

Eliza Personal Alarm Technical Guide



Welcome to Careium

Please read this manual thoroughly and retain it for future reference.

Before installation

IMPORTANT: Before installing your equipment, please ensure you have provided us with all the service user details (contact info, medical, keyholders etc). If you have not already done so, you can provide this via the form on our website, at careium.co.uk/service-user-details or via the paper forms we previously sent you. Alternatively, please contact our Customer Services team on 0300 333 6511 who can take this information over the telephone.

Please remember to update us with any changes to the information we hold, to ensure we have all the correct information when we respond to activations from your equipment.

If you have any questions or issues, please see our comprehensive FAQs online at careium.co.uk/contact/faqs

Note: All illustrations are for illustrative purposes only and may not accurately depict the actual device. The items supplied with your unit might vary depending on the software and accessories available in your region.

Read first: Safety information



IMPORTANT: 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 carers.
- 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 authorised persons in accordance with the instructions in the technical manual.
- Battery replacement may be performed only by authorised 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 of 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, the mobile phone network and the terrestrial network. This means that connection cannot be guaranteed in all circumstances.

Medical units

The use of equipment that transmits radio signals as a personal 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 personal alarm immediately. If you have any questions about using your personal alarm with an implanted medical device, consult your healthcare provider.

Important information

All systems using radio and network communication are subject to interference beyond the user's control. Products from Careium are designed to minimise 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/.

The device has a rechargeable battery that enables the device to be operated even in the event of a power failure.

The device will beep for a short which after power failure. Careium will be notified in the event of power failure as well as low charge level.

When the battery reaches a low charge level, this is indicated by a blinking status light. The backup battery power supply secures the operation up to 72 hours.

Description of functions

Eliza is a digital personal alarm and smartcare hub. Adaptable for future needs and connects to a wide range of accessories and welfare services – enabling the user a tailor made solution.

Eliza allows the user to call for assistance if they have an accident or a fall at home. Eliza can potentially be a life- saving device if someone has a fall or some other accident when they are alone.

Eliza has a built in module for 2G, 3G and 4G mobile networks, the unit has possibility to transfer alarms over broadband/network connections and mobile telephone networks. The unit offers the user the possibility of two way handsfree voice communication, even if the user is far away from the Eliza, using existing standard for VoIP (Voice over Internet Protocol) calling. The unit uses SIP, a standard protocol to initiate speech and video over broadband connections. In addition to voice connected alarm calls, Eliza offers a platform for transfer of detailed alarm information, speech messages, online status etc. The Eliza is assigned a unique identification number (ID) that is transferred and corresponding to personal information stored by Careium.

The pendant is adapted for use with the unit

Activate alarm

The assistance alarm can be activated:

- by pressing the button on a personal alarm pendant.
- by pressing the red integral button on the Eliza.

On activation, the Eliza calls an alarm receiver to summon help.

Alarm transmitters

50 radio transmitters (triggers/sensors) can be programmed with the Eliza e.g. smoke detector. In the event of an alarm from a radio transmitter, the battery status of the radio transmitter is tested.

Alarm receivers

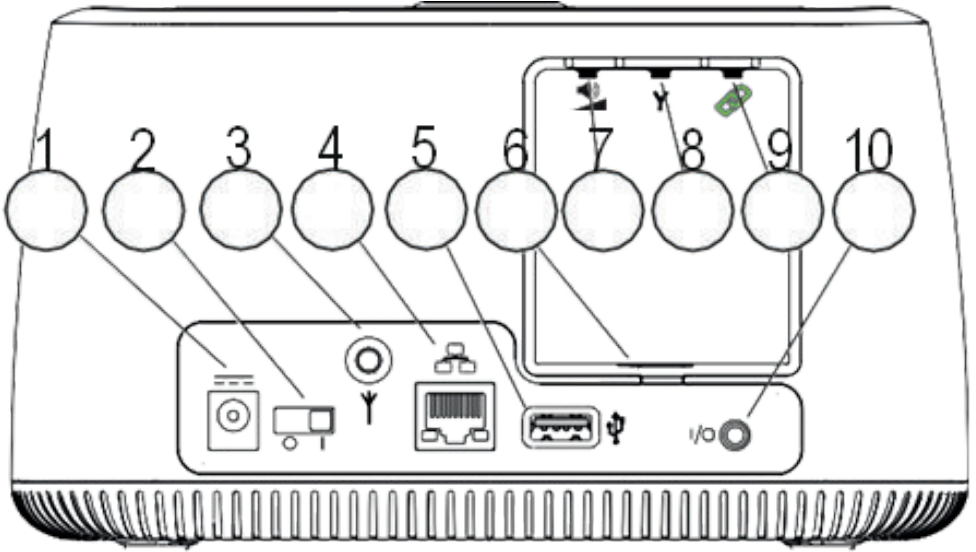
Up to 10 alarm receivers can be programmed. The alarm is identified using an alarm code which is programmed into the Eliza.

