

# mBox<sup>9200</sup>



**USER GUIDE**

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## SAFETY INFORMATION



**Always read and follow the safety information accompanied by this symbol.**

- Always test the system according to the instructions before use and always test the product after adjustments have been made.
- The device is not always suitable for all users and should not be seen as a substitute for the caregiver's monitoring routines.
- The device is NOT intended for life-sustaining equipment, where any technical failure may result in serious injury or death.
- Check the unit regularly and replace if necessary.
- Users should pay particular attention to the potential for interference from other systems operating in the same or adjacent radio frequency bands.
- The compartment covers may be opened only by authorized persons in accordance with the instructions in the service manual.
- Battery replacement may be performed only by authorized persons in accordance with the instructions in the Maintenance section. Only use recommended battery type as stated in the Technical Data section.

**CAUTION! Only use batteries, power supply and accessories that have been approved for use with this particular model. Connecting other accessories may be dangerous and may invalidate the type approval and guarantee.**

- Only use recommended power supply as stated in the Technical Data section.
- The power supply can be used as a disconnecting device. The wall socket shall be installed near the equipment and shall be easily accessible.

**IMPORTANT! This device use radio signals. This means that connection cannot be guaranteed in all circumstances.**

## Medical units

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The use of equipment that transmits radio signals as a social alarm, can interfere with insufficiently protected medical equipment. Consult a doctor or the manufacturer of the equipment to determine if it has adequate protection against external radio signals, or if you have any questions.

To avoid potential interference, manufacturers of implanted medical devices recommend a minimum separation of 15 cm between a wireless device and the medical device.

If you have any reason to suspect that interference is taking place, turn off the device immediately. If you have any questions about using your wireless device with an implanted medical device, consult your health care provider.

## Important information

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All systems using radio and network communication are subject to interference beyond the user's control.

Products from Careium are designed to minimize the impact of such interference.

Nevertheless, the user must be aware that system components can be subjected to interference or other influences that may cause malfunction.

It is therefore important to regularly check that every part of the system works in all areas, especially radio communications. Contact your supplier immediately in case of any suspected malfunction.

Users should pay particular attention to the risk of disruption from products which communicate using the same or adjacent radio frequency bands.

For further information, please contact your supplier or refer to the service manual or the documentation at [www.careium.com/support/](http://www.careium.com/support/).

## PACKING CONTENTS

The packing contains:

- One mBox 9200 including mounted batteries.
- Screws for mounting the mBox on a wall, door frame etc.

## Accessories and Sensors

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Following accessories and sensors are available to purchase:

- Velcro tape (replacement for mounting screws), art.nr: 300 125
- AC adapter + cable, art.nr: 100 061 + 100 062
- Holder, art.nr: 300 014
- Magnetic contact, art.nr: 300 127
- Bed sensor, art.nr: 300 026
- Chair sensor, art.nr: 300 022
- Carpet sensor, art.nr: 300 015

## FUNCTIONAL DESCRIPTION

The mBox is a multibox that can be used for following functions:

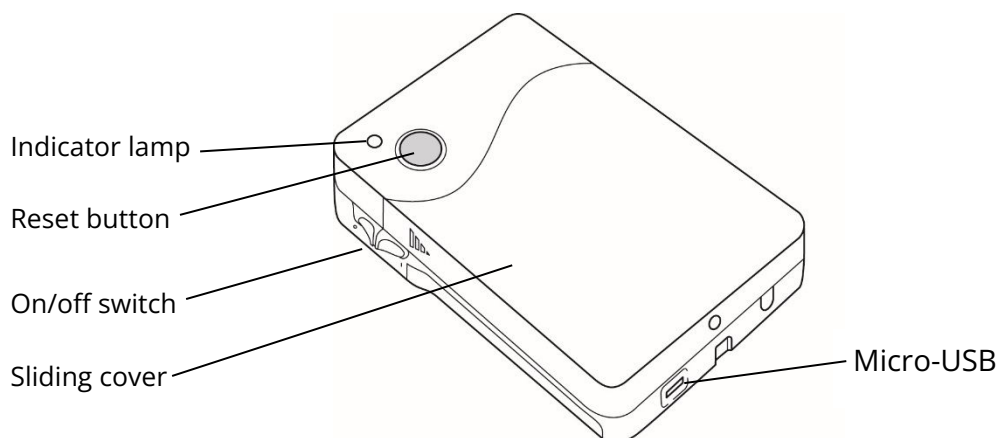
- Door alarm
- Bed alarm
- Chair alarm
- Carpet alarm
- Door alarm allowance
- Look out
- By programming the unit, further functions can be activated or changed, contact your supplier for more information.

