



Emfit® Epilepsy alarm

User manual

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1. Introduction

1.1. About Emfit Epilepsy alarm

Emfit Epilepsy alarm is a movement monitor that is used to detect and notify tonic-clonic seizures. The product consists of a bed sensor located under the mattress and a control unit where the bed sensor is connected. The control unit notifies the caregiver with a flashing led and sound (unless muted) and/or transfers a notification via external system, for example, a nurse call system or a personal emergency phone.

The device is not diagnostic and cannot differentiate between a tonic-clonic seizure and other fast movements. The manufacturer cannot guarantee that the device will detect all episodes of tonic-clonic seizure-induced body movements of the monitored person. The device may trigger a false body movement notification, especially if the person lying on the mattress fitted with the under-mattress bed sensor is awake. The device cannot be used to verify whether the alerted body movement was caused by a tonic-clonic seizure

Operating environment is typically a bedroom at a care-home or at home.

① *NOTE: Emfit Epilepsy alarm is only intended to be used as an aid by care providers. The product must not replace human supervision.*

1.2. Intended purpose

Emfit Epilepsy alarm is intended to be used to assist in sensory monitoring and to notify the caregiver:

1. of the body movements of a person lying on a mattress equipped with the undermattress sensor due to a tonic-clonic seizure while sleeping.
2. of the presence of the monitored person on the mattress equipped with the undermattress bed sensor and if he or she gets up from the mattress.

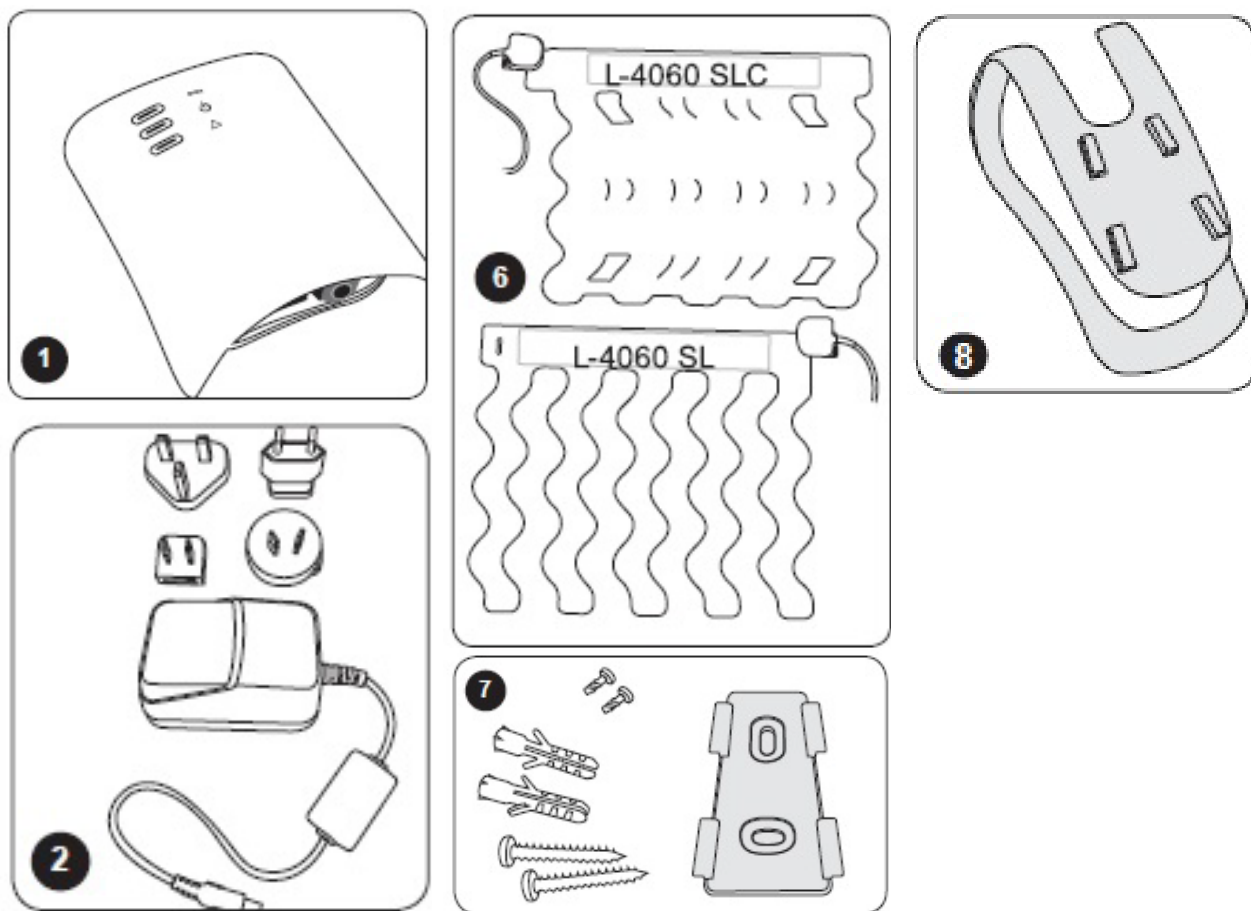
Emfit Epilepsy alarm may either be used:

- solely for the task described in point 1 above.
- for the tasks described in points 1 and 2 above simultaneously.

1.3. About this document

This user manual is intended for persons that support users with using Emfit Epilepsy alarm. The user manual describes how to use Emfit Epilepsy alarm in a safe way.

2. Overview of Emfit Epilepsy alarm



1. Control unit
2. External power supply (included for selected markets)
6. Bed sensor (L-4060 SLC or L-4060 SL)
7. Wall mounting bracket with two screws and two plugs
8. Clip for bed side attachment

Included parts

- 2 AA-batteries
- Cable kit (for selected markets)

Included document

- User manual (this document)

2.1.1. Control unit

The control unit emits a notification via dry-contact output and by sound (unless muted) when the sensor detects fast-paced movement (frequency 3–20Hz) in the bed for the duration of the preset time.

