## **TM** °Celsiu

### Wearable Temperature Sensor with Continuous Monitoring

# On/Off Button **Battery Compartment** Temperature Sensor

## **User Manual**

### Contents

- 1. Accessories
- 2. Intended Use
- 3. Application
- 4. Getting Started
- 5. Additional Details for Wearing
- 6. Operating Instructions
- 7. Troubleshooting
- Maintenance & Preservation 9. Cleaning & Disinfection
- 10. Important Precautions
- 11. Technical Specifications
- 12. Functional Description 13. Definitions of Symbols
- 14. Disclaimer
- 16. Declaration

15. Caution

- 17. Copyright Statement
- 18. Standard Warranty Information
- 19. Appendix
  - 20. Purchasing Record for Celsium™

### **Definitions**

Sensor: Celsium™ wearable thermometer.

Smart Phone/Tablet: Smart mobile device that runs the Celsium™ app and receives a Bluetooth signal from the sensor.

2. Intended Use

### 1. Accessories

- 1. One CR2025 battery
- 2. One battery tool 3. Medical patches (1 box)
- - 4. User manual 5. Warranty card
  - 6. Certificate of competency

### The wireless sensor is a battery-

operated electronic device with the intended use of measuring and monitoring human axillary temperature continuously and transmitting the results via wireless signal.

## 3. Application

The sensor is reusable and intended for temperature measurement of adult and paediatric (ages two years and over). It can be used in hospital and at home. Not suitable for ICU or other emergency situations.

## 4. Getting Started

### 1. Insert the battery

Prepare new sensor

Pull to open the battery compartment, discard the "pull" tab.





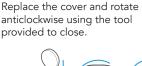
Place the battery into the opening,

making sure it is the correct way up

with the positive side facing upwards.

Insert the Battery

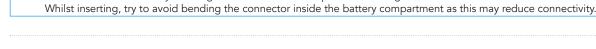




Closing the battery compartment







### If you need to change battery: Use the battery tool and rotate clockwise

to open then follow Step 2.



### 2. Download the app

- 1. Go to app Store or Google Play and search "Celsium". Download Celsium<sup>™</sup> app.





### 3. Setting up the Connection

- 1. Turn on your smart phone or tablet and ensure Bluetooth is turned on. Make sure the smart phone or tablet is connected to the Internet. 2. Switch on the temperature sensor (press the button for more than 2 seconds.
- A single LED blink indicates power is on.) 3. Open the Celsium<sup>™</sup> app on the smart phone or tablet and sign up, or sign in if already signed up.
- 4. Swipe your finger downwards on the screen where indicated. 5. The app should automatically pick the sensor up (otherwise choose
- the sensor on the list of identified serial numbers). 6. Wait for any readings to be synchronised.
- 7. The temperature readings will now appear. If it does not, please refer to our FAQs which can be found on our website www.celsium.com. This will help you resolve any issues.
- 4. Wearing Preparation Step 1



Remove the cover



Step 2:

compartment. Make sure that the sensor is in the middle of the patch.

Place the back of the sensor onto the

surface of the patch - the back of the sensor is where you found the battery

Step 3:

should be used.

a new patch is required.

Hold arm against side, it can

take up to 8 minutes for the

temperature to stabilise.



Smart Phone/Tablet





within 5 metres/16 feet

#### Step 1: Lift the arm naturally



website for further instructions on this.

Apply the sensor horizontally, just below

the natural crease of the armpit. See our

Step 2



37.20°C/98.96°F Note: To avoid disconnections, please make sure sensor and smart phone or tablet are on the same side of your chest when wearing the sensor.

#### We recommend that users use the patches we provide from the original manufacturer. Wear the sensor in a cool, neutral thermal environment for a better wearing experience.

