7.

⚠ **The recommended serving temperature for baby formula or milk is the same as body temperature approximately 37°C to 38°C.**

Object temperatures are not stored in memory.

FIGURE 7

Recalling Stored Measurements

This thermometer can store 32 readings in memory. To recall temperature values from memory briefly press the START or MODE button to activate the device.
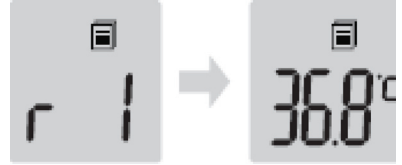

FIGURE 8

Now press the MEM button and the last measurement is displayed. See Figure 8. Each additional press of the MEM button recalls the next most recent measurement. The number in the display indicates how many measurements ago this reading was taken.

After 30 seconds of idling, the thermometer returns to body temperature mode, and is again ready for use.

⚠ **This device only stores measurements made in body temperature mode.**

LCD Display and Measurement Error Messages

The table below provides a summary of error messages and their meanings, that may occur during the use of this thermometer.

Error Message	Problem	Solution
Err	The temperature of the device is outside its operating range.	Operating temperature for this device is 15°C - 40°C (59°F - 104°F)
Hi	The temperature of the measuring point is above the measurement range.	Device Measurement Ranges: Body Temperature: 22°C - 42.5°C (71.6°F - 108.5°F)
Lo	The temperature of the measuring point is below the measurement range.	Object Temperature: 10°C - 80°C (50°F - 176°F)
	If this symbol remains after the thermometer is activated, the batteries are weak and require replacement.	Change both batteries
188.8 °C °F	This display appears briefly after changing the batteries	

Cleaning and Storage

The most delicate part of this thermometer is the probe sensor (refer to Figure 1) which must be kept clean and undamaged to ensure accuracy. Do not touch the probe sensor with your fingers.

1. To clean the probe's sensor or the thermometer's exterior, use a gauze swab, moistened with water and alcohol and carefully wipe the casing or probe area. Ensure no liquid enters the interior of the thermometer. Do not clean the thermometer with organic solvents (such as thinners, acetone, etc) or abrasive cleaners. Never splash or soak this thermometer in any liquid including water.

2. Ensure no debris from the swab remains in the probe aperture after cleaning. Do not insert any foreign objects inside the probe aperture as this may scratch or damage the sensor and cause it to malfunction.

3. The thermometer should be stored at an ambient temperature between 16°C - 40°C (60.8°F - 104°F) and be protected from direct sunlight, dust and pollutants.

4. This thermometer is intended for indoor use and should not be exposed to extreme environmental conditions which include temperatures below -20°C or above 50°C or a relative humidity above 95% (≥ 95%RH).

5. Ensure not to drop the thermometer, as it is neither shockproof nor impact resistant.

Device Certifications

CE 0120 The LifeTemp Radient Thermometer is a Class IIa Medical Device. In compliance with the European standard, this device bears the CE conformity mark of the Medical Devices Directive and complies with the following reference standards:

IS0 13485	2003	Medical devices - Quality management system – Requirements for Regulatory Purposes
IS0 9001	2008	Quality systems - Model for quality assurance In Design, Development, Production, Installation and Servicing.
ISO 14971	2007	Medical Devices - Application of Risk Management to Medical Devices
EN 60601-1	1990/A13:1996	Medical electrical equipment – Part 1: General Requirements for Safety
EN 60601-1-2	2007	Medical electrical equipment – Part 1-2: General Requirements for Safety – Collateral Standard: Electromagnetic Compatibility – Requirements and Tests
EN 60601-1-4	1996/A1:19M	Medical electrical equipment – Part 1-4: General Requirements for Safety – Collateral Standard: Programmable Electrical Medical Systems
EN 12470-5	2003	Clinical Thermometers – Part 5: Performance of Infrared ear thermometers
EN 980	2008	Graphical Symbols for use in the Labelling of Medical Devices.
EN 1041	2008	Information supplied by the manufacturer of medical devices.
ASTM E 1965 - 98	2003	Standard Specification for Infrared Thermometers for Intermittent Determination of Patient Temperature

This thermometer complies with the RoHS (Restriction of the use of certain Hazardous Substances) Directives 2002/95/EC and 2002/96/EC of the European Parliament, 2003. These directives restrict the marketing of electronic equipment containing heavy metals or compounds and set standards for the disposal of Waste Electrical and Electronic Equipment (WEEE) to lessen the impact on our health and the environment.

Disposal

Waste electrical products should not be disposed of with household waste. If this thermometer is no longer required or it is no longer serviceable, dispose of the device and its accessories in compliance with local regulations. Please recycle where facilities exist.

Check with your local Council for recycling information.

Warranty and Service

The LifeTemp Radient Non-Contact Thermometer is covered by a warranty offered by Airssential Home Health Care Solutions ("Airssential"), a division of Boian Surgical Pty Ltd., to the original purchaser of the product. Proof of purchase is required to substantiate warranty claims.

Airssential warrants that for a period of two years from the date of purchase, this product will be free from defects in material and workmanship. Airssential, at its option, will repair or replace this device if found to be defective during the warranty period, provided the product has been used in accordance with the instructions. If the product is no longer available, replacement may be made with a similar product. Airssential shall not be liable for any incidental or consequential damages caused by the breach of any express or implied warranty.