The person receiving the alarm can then speak directly with the person raising the alarm and take appropriate action.





Other functions

Additional functions can be activated or modified – refer to the service manual or contact Careium on **0300 333 6511** for further information.

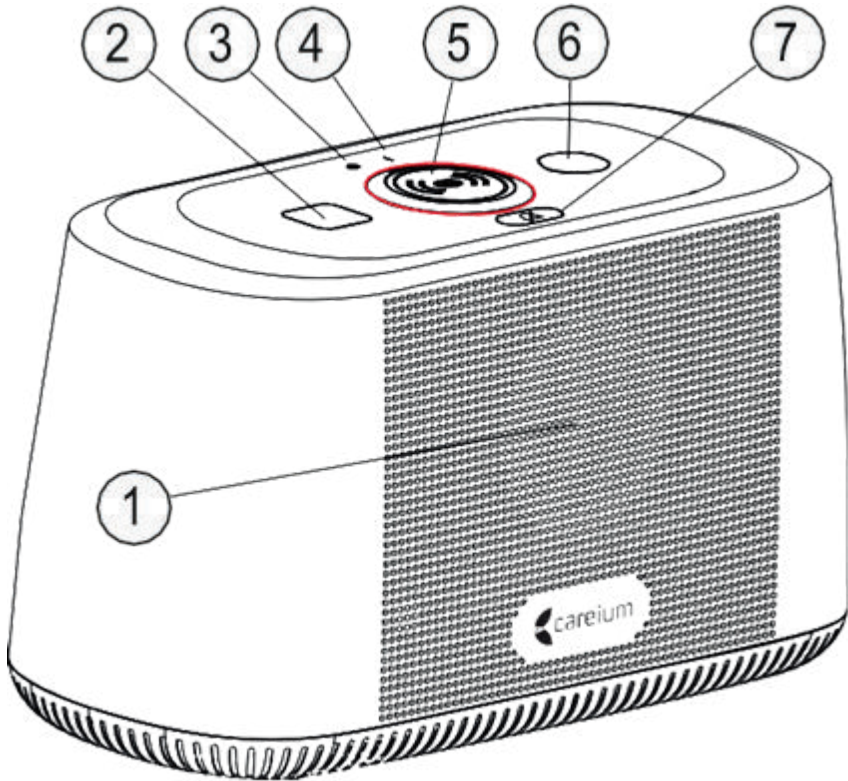
Eliza overview



Back view

- | | |
|---|--|
| 1. Power supply socket | 9V, 2A |
| 2. Power switch | Turns Eliza on or off |
| 3. External antenna connector | For an external antenna that must be adapted for use with Eliza |
| 4. Ethernet port | Connection for Ethernet cable from broadband/network |
| 5. USB-port | For USB expansion |
| 6. USB-port | |
| Function buttons under the compartment cover | |
| 7.  |  Audio volume setting |
| 8. Y-key  | Service menu |
| 9. Link key  | Radio pairing button |
| 10. I/O connector | 3.5 mm audio out or wired input |







Eliza overview



Front view

1. Loudspeaker
2. Square button (green)
3. Power indicator
4. Status indicator
5. Alarm button (red)
6. Circular button (yellow)
7. Cancel alarm (white)