Additional details for wearing

DO NOT wear the sensor in the same place for more than 24 consecutive hours. For continuous monitoring remove the sensor and replace the patch and reapply in the same position on the opposite

side. Repeat every 24 hours where continuous monitoring is required. If you feel unwell (uncomfortable or allergic) when using the

Note: For the most accurate results, make sure the smart phone or tablet has been at room temperature for at least 5 minutes before using it.

patch, replace it with another type of patch based on your

 Removal of excess armpit hair in advance can help improve connection and so is advised where applicable. Clean the surface of the sensor with medical antibacterial

A fully-covered patch (no smaller than 76mm  $\times$  62mm)

• Do not reuse patches. If a patch is already folded over,

 The material that contacts skin is non-toxic, non-irritating, and will not cause allergies or any other side effects.

1. Button functions 2. Frequent operation patterns: 2.1 Connecting to smart phone A long press (more than 2 seconds), switches the sensor on. A single or tablet for the first time:

Low battery

Low or no battery power

## indicates that sensor is connected to a

ED blink indicates power is on.

#### smart phone or tablet. A double blink indicates that sensor is not connected

blink indicates that sensor is off. Double click and hold the button

to a smart phone or tablet. No LED

#### and turn on Bluetooth, making sure the smart phone or tablet is connected to the Internet.

- phone or tablet. If the sensor is not connected with the smart after turning on, the sensor will

- wipes when sharing devices between different users.

#### a) Turn on the smart phone or tablet Short press (less than 2 seconds): Checks status. A single LED blink

6. Operating Instructions

to indicate power is off.

Symptom

Temperature data not

Sensor is not switched on

displayed properly

for 2 seconds: Switches sensor off. LED lights up for 2 seconds

7. Troubleshooting

### b) A long press (more than 2 seconds) on the button will turn on the sensor.

- c) Run Celsium™ app on the smart phone or tablet and sign in. d) Connect the sensor with the smart
- phone or tablet within 60 minutes turn itself off automatically. e) Wear the sensor.
- Possible Reasons
- c) Run the **Celsium**™ app on the smart phone or tablet to monitor body temperature. Connection will be established automatically. (If you

manually disconnected the sensor

from the smart phone or tablet the

previous time you used it, you will

need to manually connect this time.)

b) A long press (more than 2 seconds) on the button will turn on the sensor.

connected smart phone or tablet:

2.2 Connecting to previously

a) Turn on the smart phone or

- d) Wear the sensor.
- 1. Restart the sensor 2. Replace the battery

Solutions

1. Replace the battery

2. The sensor might be damaged 1. The sensor might not be worn correctly 1. Check wearing position of sensor Unusual temperature data 2. The sensor might be damaged 2. Contact customer service 3. Arm was not held tight against side for first 8 mins 3. Hold arm against side for 8 mins again 4. Sensor has not been at room temperature for at least 5 4. Keep the sensor at room temperature (without minutes before using touching or heating it) for at least 5 minutes 5. The sensor was placed in a problematic place, or there 5. Ask doctor for professional diagnosis. are other body conditions causing interference Turn on the Bluetooth of the smart phone or tablet Sensor is not connected with 1. Bluetooth does not open on smart phone or tablet 2. Move the smart phone or tablet closer the smart phone or tablet 2. Out of connection range 3. The sensor might not be worn correctly 3. Adjust wearing position of the sensor 4. Please reset the Bluetooth connection on the smart phone or tablet or restart the smart phone For more information, please visit: www.celsium.com, or send an email to support@celsium.com. We are looking forward to hearing from you.



### 8. Maintenance & Preservation

- Replace the battery when low battery is indicated, otherwise the sensor will not function as intended.
- · Clean the surface of the sensor with medical antibacterial wipes when sharing devices between different users.
- Store at temperatures of 0°C  $\sim$  50°C (32°F  $\sim$ 122°F), with humidity of 10%  $\sim$  85% and barometric pressure of 86kPa  $\sim$  106kPa.
- Treatment of the sensor and battery at the end of their life should comply with local laws and regulations.

Cautions: No extra calibration or daily maintenance is needed during the usage except the replacement of the battery.

### 9. Cleaning & Disinfection

#### The probe should be cleaned and disinfected. Cleaning and Low-Level Disinfection

Clean the surface of the sensor with medical antibacterial wipes when sharing devices between different users.