The control unit operates with 2 pcs AA size 1.5 V alkaline batteries. An external power supply is included for selected markets. In the event of a power failure, two high-quality 1.5V AA alkaline batteries can be used as an emergency power supply. The control unit has an input connector for the bed sensor and power supply. The device also has a connector to transfer the notification via an external system for example a nurse call system or a personal emergency phone.

Next to the input connector, there is a push button (SW1, see picture) that can be used to acknowledge a notification or as an on/off switch. The control unit has 8 DIP switches to select the settings and a rotary switch to adjust the sensitivity of the device.

2.1.2. Bed sensor

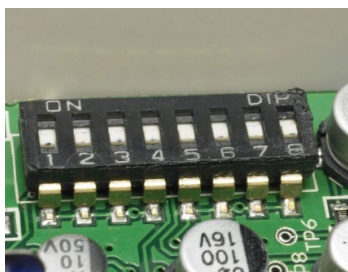
The bed sensor produces a millivolt alternating current when detecting movement. The control unit calculates the frequency and scale of the movement from this signal and, on this basis, detects possible tonic-clonic seizure. Micro-movements in the body allow the device to detect the person's presence.

3. Get started with Emfit Epilepsy alarm

i NOTE: Always test the device before using it and when the settings are adjusted.

3.1. Set up the DIP-switches before use

Inside, you will find eight DIP switches that are used to select the desired functions (see picture).



Default factory settings	Switch
Movement notification delay is 13 seconds.	1 and 2 OFF (down)
The bed exit notification is disabled.	3 ON (up) 4 and 5 OFF (down)
The SW1 switch acts as the On/Off switch, which means that the device can be switched on or off by pressing the switch for three (3) seconds.	6 OFF (down)
The notification sound is set to Very loud.	7 and 8 OFF (down)

i NOTE:

- If the wrong DIP switch settings are used, the unit will not work as expected.
- Remove the batteries and disconnect the power supply before setting up the DIP switches to implement the new settings.

To change the settings:

1. Disconnect the power supply (if used) and all cables.
2. Open the lid by lifting the side, see image.
3. Remove the batteries.

i NOTE: If the batteries and power supply are not disconnected, the new settings will not be implemented.

4. Select the desired settings.
5. Insert the batteries.
6. Close the lid
7. Connect all cables and the power supply.



3.1.1. Adjust the tonic-clonic seizure notification delay

Setting the time delay before the alarm is triggered.

When the device detects faster movement (between 3–20Hz), its internal timer switches on. The device gives a notification if the movement continues for longer than the preset time. The delay can be set to 10, 13, 16 or 20 seconds.

Choose the desired delay according to the following table. If there are problems with false alarm, increase the time delay.

Setting the fast movements duration after which the notification goes off	Switch 1	Switch 2
10 seconds	ON (up)	ON (up)
13 seconds (default)	OFF (down)	OFF (down)
16 seconds	ON (up)	OFF (down)
20 seconds	OFF (down)	ON (up)

3.1.2. Adjust the Bed-Exit Notification Delay

The device can be set to trigger a notification when a person leaves the bed and the system does not notice any micro-movements.

Time delay	Switch 3	Switch 4	Switch 5
No delay	OFF (down)	OFF (down)	OFF (down)
Disabled (default)	ON (up)	OFF (down)	OFF (down)
3 min Delay	ON (up)	ON (up)	OFF (down)
6 min Delay	OFF (down)	OFF (down)	ON (up)
10 min Delay	ON (up)	OFF (down)	ON (up)
15 min Delay	OFF (down)	ON (up)	ON (up)
30 min Delay	ON (up)	ON (up)	ON (up)

3.1.3. Activate or deactivate the SW1 switch function

SW 1 switch function	Switch 6
The SW1 switch acts as the On/Off switch which means that the device can be switched on or off by pressing the switch for three (3) seconds.	OFF (down)
The SW1 switch does not act as the On/Off switch. The device is always on when it is connected to the power supply or when the batteries are in.	ON (up)

3.1.4. Adjust the notification sound volume

ⓘ NOTE: Adjusting the volume may lead to the notification sound not being heard.

The sound signal must only be used when care persons are near the control unit. The volume can be set to loud, normal, quiet, or mute.

The sound signal stops when the reset button is pressed and when a seizure is over. If the user leaves the bed, the sound signal stops when the user returns to the bed or when the SW1 switch is pressed.

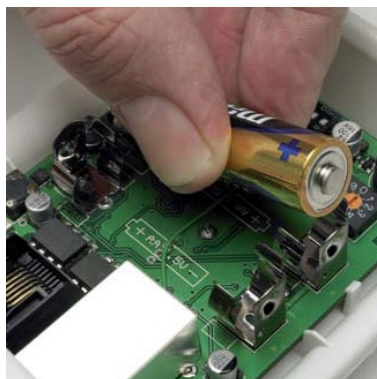
Level	Switch 7	Switch 8
Very loud	OFF (down)	OFF (down)
Normal	ON (up)	OFF (down)
Quiet	OFF (down)	ON (up)
Mute	ON (up)	ON (up)

3.2. Insert the batteries

i NOTE: Do not use any rechargeable batteries or lithium-ion batteries.



1. Open the lid lifting it from one side.



2. Insert two high-quality AA size 1.5V alkaline batteries into the device following the polarity symbols at the bottom of the device.

3.3. Prepare the 5V AC External power supply

The external power supply is included for selected markets.

⚠ WARNING: If an external force breaks the AC adapter and parts remain in the socket, it can result in electric shock.



1. Select a suitable plug from the four alternatives



2. Plug in the plug and make sure that it is not loose.

i NOTE: Do not use any power supply other than that provided by Abilia.

3.4. Connect the sensor, power supply and external systems

i NOTE:

- *The notification sound may be absent if the sensor or its cable is incorrectly positioned or damaged.*
- *The sensor or the sensor cable must not be stretched or cut.*

Connect the bed sensor, power supply (if used), and any cables to external systems (such as forwarding to nurse call systems or forwarding systems).



1. Connect the cable from the Emfit bed sensor to the X3 socket.



2. Connect the cable to the external system in the X2 socket.



3. Connect the power supply (if selected) to the X1 socket.

For a description of the X2 socket pin order, see *Appendix – X2- (AUX) Connector Pin Order* on page 25.

3.5. Install the control unit

① **NOTE:** Do not install the device near or on top of another device. If this cannot be avoided, the user must make sure that the device functions correctly.

3.5.1. Install the control unit on the wall



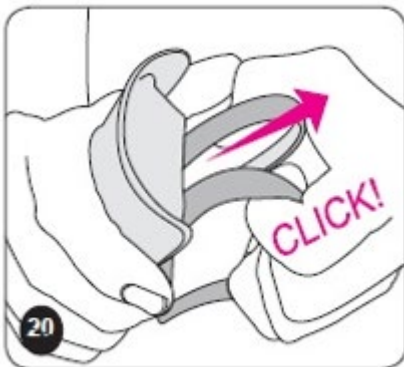
1. Fix the mounting bracket onto the wall.



2. Slide the control unit onto the wall mounting bracket until you hear a click.

3.5.2. Install the control unit with a bed side clip

Press the control unit down on the bed side clip.



4. Use Emfit Epilepsy alarm

NOTE:

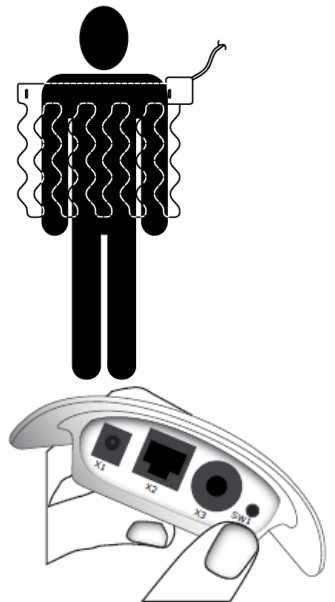
- Do not let the device get wet.
- Do not use the device in strong electromagnetic fields.
- Test the device before using it and when the settings are adjusted.
- Check the condition of the sensor and cables at least once a week and replace them if necessary.
- Check the entire system at least once a month.
- The equipment is not suitable for use in the presence of a flammable anaesthetic mixture with air or with oxygen or nitrous oxide.

4.1. Place the sensor under the mattress

NOTE:

- The notification sound may be absent if the sensor or its cable is incorrectly positioned or damaged.
- The sensor or the sensor cable must not be stretched or cut.
- Pets can cause false notifications if they walk or lie on a bed fitted with the device.
- Adjust the device sensitivity if the sensor is reinstalled or if the user or sensor is replaced.
- Always place the bed sensor under the mattress or mattress topper, never just under the sheet. The bed sensor must not come in direct contact with a person.
- The bed sensor must not be used with a pressure care mattress that is adjusted using a compressor pump, the mattress may interfere with the sensor's performance.

1. Place the bed sensor across the bed, under the mattress at approximately chest height (see picture).
2. Fix the sensor to the bed bottom mattress using the provided double sided tape to prevent the bed sensor from moving. The tape will not leave marks and will come off as a whole if removed.
3. If you are using the bed sensor with a spring mattress, place the bed sensor between the mattress and the mattress topper.
 - a. Place a hard board (plastic or hardwood 2-3 mm thick) under the sensor to avoid damaging the sensor.
 - b. Set the switch for sensitivity to 4.



4.2. Use the SW1 press switch

 NOTE: If you press the SW1 switch for too long, you might accidentally switch off the device.

The SW1 switch (see picture) can be used in four ways.

4.2.1. Use SW1 as an acknowledgement switch

The notification sound (if activated) can be muted by pressing the SW1 switch shortly. The device will make a "beep-beep" sound. The fast movement notification sound will stop when the movement stops.

In the event of absence in bed notification, the sound signal stops after about 40 seconds when the user returns to the bed.

4.2.2. Use SW1 as an ON/OFF switch

The SW1 switch acts as the on/off switch if this function is activated (DIP switch 6 is down). Press the SW1 switch for three (3) seconds to activate or deactivate the control unit. When the control unit is switched on, you will hear a beep and the blue LED light will start to flash. When the device is switched off, you will hear a "beep-beep-boop" (high-high-low) sound. The blue LED light will go off.

4.2.3. Use SW1 as a bed exit alarm bypass switch

The bed exit alarm can be deactivated if the user wants to leave the bed without triggering an alarm. This means that the user can leave the bed without any time limit. The time delay for the bed exit alarm is not activated again until the user returns to the bed and then leaves it.

When the bed exit alarm is activated through DIP switch 4 and you want to deactivate the alarm, the SW1 switch must be pressed before the time delay runs out. A beep sound is heard when the alarm is deactivated. The SW1 switch can also be pressed before the user leaves the bed to deactivate the alarm.

When the SW1 switch is pressed, the user has 20 seconds to leave the bed. If not, the alarm is activated again.

4.2.4. Use SW1 as a bed exit alarm "presence/absence" sensitivity switch

The SW1 switch can be used to launch automatic calibration for presence and absence sensitivity. See chapter 4.5. Calibrating the "presence / absence" sensitivity

4.3. Signal lights

The LED lights provide information about the status of the product.

4.3.1. Green – Presence

Light flashes every second time compared to blue light.	A person is on the bed or other movement is being made.
Light flashes the same speed as blue light.	A person has been on the bed for 60 seconds and the device has become activated.
Light flashes rapidly.	Fast-paced movement on the bed detected
Light is off.	No one is on the bed.

4.3.2. Blue – Device on/standby

Light is off.	Device is switched off
Light flashes slowly.	Device is switched on.
Light flashes rapidly a few times.	Device triggers a notification.

4.3.3. Red – Malfunction

Light is flashing the same speed as blue light	Bed sensor is disconnected or defective. Signal alarm sounds after 10 seconds and then every 45 seconds. There is also an alarm sent through the X2 connector after 30 seconds and then every 30 minutes.
Light is flashing every fourth time compared to blue light.	Batteries are empty. Replace batteries.

4.4. Signal sounds

There are two types of signal sounds.

Alarm signals, that are long and loud, are used to notify about fast movements and bed exit. Alarm signals can be muted using the DIP switches (see section 3.1.4 *Adjust the notification sound volume*).

Information signals, that are short and quieter than alarm signals, are used as feedback to the user. Information signals tell the user when the device is turned on or off or when alarm signal is acknowledged. Possible malfunctions of the equipment (disconnected bed sensor, empty batteries) and feedback about calibration of the sensor are also notified with information signals. Information signals can't be muted.

Alarm signals are high priority signals that will overrule information signals if both signals activate simultaneously.

4.4.1. Alarm signals

Two high and low "BEEPS" in a loop.	Fast movements alarm goes off.
Three high and low "BEEPS" in a loop.	Bed exit alarm goes off.

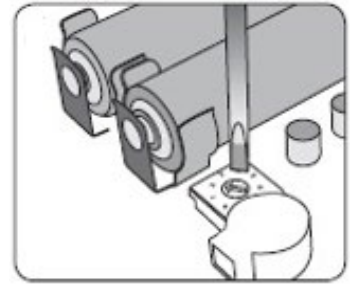
4.4.2. Information signals

Short, high "BEEP".	SW1 is pressed and device turns on.
Short, low "BEEP".	SW1 is pressed and device is turned off.
Short, low "BEEP" x 2.	SW1 has been pressed once and alarm signal is acknowledged.
Short, high "BEEP" x 3 and short low "BEEP" x 3.	Sensor is disconnected or broken. Information signal sounds after 10 seconds of disconnection and then every 45 seconds.
Short, high "BEEP", short "LOW" beep.	Batteries are empty. Replace batteries.
Short, high "BU-BEEP" x 3.	Sensitivity calibration has started / successful calibration.
Short, low "BEEP" (after calibration).	Sensitivity too low.
Short, low "BEEP" (after calibration) x 2.	Sensitivity too high.

4.5. Set sensitivity to notice tonic-clonic seizure

i NOTE:

- The sensitivity of the product must be adjusted according to the user's weight
- Adjust the sensitivity of the device every time the sensor is re-installed and if the user or the sensor changes.
- Test the device before using it and when the settings are adjusted



The sensitivity to notice fast movements caused by tonic-clonic seizure can be adjusted with the 10-position rotary switch inside. The factory default setting is 3. Increasing sensitivity may lead to false notifications while decreasing sensitivity may lead to the notification not becoming activated when needed.

If you feel that sensitivity is not good enough, simply adjust higher step by step. Or, if you feel it is too sensitive causing false notifications, simply drop the setting lower step by step.

Person weight	Switch position (in parenthesis if false alarms occur)
>75 kg	1 (0)
50-75 kg	2 (1)
35-50 kg	3 (2 or 1)
25-35 kg	4 or 5 (3 or 2)
15-25 kg	6 or 7 (5 or 4)
<15 kg	8 or 9 (7 or 6)

4.5.1. Calibrate the “presence/absence” sensitivity

i NOTE: Always calibrate if there are changes, such as a new bed or mattress, or if someone else is going to use the sensor.

If you use the bed-exit (absence) notification, the sensitivity to determine that person is in or out of the bed is adjusted in calibration mode. Increasing sensitivity can lead to false alarms while decreasing sensitivity can lead to the alarm not being activated when needed.

The person to be monitored should be in bed and lying still (not moving or talking) for at least one (1) minute until green light starts to blink the same speed as blue light. The monitor (control unit) should be placed on a table, clipped on bed, or mounted on wall. Sensor should be in correct position under mattress.

Start calibration by pressing the SW1 switch (picture 21) three (3) times. You will hear 3 low and high tones (bu-beep, bu-beep, bu-beep). The calibration takes 18 seconds. If calibration is successful, the confirmation sound will be the same 3 low and high tones (bu-beep, bu-beep, bu-beep).

4.5.2. Error messages and how to handle them

One (1) long beep - Device has not detected strong enough micro movement signal and has reached an adjustment limit. Device might not work optimally. Is the sensor positioned correctly in the bed and device was not in error -state (red led was not blinking)? If not: Correct the problem and re-try calibration. If yes: Adjust the rotary switch up 2 notches and re-try auto adjustment.

Two (2) long beeps - Device has detected too strong signal and has reached an adjustment limit. Device might not work optimally. Was person laying still during the calibration period? Re-try calibration again and see if second time would be successful. If second time gives same error sound, adjust the rotary switch down 2 notches and do the calibration again. You can always return sensitivity to factory default. First press SW1 three (3) times and soon after hearing the three sounds, press SW1 again 3 times. That interrupts adjustment and device returns to factory setting.

5. Maintenance

5.1. Checks

5.1.1. Weekly checks

1. Check the condition of the cables
2. Check the position of the bed sensor under the mattress. The correct position is at the chest height of the user and across the bed.

5.1.2. Start-up and monthly checks

To ensure faultless performance, conduct the following tests at least once a month and whenever the device is re-installed.

Testing the tonic-clonic seizure notification

1. Make fast-paced movements (for example, tapping the mattress repeatedly around the bed sensor).
2. The green light should start flashing when you tap the mattress.
3. The device should trigger a notification after the pre-set delay time has passed (10, 13, 16 or 20 seconds).

Testing the absence notification sensitivity

1. Check that the function is activated. If it is not, set DIP switch 5 to OFF position. Make sure that the control unit is on (blue LED flashes slowly).

i *NOTE: To activate the changes, the batteries must be removed and the power supply disconnected.*

2. To test the sensitivity of the sensor, have a person lie on the bed completely still and without talking. Wait at least 1–2 minutes. The control unit should immediately register micro movements in the body and the green light should flash slowly every second time the blue light flashes. The green light flashes constantly if a person is in the bed. The control unit is activated when movements or micro movements have been registered for 40 seconds and the green light starts flashing in the same pace as the blue light.
3. If the device does not register presence of a person (green light does not flash), see section **6 Troubleshooting**. If the green light still does not light up, increase the sensitivity by turning the rotary switch up gradually until the green light lights up. If the green LED lights up when no one is on the bed, turn the rotary switch down gradually until the green light is no longer on.
4. Ask the person in the bed to leave the bed. A notification is triggered after the pre-set delay time (provided that no one has touched sensor, bed or cables). If a notification is not triggered and the green light continues to flash, see section **6 Troubleshooting**.

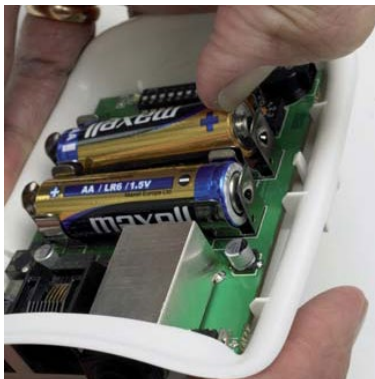
5.2. Change batteries

i NOTE: Do not use any rechargeable batteries or lithium-ion batteries.

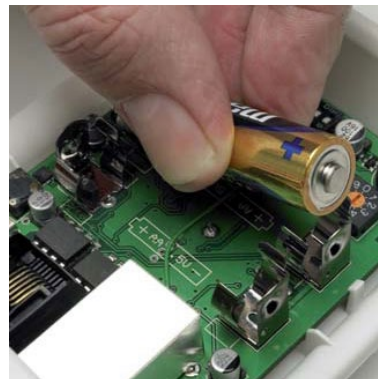
Unplug the power supply to test the batteries. When it is time to replace the batteries, the red LED starts flashing slowly. The device makes a beep sound every 1.5 hour and X2 notifies every three hours.



1. Disconnect the power supply and all cables.
2. Open the lid by lifting the side.



3. Lift the old batteries at the positive terminal (+) and remove them.



4. Insert two 1.5 V AA alkaline batteries. Make sure that the poles are placed correctly according to the marking.

Estimated battery life is 6 months when using high quality alkaline batteries with 2800 mAh capacity (2 pcs). Estimation is based on the device being on 50% of time (shut down 50% of time) and of that 50% of time there is someone in bed 75% of that time, there are two notifications per day and sound notification is on 30 seconds each time.

5.3. Cleaning

- i** NOTE:
- Do not let the device get wet.
 - Unplug the power supply before cleaning.

Always disconnect the external power supply and remove nurse call cable (if used) from connector X2 before cleaning the device. You can wipe the bed sensor and cables, control unit and external power supply with a damp cloth, neutral cleaning product or mild disinfectant. Dry all parts well after cleaning.

6. Troubleshooting

Ensure that the device is properly installed. Test the device carefully every time its settings are adjusted.

Problem	Solution
The device triggers a notification, but the nurse call system does not.	Ensure that the external wireless transmitter or other system's connection cable is connected to the X2 connector. Check the battery of the external wireless transmitter.
Notification sound is inaudible.	Check the volume.
The device triggers a notification even if there is no unusual movement.	Check the condition, installation, and position of the bed sensor. Check that the sensitivity setting of the sensor is not too high. The green light should not be on if no one is on the bed. The device may interpret normal movements (scratching, rocking, etc.) as a seizure. Adjust the delay time longer if necessary. Some people are restless before they fall asleep, and this might cause false notifications. Try switching the device on only after the person has fallen asleep. If the bed exit alarm is enabled (DIP switch 3 in DOWN position) and sensitivity is not set high enough, alarm may trigger. Either disable alarm (DIP switch 3 in UP position) or see section 15.
The green light is on even if no one is on the bed.	Ensure that the bed sensor and its cables are not affected by external movement and remove any distractions. Check the condition of the bed sensor and its cables. Faulty sensor or cable may cause distractions so that the green light is on all the time. Adjust sensitivity.
The device does not trigger a notification, and the green light is not on even if someone is on the bed.	Check the condition of the bed sensor and its cables. Check the sensitivity of the device by having someone lie on the bed completely still. The green light should be on.

7. Transport, storage and disposal

7.1. Transport

Do not move or transport the device during use. If the bed equipped with the device needs to be moved remember to unplug all cables and turn off power. Fix the control unit to the bed with bed-side attachment clip to prevent it from moving.

7.2. Storage

Remove the batteries when the device is not in use or when it is stored for an extended period.

Operating temperature:	10–40°C
Storage and transport temperature:	-30–50°C
Relative humidity:	20–75%

7.3. Disposal

The product contains electrical components that must be recycled. Dispose of the product at an applicable disposal location.



8. Product specifications

8.1. Control Unit

Model:	D-1090-2G (t63v1.3.2)
Operating voltage:	3 V DC with batteries / 5 V DC with external power supply
Input and output connectors:	Power supply, AUX and bed sensor
Dry-contact output:	Max. 100 mA, <60 V DC, <25 V AC
Measurements:	96 x 127 x 34mm
Weight (g):	110 g
IP rating:	IP20
Casing:	Plastic
Estimated lifetime:	5 years

8.2. Bed Sensor

Model:	L-4060SL (art. no. 464027)
	L-4060SLC (art. no. 464011)
Measurements:	430 x 580 mm
Thickness:	0.4 mm / 1.4 mm
Weight:	185 g / 410 g
Surface material:	Polyester / Phthalate free PVC
Cable length:	3.0 m
IP rating:	IP20
Estimated lifetime:	2 years (depending on use and surface it is placed on)

8.3. Power supply

The external power supply is included for selected markets.

Manufacturer and model:	GlobTek Inc. or SL Power Electronics
Input voltage:	100-240 V
Input current:	<0.6 A RMS MAX
Input frequency:	50 - 60 Hz
Watts:	6.0 W
Output voltage:	5 V DC
Output current:	1.2 A
Electrical safety class:	Class II

8.4. Accessories

For more information about Emfit Epilepsy alarm and the accessories, go to www.abilia.com or scan the QR code.



9. Important information

Before you use the product, read and understand the contents of this user manual.

9.1. Safety definitions

⚠ WARNING: Risk of injury or death if the instructions are not followed.

⚠ CAUTION: Risk of damage to the product if the instructions are not followed.

ℹ NOTE: Information that is necessary in a given situation.

9.2. Safety instructions before using Emfit Epilepsy alarm

⚠ WARNING: Read the following warning instructions before you use the product.

- If an external force breaks the AC adapter and parts remain in the socket, it can result in electric shock.

9.3. Serious incidents

If a serious incident related to the product occurs, report this to the manufacturer and the competent authority of your country. A serious incident directly or indirectly led, might have led or might lead to the death of a patient, user or other person; the temporary or permanent serious deterioration of a patient's, user's or other person's state of health; or a serious public health threat.

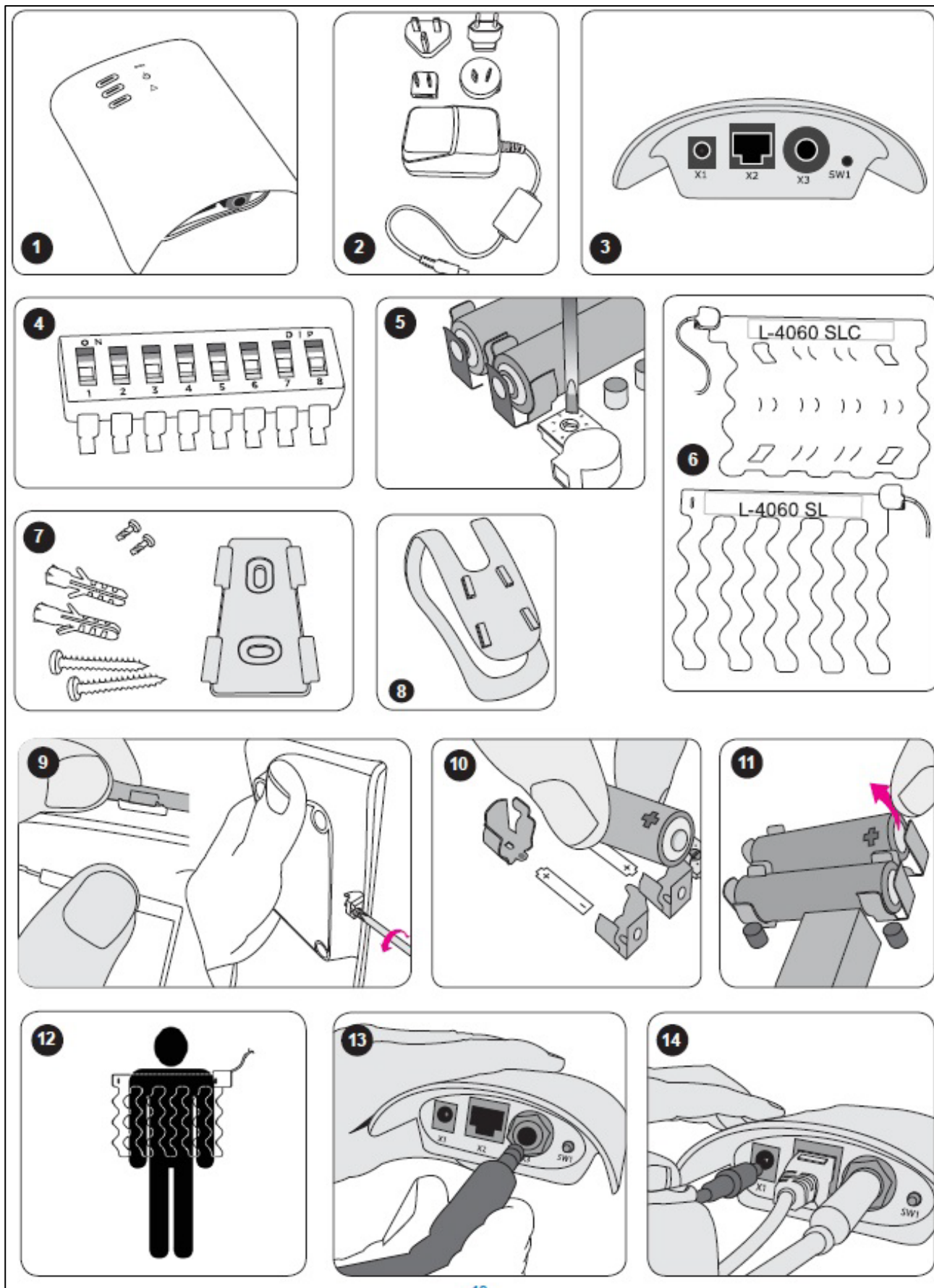
9.4. Conformance with requirements for medical devices

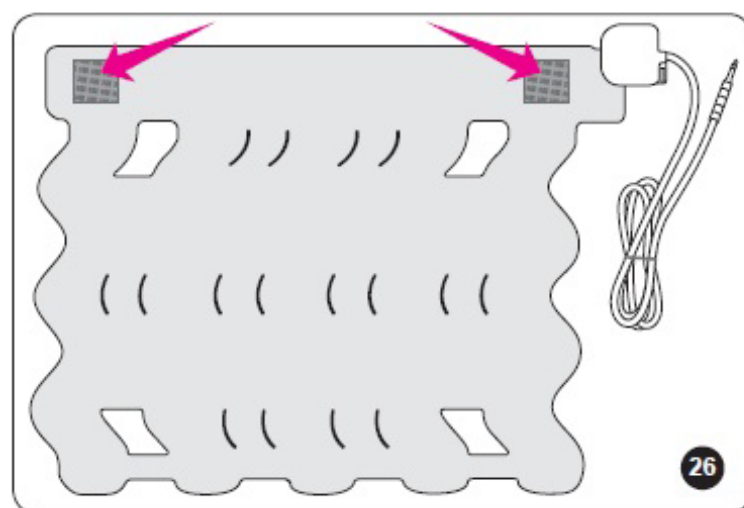
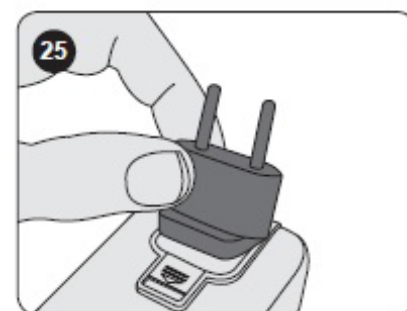
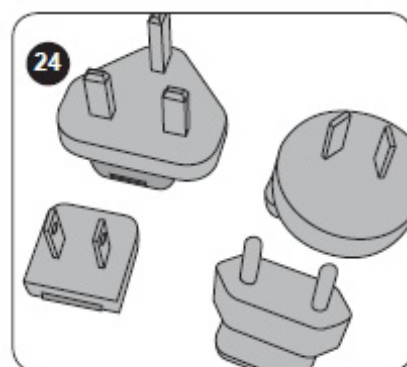
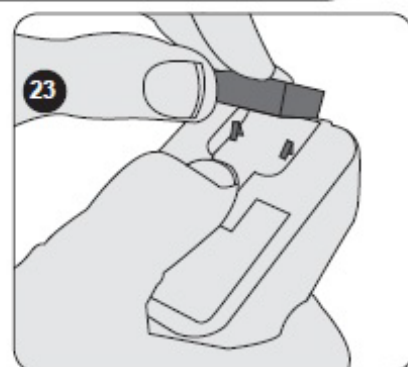
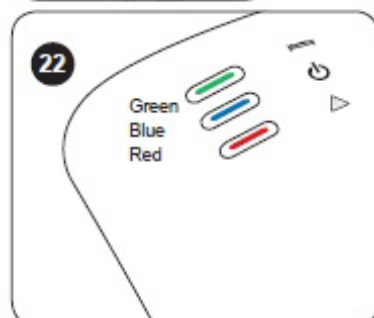
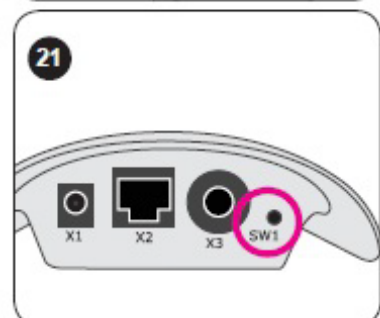
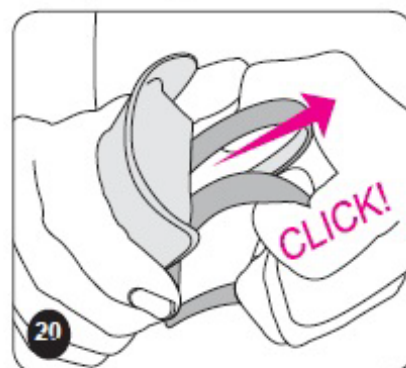
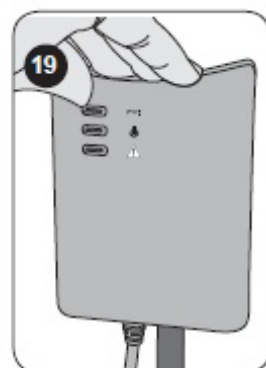
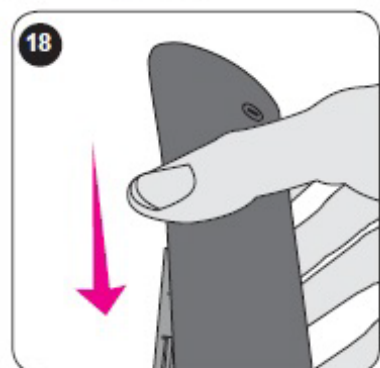
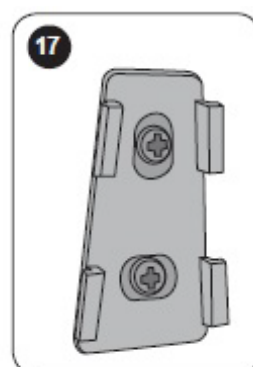
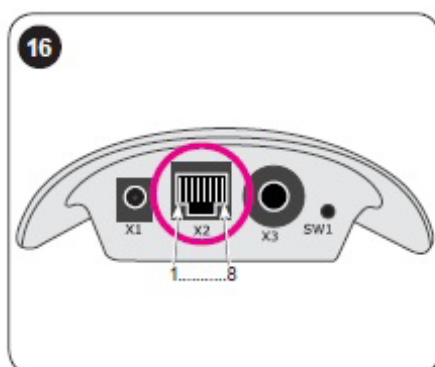
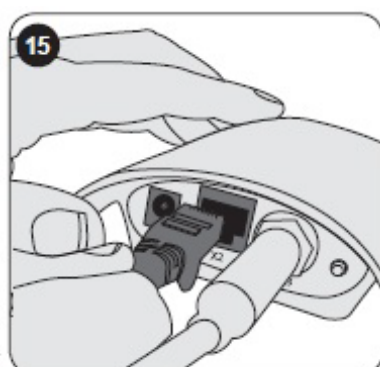
Emfit Epilepsy alarm is marketed as a technical aid for people with disabilities. It complies with all necessary requirements, regulations and directives for medical devices.

9.5. Product liability

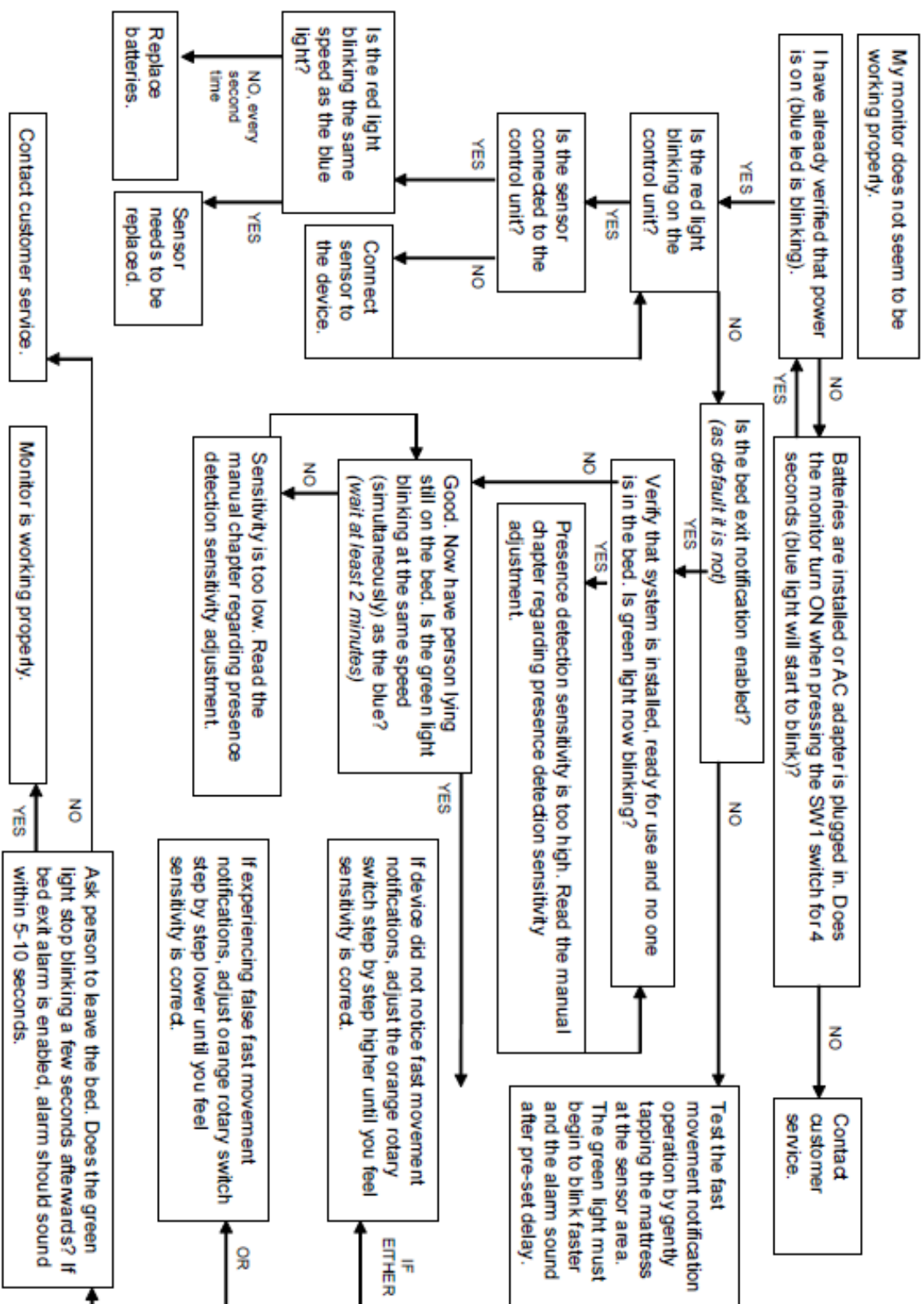
The product is developed and risk-assessed according to ISO 14971. The manual and the technical specifications are made according to the safety assessments in the risk analysis. Always consider the safety when using the product. Abilia AB does not take responsibility for any consequences following incorrect use or installation of the product. Any form of damage or tampering with the product invalidates the warranty and disclaims the manufacturer's liability. The estimated lifetime of the product applies when used in accordance with its intended use and maintenance instructions.

Appendix – Related images





Emfit Tonic-Clonic Seizure Monitor Troubleshooting Flow Chart

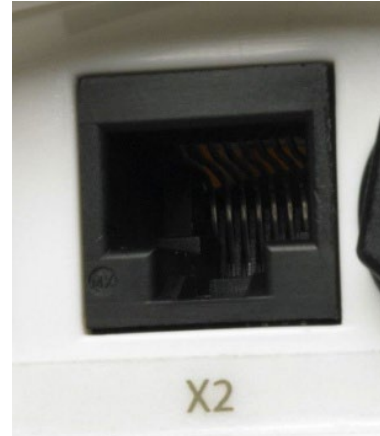


Appendix – X2- (AUX) Connector Pin Order

Output signals from the X2 socket can only be sent to other systems with a maximum of 25V (AC) or 60V (DC) where both poles are disconnected from the mains. Maximum simultaneous load is 100 mA.

From left to right:

Pin 1	Common return
Pin 2	Normally Open (NO) send
Pin 3	Normally Closed (NC) send
Pin 4	Low Battery send (NC)
Pin 5	Not in use, do not connect
Pin 6	Not in use, do not connect
Pin 7	Not in use, do not connect
Pin 8	Not in use, do not connect



Appendix – Recommended distance from RF-equipment

Recommended separation distances between portable and mobile RF communications equipment and the equipment			
The Emfit Epilepsy alarm is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Emfit Epilepsy alarm can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Emfit Epilepsy alarm 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		
	150 kHz – 80 MHz $d = 1,2\sqrt{P}$	80 MHz – 800 MHz $d = 1,2\sqrt{P}$	800 MHz – 2.5 GHz $d = 1,2\sqrt{P}$
0,01	0,12 m	0,12 m	0,23 m
0,1	0,38 m	0,38 m	0,73 m
1	1,2 m	1,2 m	2,3 m
10	3,8 m	3,8 m	7,3 m
100	12 m	12 m	23 m
For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be determined 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: - At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies. - 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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