This warranty excludes the repair or replacement of parts due to normal wear, damage due to improper usage or accidental user damage. Freight costs associated with all warranty claims or service requests will be borne by the consumer.

Do not disassemble this device, as it cannot be serviced at home. Unauthorised disassembly of this device will void the warranty. An authorised dealer must perform all repairs to ensure product safety.

If service is required, contact the Airssential Customer Care Service Centre to arrange service on (02) 9708 5560. Send this device, together with proof of purchase and a cheque or money order for $9.90 to cover return shipping and insurance to Boian Surgical Pty. Ltd, 122 Gow St., Padstow, NSW, 2211. Please include your name, address and a contact telephone number with your request.

Technical Specifications

Power:	3V DC (Two AAA (LR03) Battery 1.5V)
Measurement Method:	Infrared (IR) Non-Contact Measurement
Button Functions:	Switch for body or object temperature
	Switch for preferred temperature scale (°C or °F)
	Switch for optional on/off Sound control
	Memory recall
Operating Conditions:	Temperature: 16°C to 40°C (60.8°F to 104°F)
	Humidity: < 95% RH
	Atmospheric Pressure: 70-106 kPa
Measurement Distance:	2cm to 3cm from temporal area or object
Measurement Range:	*Body temperature:* 22°C to 42.5°C (71.6°F to 108.5°F)
	Accuracy: ± 0.2°C (36°C – 39°C)
	Other accuracy: ± 0.3°C
	Object temperature: 10°C to 80°C (50°F to 176°F)
	Accuracy: ± 2°C
Measurement Time:	Less than 2 seconds, continuous measurement
Resolution:	0.1°C
Mode Selection:	Body temperature: Object temperature
Memory Capacity:	Automatic storage for up to 32 body temperature results
Sound:	Button Sound, Measuring Sound and Result Sound
	Sound can be activated or deactivated by alternately pressing the Sound Button
Screen:	Liquid Crystal Display (mono LCD)
Display Icons:	Body or Object Temperature Mode
	Memory Location
	Temperature Reading (°C or °F)
	Low Battery Warning
	Hi / Lo signals when the temperature is not within the measurable range
Backlight:	Red/Green backlight active for 3 seconds after measurement, then automatic shut-off
Power Saving:	Auto Power-Off 1 minute after last operation
Life Expectancy:	More than 5,000 measurements
Size:	152mm (W) x 36mm (D) x 37mm (H)
Weight:	68g (without batteries)
Transport & Storage Conditions:	-20°C to 50°C (-4°F to 122°F)
	Humidity: < 95% RH
	Atmospheric Pressure: 70-106 kPa
Shock Protection:	🧍 Type B

Specifications are subject to change without notice.

Symbols Used In This Manual

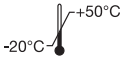⚠   Caution - Consult Instructions for Use

🧍   Type B applied part

🗑   Battery Recycling/Environment Protection

🏭   Manufacturer

📖ℹ   Please read the instructions for use

+50°C / -20°C   Temperature Limitation

Appendix 1

Guidance and Manufacturer's Declaration – Electromagnetic Emissions

The thermometer is intended for use in the electromagnetic environment specified below. The customer or the user of the thermometer should assure that it is used in such an environment.

Emissions Test	Compliance	Electromagnetic Environment – Guidance
RF emissions CISPR 11	Group 1	The thermometer uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class A	The thermometer is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Not applicable	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Not applicable	

Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment – Guidance
Conducted RF IEC 61000-4-6 Radiated RF IEC 61000-4-3	3 Vrms 150 kHz to 80 MHz 3 V/m 80 MHz to 2,5 GHz	Not applicable 3 V/m	Portable and mobile RF communications equipment should be used no closer to any part of this thermometer, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = 1{,}2 \sqrt{P}$ $d = 1{,}2 \sqrt{P}$ 80 MHz to 800 MHz $d = 2{,}3 \sqrt{P}$ 800 MHz to 2,5 GHz where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, a should be less than the compliance level in each frequency range b. Interference may occur in the vicinity of equipment marked with the following symbol: $\left(\left(\left(\cdot\right)\right)\right)$

NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.
NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

a. Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the thermometer is used exceeds the applicable RF compliance level above, the thermometer should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the thermometer.

b. Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment – Guidance
Electrostatic discharge (ESD) IEC 61000-4-2	6 kV contact 8 kV air	6 kV contact 8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast transient/burst IEC 61000-4-4	2 kV for power supply lines 1 kV for input/ output lines	Not applicable	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	1 kV line(s) to line(s) 2 kV line(s) to earth	Not applicable	Mains power quality should be that of a typical commercial or hospital environment.
Interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5 % UT (>95 % dip in UT) for 0,5 cycle 40 % UT (60 % dip in UT) for 5 cycles 70 % UT (30 % dip in UT) for 25 cycles <5 % UT (>95 % dip in UT) for 5 sec	Not applicable	Mains power quality should be that of a typical commercial or hospital environment. If the user of the TH8xyz series requires continued operation during power mains interruptions, it is recommended that the TH8xyz series be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

NOTE: UT is the a.c. mains voltage prior to application of the test level.

Appendix 2

Recommended separation distances between portable and mobile RF communications equipment and the ME EQUIPMENT or ME SYSTEM

The thermometer is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the thermometer can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the thermometer as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter M		
	150 kHz to 80 MHz d = 1,2 √P	80 MHz to 800 MHz d = 1,2 √P	800 MHz to 2,5 GHz 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

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

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