#### **WARNINGS**

- Use of cleaning agents and disinfectants other than alcohol may damage the sensor and shorten product lifetime or cause safety risks.
- Do not soak the sensor in any liquid. Do not sterilise or use an autoclave on the sensor.
- If you notice any deterioration or damage, stop using the sensor immediately.

### • Warning: Any form of modification

10. Important Precautions

- to this sensor is forbidden.
- Do not use sensor together with MRI or CT equipment.
- To avoid risk of explosion, do not use the sensor with flammable aesthetic gas. A qualified doctor should
- make the diagnosis of clinical manifestation and symptoms, with sensor as a subsidiary tool. • Please check the sensor regularly to make sure that it is in firm

contact with the skin. Otherwise

- data may be inaccurate. Soaking the sensor in liquid or disinfectant may lead to
- incorrect data or breakage.
- may lead to incorrect data. • Make sure to keep smart phone

• Sudden movement of the sensor

- or tablet charged when using it to monitor body temperature for a long period of time. • Do not apply pressure to
- sensor. If the cover is broken, stop using the sensor. • Muscle and fat affect wireless
- transmission, so range of transmission decreases if an adult or obese child uses the sensor. Pay attention to operating
- temperature and humidity. Using the sensor in conditions that do not satisfy requirements may lead to measurement error.
- The sensor is for indoor use only. Please upgrade the application
- when necessary in the app Store/Google Play Store.
- If you encounter any incompatibility or conflicting issues with the app please contact us.
- The battery must be installed/ replaced by an adult. Please put the battery and opening tool of the battery cover out of the reach of children. This product has not been
- aseptically treated. The battery should be removed
- from the compartment when not in use for greater than one month.

## 11. Technical Specifications

Product name

Wearable Thermometer

Model WT705

51.9mm × 31.6mm × 6.5mm

Weight 6g (without battery)

Battery CR2025 Temperature unit °C or °F

Up to 5 metres

Valid transmission distance

Measurement range 25 °C-45 °C or 77°F - 113°F

Accuracy ±0.05°C (35°C-38.5°C)  $\pm 0.1$ °C (<35°C and >38.5°C)

±0.09°F (95°F - 101.3°F) ±0.18°F (<94.9°F and >101.3°F) Smart phone or tablet

Bluetooth v4.0 and iOS10.0 +

For more information, please visit: www.celsium.com

Battery life 120 days at 8 hours per day

Note: frequent synchronisation of data may deplete power more quickly Operating conditions

Bluetooth v4.0 and Android 5.0 +

Temperature: 5°C - 40°C or 41°F – 104°F Humidity: 15% - 85% Barometric pressure: 86kPa - 106kPa

### 12. Functional Description

#### Body temperature monitoring The sensor connects to a smart phone or tablet to monitor

it to the smart phone or tablet via Bluetooth. Real-time temperature can then be seen on the smart phone or tablet. Smart temperature alert

The temperature reading becomes red with an audio

body temperature. It measures the temperature and sends

#### notification on the smart phone or tablet when the temperature reaches the threshold. The audio notification can

Bluetooth disconnection alert A dialogue box appears and an audio notification sounds on the smart phone or tablet when the Bluetooth

be turned on and off, and the threshold can be set manually

### body temperature independently if Bluetooth

Temperature data storage

communication is lost during monitoring. The sensor measures body temperature every 4 seconds

The sensor continues to measure and store

and stores a maximum of 10 days of data. The stored data in the sensor is sent to the smart phone or tablet as soon as the connection is resumed. Uploading 24 hours of data takes about 1 minute.

#### Low voltage indication This function requires the connection between the sensor and the smart phone or tablet. A pop-up

window with alerts will appear on the smart phone or tablet when the sensor's battery level is low.

#### 13. Definitions of Symbols ★ BF medical device (i) Read user manual before use

connection has been lost for more than 5 minutes.

Recyclable Recyclable

No littering  $\triangle$  Cautions! Please refer to the instruction for use.