The mBox is compatible with:

- Legacy Caretech/Doro/Careium social alarms
- CareIP
- CareIP Mobile
- CareMobile
- Eliza
- Eliza S
- Eliza S+

## Overview

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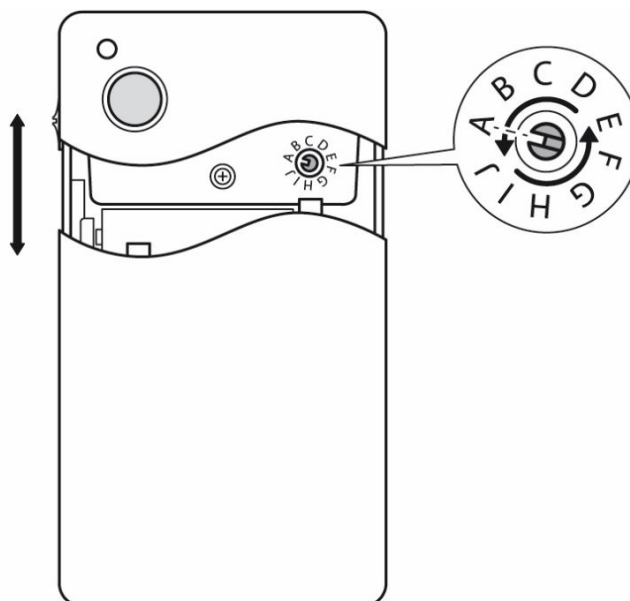
## mBox <sup>9200</sup> and the basic functions

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By opening the sliding cover to the first position access is given to the function selector with 10 optional setups.

Choose position, A-J, depending on how the unit shall be used. Use a suitable screwdriver for setting the knob in correct position.

See below for the preprogrammed positions used for mBox.



## A – Door alarm

---

When the mBox is set to position A, the unit is, in combination with a magnetic contact\*, working as door alarm.

A short push on the reset button gives following functions:

- Temporarily inactivates the alarm for passing through the door, mBox is mounted on your side of the door.
- Inactivates an alarm that will be sent within 10 seconds, mBox is mounted on the other side of the door.

\* Magnetic contact is ordered separately.

## A – Carpet alarm

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When the mBox is set to position A, the unit is in combination with a carpet sensor\* working as carpet alarm.

\* Carpet sensor is ordered separately.

## B – Bed/chair alarm, 10 seconds

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When the mBox is set to position B, the unit is, in combination with a bed or chair sensor\*, working as bed or chair alarm.

A short push on the reset button gives following functions:

- The alarm is activated by 30 seconds pressure on the sensor and an alarm is sent if the person is missing for more than 10 seconds after the activation.
- Absences less than 10 seconds activates no alarm.

\* Bed or chair sensor is ordered separately.

## C – Bed/chair alarm, 15 minutes

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When the mBox is set to position C, the unit is working the same as it does in position B but is allowing 15 minutes absence before an alarm is sent.

## D – Repeater

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When the mBox is set to position D, the unit is working as a repeater of radio signals.

The following functions are available:

- Repeating all radio signals.
- Repeating only radio signals from paired radio transmitters.

## E – Radio receiver

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When the mBox is set to position E, the unit is working as a receiver of radio signals.

The following function is available:

- The output is activated when the mBox receives a radio signal from a paired radio transmitter.

## F – Door open allowance

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When the mBox is set to position F, the unit is working as a door alarm with door open allowance.

The following functions are available:

- An alarm will be sent if the client opens the door and doesn't close it within 15 minutes.
- A press on the reset button temporarily disable the alarm before or after the door is opened.

## G – Door alarm with presence function

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When the mBox is set to position G, the unit is working as a door alarm with support for presence marking. When entering the room the medical staff can mark their presence with the reset button and when they leave the room, they can reset the presence marking with the same button. This is used together with Nurse call system-5000.

If one should forget to reset the presence marking when leaving the room, the unit will automatically reset the presence marking after the adjustable time (default 12 hours).

## I – Radio pairing

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When the mBox is set to position I, the unit is in pairing mode. A radio transmitter can be paired with the mBox to unlock functions in mode D (repeater), E (radio receiver) and J (Look out).

The following functions are available:

- A short press on the reset button activates or deactivates the radio pairing mode.
- A long press, approx. 10 seconds, on the reset button deletes all paired radio transmitters.
- Up to 10 radio transmitters can be paired with the mBox at the same time.

## J – Look out

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When the mBox is set to position J, the unit combined with a Motion, is working as a door alarm with look out function. The client is allowed to open the door and look out, but if the client doesn't return within 3 minutes an alarm is sent.

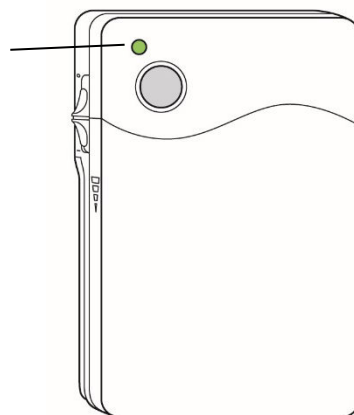
A short push on the reset button gives following functions:

- Temporarily inactivates the alarm for passing through the door, mBox is mounted on your side of the door.
- Inactivates an alarm that will be sent within 3 minutes, mBox is mounted on the other side of the door.

## Indicator lamp

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- **Green light:**  
Confirmation of alarm indicates with a short green light.
- **Green, continuous light:**  
Unit is using an external power supply.  
The unit is in mode G with presence activated.
- **Green flashing light (every 6th second):**  
The unit is being powered by batteries (default).  
The unit is in mode G without presence activated.
- **Red light:**  
During startup, the indicator lamp is lightning red.  
During transmission of a radio message, the indicator lamp is lightning red.
- **Red flashing light (every 6<sup>th</sup> second):**  
The unit is powered by internal batteries, low voltage level. Replacing the batteries is necessary.
- **Red fast flashing (every ½ second):**  
Invalid status. Turn the function selector to a valid position.
- **Orange fast flashing:**  
Change of position with the function selector, one blink.
- **Alternating green and red, twice per second:**  
Unit is in pairing mode.



## Default reset

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The mBox can be restored to the default settings.

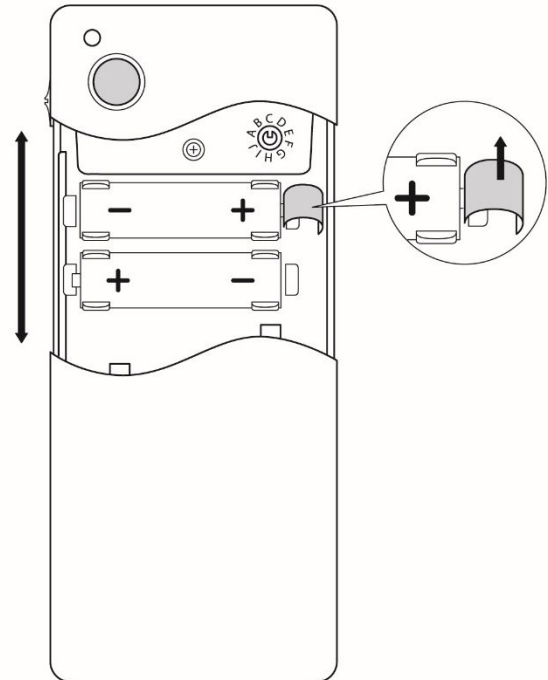
1. Turn the function selector to the position H.
2. Press and hold the reset button for approx. 10 seconds until the indicator lamp flashes red once.
3. The default reset is completed, and the unit is restored to the default settings.

# INSTALLATION

## Removing protective strip from battery

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The protective strip must be removed from the battery before the mBox is used for the first time.



## Pairing the mBox with a carephone

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The mBox can be connected to different sensors and can be paired to a Careium Carephone as described in the following sections for each selectable mode.

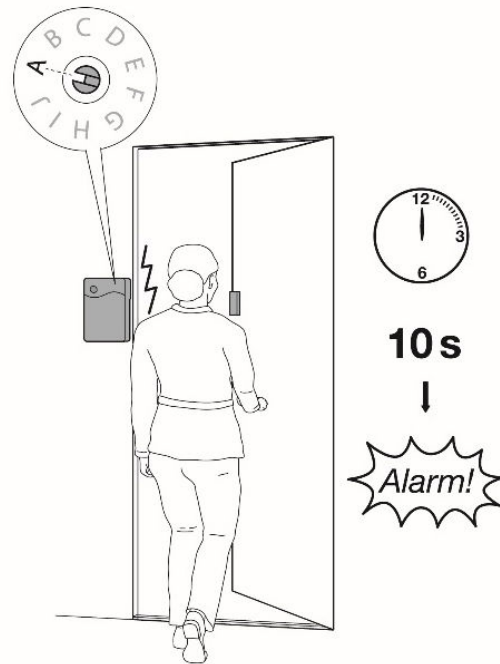
The mBox can also be connected to other social alarm systems, please refer to that systems documentation for the installation process.

## A – Door alarm

Mount the mBox on the door frame using the supplied screw or adhesive Velcro\*. The magnet must be mounted on the door with 5-10mm distance to the right long side. See the picture.

Connect the mBox to the Carephone as following:

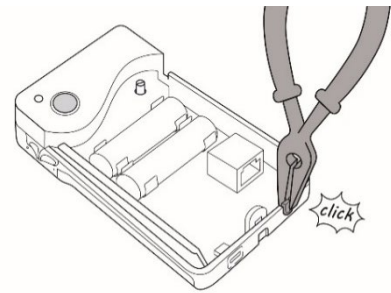
1. Press the green button on the Carephone for about 4 seconds until a beep can be heard.  
(For Eliza, press the radio pairing button found in the back panel.)
2. Open up the door and wait for 10 seconds, a melody can be heard from the Carephone.
3. Confirm the activation by pressing the red button on the Carephone. A confirmation melody is heard from the Carephone.
4. The units are now connected, make a test alarm by opening the door to verify the function.



\* Velcro tape is ordered separately.

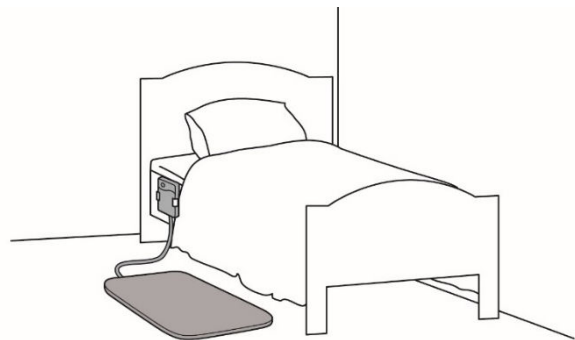
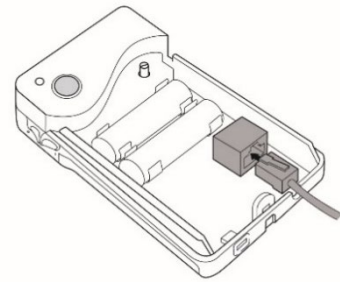
## A – Carpet alarm

Open the sliding cover completely and remove the plastic cable cover in the bottom of the unit. Connect the carpet sensor to the connector on the mBox, feed out the cable thru the bottom of the unit and close the sliding cover. See the pictures.



Connect the mBox to the carephone as following:

1. Place the carpet sensor on the floor.
2. Press the green button on the carephone for about 4 seconds until a beep can be heard.  
(For Eliza, press the radio pairing button found in the back panel.)
3. Step on the carpet, a melody can be heard from the carephone.
4. Confirm the activation by pressing the red button on the carephone. A confirmation melody is heard from the carephone.
5. The units are now connected, make a test alarm by stepping on the carpet to verify the function.



## B – Bed/chair alarm, 10 seconds

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Open the sliding cover completely and remove the plastic cable cover in the bottom of the unit. Connect the bed/chair sensor to the electrical connector on the mBox, feed out the cable through the bottom part of the unit and close the sliding cover.

Connect the mBox to the carephone as following:

1. a) Bed alarm – Place the sensor beneath the bed sheet in height of the shoulder blade.  
b) Chair alarm – place the sensor on the seat cushion.
2. Sit or lie on the sensor for more than 30 seconds to activate the alarm function.
3. While sitting/lying on the sensor, press green button on the carephone for about 4 seconds until a beep can be heard.  
(For Eliza, press the radio pairing button found in the back panel.)
4. Release the pressure from the sensor.  
After about 10 seconds, a melody can be heard from the carephone
5. Confirm the activation by pressing the red button on the carephone. A confirmation melody is heard from the carephone.
6. The units are now connected, make a test alarm to verify the function.



## C – Bed/chair alarm, 15 minutes

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The mBox in position C is working the same way as in position B but is allowing 15 minutes absence before an alarm is sent.

To make the setup between the mBox and carephone time efficient and to avoid waiting for 15 minutes – follow the instructions for position B. When everything is ready, tested and working, change to position C for 15 minutes absence.

## D – Repeater

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Place the repeater between an area with low radio coverage and the carephone.

Pair a radio transmitter with the mBox to only repeat the radio messages from the paired unit. All radio messages are repeated if no radio transmitter is paired with the mBox.



**Two or more repeaters shall not be placed in the same radio transmitter area.**

## E – Radio receiver

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Place the mBox in an area with good coverage where the radio message shall be received.



**One or more radio transmitters has to be paired with the mBox.**

## F – Door alarm allowance

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The mBox in position F is working similar to position A but is allowing the door to be open for 15 minutes before an alarm is sent. No alarm is sent if the door is closed within the 15 minute time interval.

To make the setup between the mBox and carephone time efficient and to avoid waiting for 15 minutes – follow the instructions for position A. When everything is ready, tested and working, change to position A for 15 minutes door open allowance.

## G – Door alarm, presence

---

Mount the mBox on the door frame using the supplied screw or adhesive Velcro\*. The magnet must be mounted on the door with 5-10mm distance to the right long side.

Connect the mBox to the Carephone as following:

1. Press the green button on the Carephone for about 4 seconds until a beep can be heard.  
(For Eliza, press the radio pairing button found in the back panel.)
2. Open up the door, a melody can be heard from the Carephone.
3. Confirm the activation by pressing the red button on the Carephone. A confirmation melody is heard from the Carephone.
4. The units are now connected, make a test alarm by opening the door to verify the function.

\* Velcro tape is ordered separately.

## I – Radio pairing

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Up to 10 radio transmitters can be paired with the mBox. Paired radio transmitters are used together with the mBox in the modes D, E and J.

1. Press the reset button on the mBox.
2. Trigger an alarm from the radio transmitter.
3. Radio trigger is paired with the mBox.

## J – Look out

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A mBox paired with a Motion\* work together as a door alarm with look out function.

Mount the mBox on the door frame using the supplied screw or adhesive Velcro\*. The magnet must be mounted on the door with 5-10mm distance to the right long side.

Mount the Motion in a location where the client regularly pass through.

### **Step 1 – Pairing the mBox with the Motion:**

1. Pair the Motion with the mBox, follow the instructions for mode I, radio pairing.

### **Step 2 – Connect the mBox to the Carephone:**

1. Press the green button on the Carephone for about 4 seconds until a beep can be heard.  
(For Eliza, press the radio pairing button found in the back panel.)
2. Open up the door and wait for 10 seconds, a melody can be heard from the Carephone.
3. Confirm the activation by pressing the red button on the Carephone. A confirmation melody is heard from the Carephone.
4. The units are now connected, make a test alarm by opening the door to verify the function.

\* Velcro tape and Motion are ordered separately.

# MAINTENANCE

## Cleaning

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All accessories from Careium can be cleaned with a slightly damp cloth. Do not use strong detergents or solvents.

## Battery

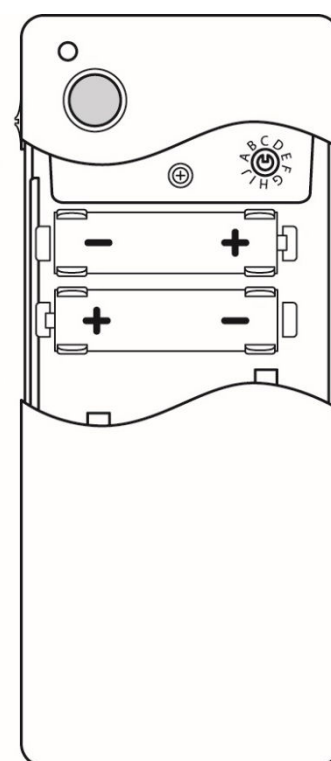
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By opening the sliding cover to the second position, access is given to the batteries.

Use only Alkaline AA (LR06) batteries with good quality. When changing the batteries, take notice to the polarity of the batteries to avoid electrical damage.

The duration of the batteries depends on the quality, the amount of sent alarms and if additional programming has been done to the mBox.

Batteries mentioned above can be ordered from your supplier.



## TECHNICAL INFORMATION

### mBox

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|                  |                                                                                                             |
|------------------|-------------------------------------------------------------------------------------------------------------|
| Article number:  | 300 154                                                                                                     |
| Dimensions:      | 110 x 70 x 41/100 mm                                                                                        |
| Power supply:    | 2x 1.5V LR6/AA Alkaline batteries<br>External power                                                         |
| Duration:        | Up to 24 months running on batteries                                                                        |
| Radio frequency: | 869,2 MHz                                                                                                   |
| Equipment class: | Class 1 radio equipment  |

### Sensors

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|                    | <b>Bed sensor</b>     | <b>Chair sensor</b>   | <b>Carpet sensor</b>  |
|--------------------|-----------------------|-----------------------|-----------------------|
| <b>Min. weight</b> | 27 kg                 | 27 kg                 | N/A                   |
| <b>Size</b>        | 755 x 255* (L x W mm) | 375 x 177* (L x W mm) | 715 x 390* (L x W mm) |
| <b>Connection</b>  | Sensor contact        | Sensor contact        | Sensor contact        |
| <b>Warranty</b>    | 6 months              | 6 months              | 12 months             |

\* Excluding cable, contact and sensor cover.

## ENVIRONMENT

|                    |                            |
|--------------------|----------------------------|
| Temperature:       | +5 to +35 °C               |
| Humidity:          | 0 to 75% relative humidity |
| Environment class: | I                          |

## ENVIRONMENTAL INFORMATION

This product complies with applicable EU- and UK regulations. Further information is available at the Careium website: [www.careium.com](http://www.careium.com)

Careium has certifications in the international standards for environment, ISO 14001. Careium also supports UN's global goals for sustainable development. You can read more about the sustainability work at:

[www.careium.com/en-gb/about-careium/about-us/sustainability/](http://www.careium.com/en-gb/about-careium/about-us/sustainability/)

## DECLARATION OF CONFORMITY

### Declaration of conformity

Hereby Careium Sweden AB declares that this radio equipment is in compliance with the RE Directive 2014/53/EU as well as other applicable EU and UK regulations. The full text of the declarations of conformity is available at: [www.careium.com/dofc](http://www.careium.com/dofc)