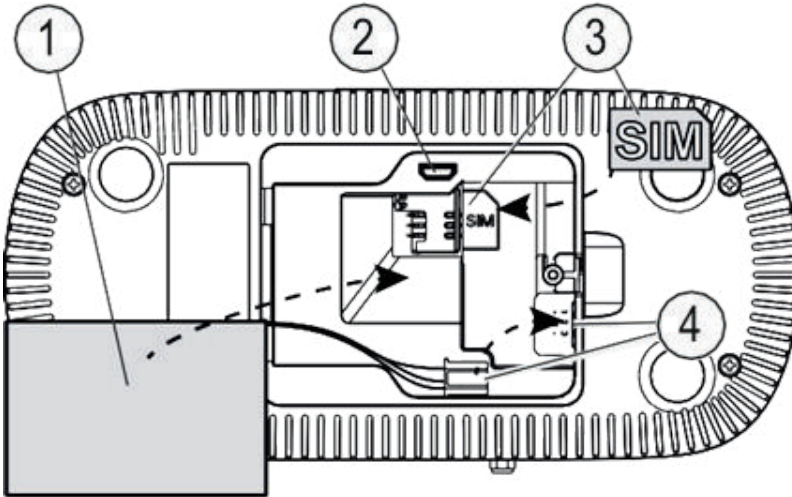
Indicator lights

2		SQUARE	GREEN
			Subject to configuration
3		ON	RED
		Steady light	Mains power
		Blinking light	Mains failure
4		STATUS	RED
		Off	Normal operation
		Steady light	Ethernet link1 or mobile network problem
		Blinking light	Low battery
5		ALARM	RED
		Steady light	Normal operation
		Blinking light	Alarm activated
6		CIRCLE	YELLOW
			Subject to configuration
7		CANCEL	WHITE
			Steady light

1 Disable ethernet link supervision if only mobile network is used.

Bottom view

Illustration below is shown with the compartment cover removed.



1. Battery
2. Maintenance USB-port
3. SIM card slot under battery
4. Battery connector



CAUTION: Only authorised persons may open the compartment covers and perform wiring in accordance with the instructions in the service manual.

Installation

Eliza is easy to install, if broadband/network connection shall be used, connection is made with a network cable (not included). Normally Eliza is set to use DHCP, which means that the unit automatically will be assigned an IP address when connected to a network.

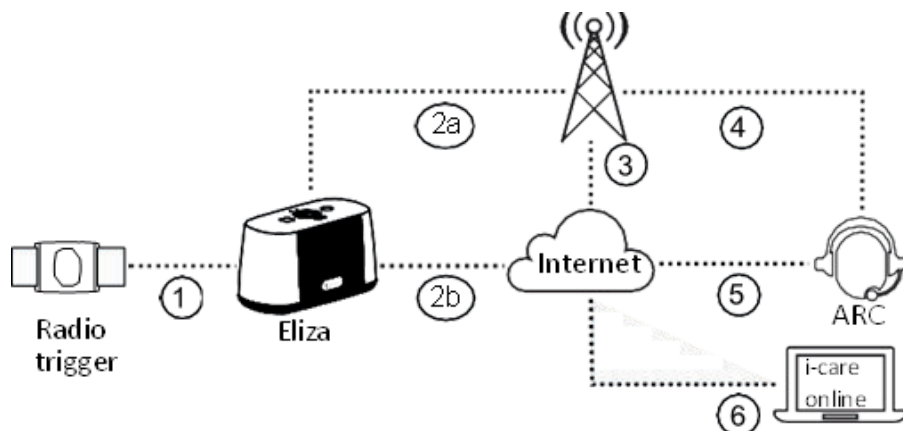
1. Connect the power supply to the wall socket and the power supply lead to the DC input socket. Keep the device connected to the mains power at all times.
2. Connect the network cable from the broadband/ network to the Ethernet socket on Eliza.
3. Turn the power switch to the I position
4. Check that the On ! indicator lamp has a steady red light
5. The status light shall go off within 90 seconds if the mobile network (GSM/UMTS/LTE) is detected
6. Carry out a test alarm from the Eliza



CAUTION: Installation must be performed only by authorised persons in accordance with the instructions in the technical guide.

Communication path


Example of a simplified communication path:



1. Radio or wired pedant alarm trigger activated.
2. Depending on selected transmission path:
 - a. Connection via mobile network (GSM/UMTS/LTE) to Voice, IP alarm protocol and additional data
 - b. IP on Ethernet, VoIP, IP social alarm protocol and additional data
3. IP connection via mobile network (GSM/UMTS/LTE)
4. Voice connection via mobile network (GSM/UMTS/LTE)
5. IP connection to Careium
6. Optional connection to i-care® online system.

Pairing


Pairing pendants Up to 50 pendants/sensors or other radio-alarm transmitters can be paired to Eliza.

- 1** Press and hold the radio pairing button  (Link key) and release when an audible signal is played and the Power indicator ! starts to blink.
- 2** Activate the radio transmitter. When Eliza receives the radio signal an audible signal is played.
- 3** Confirm the pairing by pressing and releasing the red integral alarm button once on Eliza. The successful pairing is confirmed with an audible signal.
- 4** The pendant is now paired and set to a default alarm type. The alarm type can be changed anytime using the optional i-care® online service..

Note: Repeat the steps above to pair additional pendants.





Check the radio coverage

Always check the function after installation and pairing.

- 1** Press and immediately release the radio pairing button  (Link key).
- 2** Press/activate the pendant/accessory. When Eliza receives the radio signal, you will hear a tone. Repeat this in all areas where the pendant/accessory shall function.

On device check

Check the mobile network signal strength on the device.

1. Remove compartment cover on the backside of the device to access the maintenance buttons.
2. Press the radio pairing button  twice.
3. A synthetic voice will say, -Service Mode!.
4. Press the Green square  button repeatedly until a synthetic voice will say, -Signal strength!.
5. Press the Main Integral alarm button  once.
6. The actual signal strength will be presented via a synthetic voice.
7. Press the Cancel button  to exit the service mode.
8. Replace the compartment cover.

Note! If acceptable value can't be achieved an external antenna must be used.

Check the functionality

Always check the function after installation and pairing. Test alarms shall be done regularly and in a way that secures the whole alarm chain from radio transmitter to alarm receiver.

Automatic test

The functionality of the Eliza and its communication can automatically be checked down to every other minute through the optional i-care® online service. It can also be checked by automatic function monitoring or a periodical test report to Careium for example once a day or once a week.

Your pendant explained

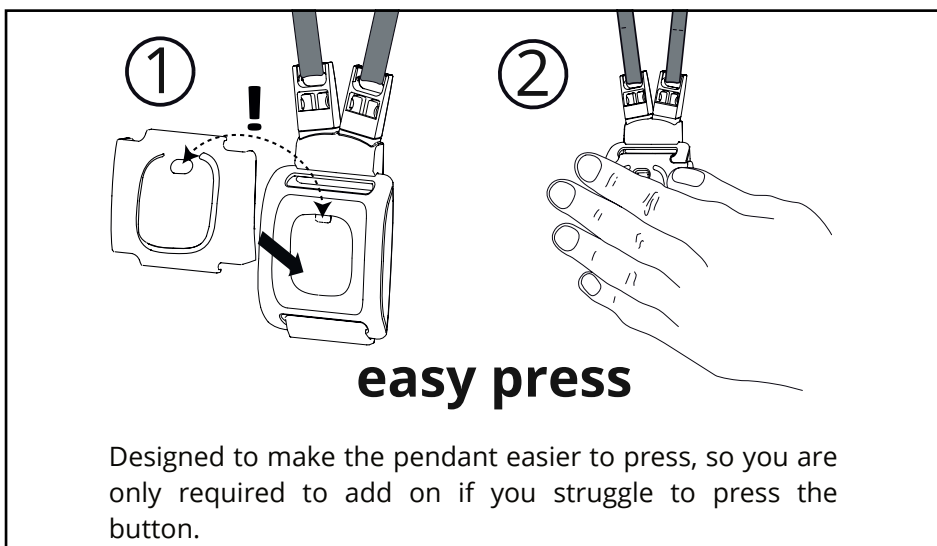
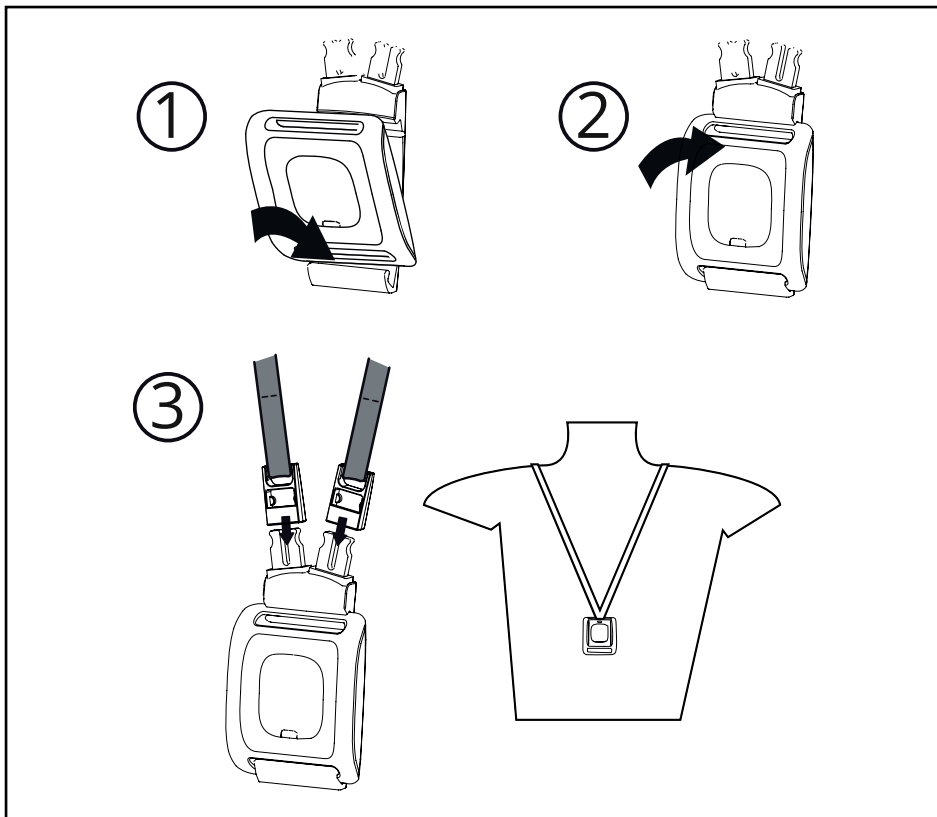
The pendant uses two-way radio communication, this means that when Eliza receives an alarm from a pendant the alarm unit will send a confirmation of receipt to the pendant.

This is confirmed on the pendant by indicator light change from red to green. If the pendant doesn't get any confirmation, the alarm is repeated.

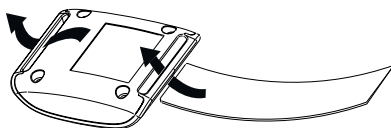
The pendant can be worn using a wristband or neckband.

The pendant is waterproof according to IP67 by an integrated gasket and can be carried in the shower and in wet environment.

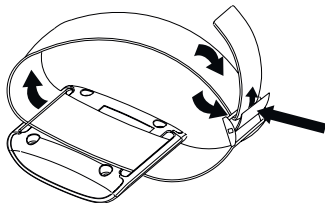




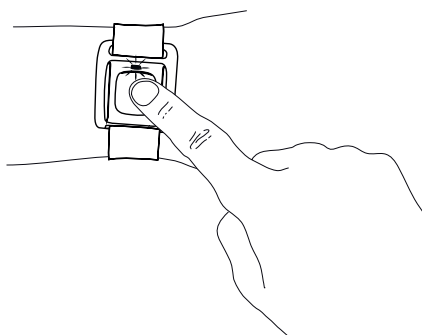
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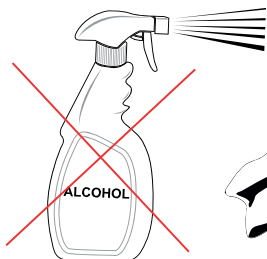


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OK



General information

- If Broadband/network connection is used the unit should always be connected to the network as near the router (or Ethernet connection) as possible.
- Verification of mobile network coverage should always be done as a part of installation.
- In order for an alarm to be sent, at least one alarm receiver/response centre needs to be programmed.
- The Eliza must not come into contact with water or any other liquid.
- Used batteries shall be disposed of in an environmentally-responsible manner.
- If the Eliza is supposed to be connected to a mobile network it need to be equipped with a mini-SIM (2FF) and having an appropriate mobile subscription including voice and data.

Maintenance

Cleaning

The Eliza and the pendant should be cleaned using a slightly damp cloth. Do not use other solvents when cleaning.

Replacement battery

Battery should be replaced within three years, or a.s.a.p. after battery alarm that is not related to a power cut. It's normal that a long-term power cut generates a battery alarm. When changing the battery, DO NOT pull the cable, use suitable pliers/tweezers to remove the connector. Contact Careium on **0300 333 6511** for Eliza battery issues.

Replacement personal alarm battery

To replace the alarm battery, please refer to the service manual or contact Careium on **0300 333 6511**.



CAUTION: Battery replacement may be performed only by authorised persons in accordance with the instructions in service manual.

Technical data

ELIZA S BASE UNIT	
Model No	A150
Dimensions	197 x 92 x 112 mm (L x W x D)
Weight (inc power supply & cables)	0.7 kg
Power supply	9 VDC power supply
Power consumption	2W (Nominal)
Backup battery	3.7 V, 2000 mAh, Li-Ion
Backup time	Up to 72 hours (new and fully charged battery)
Inputs	1 Normally Open (NO)
Outputs	Audio
Communication	GSM 2G, UMTS/HSDPA 3G, LTE
Radio frequency band	869,2-869,25 MHz
Number of radio transmitters	up to 50
Equipment class	Class 1 radio equipment
Bluetooth, version	5, BLE , long range
ZigBee	IEEE 802.15.4

Approval



-marked. Complies with relevant standards.

PENDANT	
Dimensions	39 x 32 x 11 mm (L x W x D)
Weight	12 g (excluding wrist band or necklace)
Battery	3V lithium battery CR 2032
Battery life	Up to five years
Water resistance	Complies with IP67
Radio frequency band	869,2-869,25 MHz
Radio frequency power	max. 10 mW (10 dBm)
Radio frequency range indoors	≥ 40 meters (normal environment)
Radio frequency range outdoors	≥ 300 meters (typical, line of sight)
Radio frequency band	869,2-869,25 MHz
Number of radio transmitters	Up to 50
Equipment class	Class 1 radio equipment
Bluetooth, version	5, BLE , long range
ZigBee	IEEE 802.15.4
ENVIRONMENT	
This product is intended for indoor use in a normal residential environment.	
Operating temperature	5° C (41° F) - 35° C (95° F)
Humidity	0% to 75% relative humidity (non-condensed)
Environmental class	(EG-I)

Approval

  -marked. Complies with relevant standards.

Other information

EU declaration of conformity

Hereby, Careium declares that the radio equipment type A150 and 9150 is in compliance with Directives: 2014/53/EU and 2011/65/EU. The full text of the EU declaration of conformity is available at the following internet address: www.careium.com/dofc

Ecodesign declaration, energy efficiency for external power supply

Hereby, Careium declares the external power supply for this device is in compliance with Commission Regulation (EU) 2019/1782 regarding ecodesign requirements for external power supplies pursuant to Directive 2009/125/EC. The full information regarding the ecodesign requirements is available at the following internet address: www.careium.com/ecodesign

Environmental information

This product complies with the requirements of the EU directives, 2012/19/EU (WEEE) and 2006/66/EC (batteries). These directives regulate the product liability for electrical and battery recycling with the purpose of increasing recycling and minimising waste. The unit is marked with the crossed out wheeled bin logo, which indicates that it shall be handed in for recycling. The product can be returned free of charge to a recycling station that is connected, directly or via a recycling system, to Careium or to your distributor. For detailed instructions, please check with your distributor or visit our website: www.careium.com

Note: The WEEE information and recycling instructions applies to European Union member states only. For other countries please check local legislation or contact your distributor. Manufactured in accordance with the EU directive, 2011/65/EU (RoHS2). The materials used in the pendant wristband and neckband meet the textile safety requirements of Oeko-Tex standard 100.

Legal notices

The information contained here is subject to change without notice. The only warranties for Careium products and services are set forth in the express warranty statements accompanying such products and services.

Nothing herein should be construed as constituting an additional warranty.

Careium shall not be liable for technical or editorial errors or omissions contained herein.

UK Declaration of Conformity

Hereby, Careium declares that the radio equipment type A150 and 9150 is in compliance with the relevant UK legislation. The full text of the UK declaration of conformity is available at the following internet address:

www.careium.com/dofc

Notes

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Careium
Aspinall House,
Walker Office Park,
Blackburn,
Lancashire,
BB1 2QE

Call: 0300 333 6511
Visit: www.careium.co.uk
Email: uk.info@careium.com