EC REP European Authorised Representative

ROHS Certified

SN Serial number

Lot Number

Manufacturer ം Manufacturing Date

### 14. Disclaimer

Celsium™ has made every effort to guarantee the contents of this manual are accurate and reliable. However, the company does not assume liability for any loss or damage caused by omissions, inaccuracies, or typographical errors in this manual. Where a software upgrade leads to discrepancies in this manual, the software shall prevail. When product improves or technology changes, you may visit the company technical support website for the relevant information.

This manual is written in accordance with available information

and its contents are subject to change without notice

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The Bluetooth® word mark, figure mark, combination mark, and Bluetooth Smart and Bluetooth Smart Ready marks are all

trademarks that are owned by the Bluetooth SIG and any use

of such marks by Celsium<sup>™</sup> is under license. Other trademarks

### This sensor complies with part 15 of the FCC Rules. Operation is subject

15. Caution

to the following two conditions: 1. This sensor may not cause harmful interference. 2. This sensor must accept any interference received, including interference that may cause undesired operation.

by the party responsible for compliance could void the user's authority to operate the equipment. Note: This equipment has been tested and found to comply with the limits for a Class B digital sensor,

pursuant to part 15 of the FCC Rules. These limits are

interference in a residential installation. This equipment

designed to provide reasonable protection against harmful

Changes or modifications not expressly approved

generates, uses, and can radiate radio frequency energy 16. Declaration 1. The EMC of the product meets the standard of IEC60601-1-2.

instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or

and, if not installed and used in accordance with the

Reorient or relocate the receiving antenna. Increase the separation between the equipment and smart phone or tablet. Connect the equipment into an outlet on a circuit different

Rectal/Ear (°C/°F)

38.4-39.1°C/101.1-102.4°F

39.2-39.7°C/102.5-103.5°F

television reception, which can be determined by turning the

equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- from that to which the smart phone or tablet is connected. Consult the dealer for help.

### 2. The material that comes in contact with skin is non-toxic, non-irritating, and up to standard of ISO10993-1, -5, -10. 17. Copyright Statement

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- right to interpret and revise this handbook and this statement. Copyright of this manual belongs to Smartr Health Limited. Without prior written permission, no company or individual is allowed to reproduce, copy, or translate this manual or any information contained therein

a copy for proof of purchase. To find the customer information, please visit our company website at: www.celsium.com

Oral (°C/°F)

37.5-37.7°C/99.5-99.9°F

38.6-39.1°C/101.6-102.4°F

MEQUIPEX E.U. Feldstrasse 39/1/3, 4813 Altmuenster, Austria

Supplied by SMARTR Health Ltd, Arquen House, 4-6 Spicer Street, St Albans Al3 4PQ

Software manufactured by SMARTR Health Ltd Arquen House, 4-6 Spicer Street, St Albans Al3 4PQ

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18. Standard Warranty Information The product is warranted from manufacturing defects for one year from date of retail purchase. This does not cover the damages or wear resulting from accident, misuse, abuse, commercial use, or unauthorised adjustment and repair. Please direct all returns to the place of the original purchase. Please retain your original receipt as you may be asked to provide

Railing Medical Company FL4-E BLDG.8, Changliu Rd. 738 Machikou Town, Changping Dist. Beijing, China

#### Reference from WebMD (www.webmd.com) Comparison of temperatures in Celsius by method

Axillary/Forehead (°C/°F)

36.9-37.4°C/98.4-99.3°F

38.5-38.9°C/101.2-102°F

19. Appendix

Date of Purchase:

37.5-38.4°C/99.4-101.1°F 37.8-38.5°C/100-101.5°F

39–39.5°C/102.1–103.1°F	39.2–39.7°C/102.5–103.5°F		39.8-40.3°C/103.6-104.6°F				
39.6–40°C/103.2–104°F	39.8–40.3°C/103.6–104.6°F		40.4–40.9°C/104.7–105.6°F				
20. Purchasing Record For Celsium™							
Model Purchased:		Serial Number:	Serial Number:				

Distributor Name:

Representative:	

Fax Number:	Email Address:

