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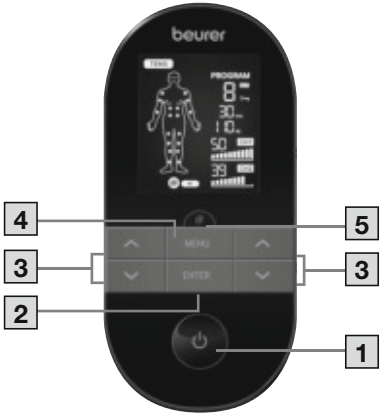
EM 59 Heat

EN Digital TENS/EMS unit with heat function
Instructions for use

CE 0483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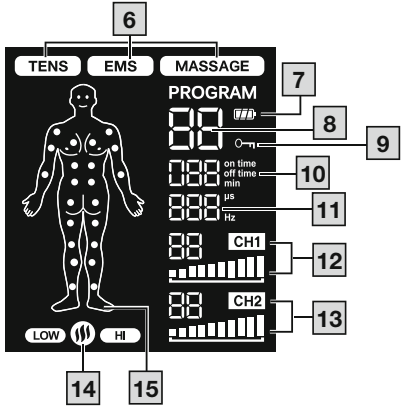
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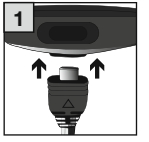
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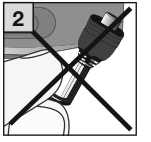
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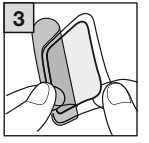
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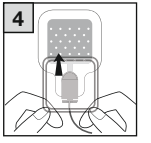
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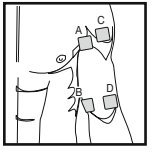
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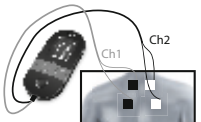

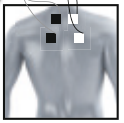
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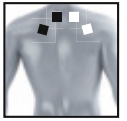
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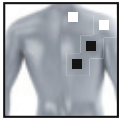
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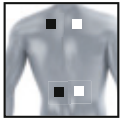
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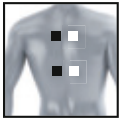
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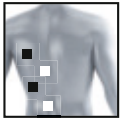
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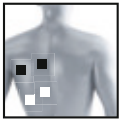
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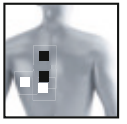
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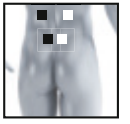
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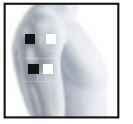
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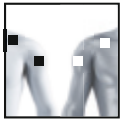
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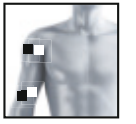
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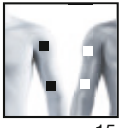
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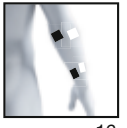
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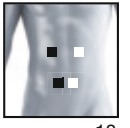
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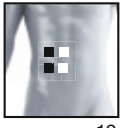
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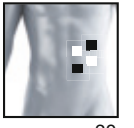
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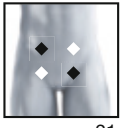
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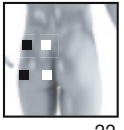
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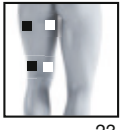
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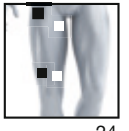
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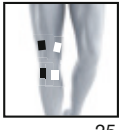
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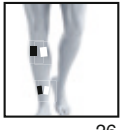
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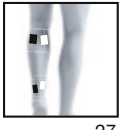
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Read these instructions carefully and keep them for later use, be sure to make them accessible to other users and observe the information they contain.

1. INCLUDED IN DELIVERY

Check that the exterior of the cardboard delivery packaging is intact and make sure that all contents are present. Before use, ensure that there is no visible damage to the device or accessories and that all packaging material has been removed. If you have any doubts, do not use the device and contact your retailer or the specified Customer Service address. **A**

A 4 x electrodes including gel pads
B 1 x EM 59 Heat unit
C 1 x connection cable
D 1 x belt clip

2. GETTING TO KNOW YOUR DEVICE

What is EM 59 Heat, and what can it do?

EM 59 Heat falls into the electrostimulation device category. It provides four basic functions suitable for combined operation:

1. Electrical stimulation of nerve tracts (TENS)
2. Electrical stimulation of muscle tissue (EMS)
3. A massage effect triggered by electrical stimulation
4. The heat function

The unit also features two independent stimulation channels and four electrodes. It offers a wide range of functions for increasing general well-being, pain relief, maintaining physical fitness, relaxation, muscle revitalisation and combating tiredness.

The principle of electrostimulation devices is based on the imitation of impulses in our bodies that are transferred to nerve and muscle fibres using electrodes via our skin. The electrodes can be applied to many parts of the body; the electrical impulses are completely harmless and virtually painless. In certain applications you will only perceive a slight tingling or vibrating sensation. The electrical impulses that are sent into the tissue influence the transmission of

stimulation into nerves, nerve centres and muscle groups in the application area.

Electrostimulation usually only has an effect after regular applications. With regard to muscles, electrostimulation does not replace regular training. However, it is a sensible, supplementary training element.

To enable pain to be alleviated even more pleasantly, with the EM 59 Heat you can also switch on a soothing heat function.

TENS, or transcutaneous electrical nerve stimulation, relates to the electrical stimulation of the nerves through the skin. TENS is an effective non-pharmacological method of treating different types of pain that have a variety of causes. It has no side-effects if administered correctly. The method has been clinically tested and approved and can be used for simple self-treatment. The pain-relieving or pain-suppressing effect is achieved by inhibiting the transfer of pain to nerve fibres (caused mainly by high-frequency pulses) and by increasing the secretion of endorphins in the body. Their effect on the central nervous system reduces the sensation of pain. The method is scientifically substantiated and approved as a form of medical treatment.
Any symptoms that could be relieved using TENS must be checked by your GP. Your GP will also give you instructions on how to carry out a TENS self-treatment regime.

TENS is clinically tested and approved to treat the following complaints:

- Back pain, particularly in the lumbar/cervical spine area
- Sore joints (e.g. knee, hip and shoulder joints)
- Neuralgia
- Menstrual cramps in women
- Pain resulting from injury to the musculoskeletal system
- Pain caused by circulatory disorders
- Chronic pain with various causes.

Electrical muscle stimulation (EMS) is a widespread and generally recognised method and has been used in sports and rehabilitation medicine for years. In sports and fitness, EMS is used to complement conventional muscle training, to increase the performance of muscle groups and to adjust physical proportions to achieve the desired aesthetic results, amongst other things. There are two different types of EMS application. One is for targeted strengthening of the muscles (activating application), and the other is to achieve a relaxing, restful effect (relaxing application).

The **activating application** involves:

- Muscle training to increase endurance and/or
- Muscle training to support the strengthening of specific muscles or muscle groups, and to achieve the desired changes to physical proportions

The **relaxing application** involves:

- Muscle relaxation for easing muscle tension
- Improving symptoms of muscular fatigue
- Acceleration of muscle regeneration after intense muscle performance (e.g. after a marathon)

Thanks to **integrated massage technology**, the EM 59 Heat is also capable of relieving muscle tension and combating fatigue with a program based on the sensation and effects of a real massage.

For the purposes of alleviating any discomfort even more pleasantly, the EM 59 Heat also offers the option of adding **soothing heat** in two stages, with a maximum heat generation of 43 °C. Heat is proven to promote blood circulation and thereby exerts a relaxing effect. The heat function of the EM 59 Heat can be used parallel or separately to a stimulation.

The positioning suggestions and program tables in these instructions for use allow you to quickly and simply determine the corresponding application (depending on the affected area of the body) and set the unit to achieve the desired effects.

Thanks to its two separately adjustable channels, the EM 59 Heat offers you the advantage of being able to set the intensity of the impulses independently from each other for two treatment areas on the body, for example to cover both sides of your body or to evenly stimulate larger areas of tissue. The option to individually set the intensity of each channel also enables you to treat two separate areas of the body simultaneously instead of having to treat the individual areas in turn, which saves you time.

3. SIGNS AND SYMBOLS

The following symbols are used on the device, in these instructions for use, on the packaging and on the type plate for the device:

⚠ WARNING

Indicates a potentially impending danger. If it is not avoided, there is a risk of death or serious injury.

⚠ CAUTION

Indicates a potentially impending danger. If it is not avoided, slight or minor injuries may result.

NOTICE

Indicates a potentially harmful situation. If it is not avoided, the system or something in its vicinity may be damaged.

	**Product information** Note on important information
	**Observe the instructions** Read the instructions before starting work and/or operating devices or machines
IP22	Device protected against foreign objects ≥ 12.5 mm and against water dripping at an angle
SN	Serial number
	Application part, type BF
	The electronic device must not be disposed of with household waste
	Do not dispose of batteries containing hazardous substances with household waste
CE	**CE labelling** This product satisfies the requirements of the applicable European and national directives.
	Manufacturer

	The device can emit effective output values above 10 mA, averaged over every 5-second interval
	Marking to identify the packaging material. A = Material code, B = Material number: 1-7 = Plastics, 20-22 = Paper and cardboard
	Separate the product and packaging elements and dispose of them in accordance with local regulations.
	Temperature limit
	Humidity limitation
	The device must not be used by persons with medical implants (e.g. heart pacemakers). Otherwise their function could be impaired.
REF	Item number
	Importer symbol
#	Type number
CH REP	Swiss authorised representative
UDI	Unique Device Identifier (UDI) for unique product identification
MD	Medical device
	Date of manufacture
	Use by date

4. INTENDED USE

TENS/EMS/massage purpose

The device is intended to treat pain using TENS technology (transcutaneous electrical nerve stimulation). This pain relief can be applied to different areas of the human body as identified in the following eight indication areas.
As a non-medical purpose, the device can also be used with EMS technology (electrical muscle stimulation) to strengthen the muscles, and for regeneration and relaxing massages.

TENS/EMS/massage target group

This device is intended for self-treatment in the home, and not in professional healthcare facilities. Suitable for use by all adults suffering from pain as indicated in the indications below.

Clinical benefits

Treatment of pain due to various causes.

Non-clinical benefits

- Muscle training to increase endurance and/or
- training to support the strengthening of specific muscles or muscle groups, and to achieve the desired changes to physical proportions.
- Acceleration of muscle regeneration after intense muscular output (e.g. after a marathon).
- Improving symptoms of muscular fatigue.
- Muscle relaxation for easing muscle tension.

Indications

Use of the device is advised for:

- Back pain – pain at rest and on exertion
- Joint pain – pain at rest and on exertion
- Neuralgia, including phantom pain
- Menstrual cramps
- Pain due to circulatory disorders – pain at rest and on exertion
- Headaches
- Pain after musculoskeletal injuries – pain at rest and on exertion
- Chronic pain due to various causes – pain at rest and on exertion

Contraindications

- The device must never be used near to the heart. The stimulation electrodes must not be placed on any part of the front ribcage (where the ribs and breastbone are located), and especially not on the two large pectorals. This can increase the risk of ventricular fibrillation and induce cardiac arrest (see “General warnings” section).
- Do NOT use the device
  - On the skeletal skull structure, or around the mouth, throat or larynx.
  - In the neck/carotid artery area.
  - In the genital area.
  - If you have implanted electrical devices (e.g. a pacemaker).
  - If you have metal or electrical implants.
  - If you use an insulin pump.
  - If you have a high temperature (e.g. > 39°C).
  - If you have a known or acute cardiac arrhythmia or disorders of the heart’s conduction system.
  - On acutely or chronically diseased (injured or irritated) skin (e.g. inflamed skin – whether painful or not, reddened skin, rashes (e.g. allergies), burns, bruises, swellings, both open and healing wounds, or post-operative scars that are healing).
  - If you suffer from a seizure disorder (e.g. epilepsy).
  - If you are pregnant.
  - If you have cancer.
  - After an operation, if strong muscle contractions could affect the healing process.
  - If you are connected to a high-frequency surgical device.
  - If you have an acute or chronic disease of the gastrointestinal tract.
  - In the case of a known allergy to the electrode material
  - On acutely or chronically affected (by injury or irritation) skin (e.g. inflamed skin°– whether painful or not; reddened skin; rashes, e.g. due to allergies; burns; bruising; swelling; open and healing wounds and post-operative scars where the healing process could be impaired)

⚠WARNING

Undesirable side effects

- Skin irritation
- Feeling of pressure at the electrode location
- Slight redness, burning and pain of the skin after treatment
- Paraesthesia
- Discomfort

- Sleepiness
- Vibration of muscles
- Tension
- Headaches
- Increased menstrual bleeding
- Allergic reactions to components

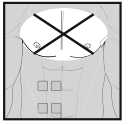
5. WARNINGS AND SAFETY NOTES

This device is not a substitute for medical consultation and treatment. Consult your doctor first if you are experiencing any pain or are suffering from an illness!

⚠ WARNING

To avoid damage to health, we strongly advise against using the digital EMS/TENS unit in the following situations:

- With implanted electrical devices (such as a pacemaker)
- In the case of metal implants
- If you use an insulin pump
- If you have a high temperature (e.g. > 39°C)
- If you have a known or acute cardiac arrhythmia, or disorders of the heart's impulse and conduction system
- If you suffer from a seizure disorder (e.g. epilepsy)
- If you are pregnant
- If you have cancer
- After an operation, if strong muscle contractions could affect the healing process
- The device must never be used close to the heart. The stimulation electrodes must not be placed on any part of the front ribcage (where the ribs and breastbone are located), especially not on the two large pectorals. This can increase the risk of ventricular fibrillation and induce cardiac arrest.



- On the skeletal skull structure, or around the mouth, throat or larynx
- In the neck/carotid artery area
- In the genital area
- On acutely or chronically diseased (injured or irritated) skin (e.g. inflamed skin – whether painful or not, reddened skin, rashes, e.g. allergies, burns, bruises, swellings, both open and healing wounds, and post-operative scars where the healing process could be affected)
- In humid environments (e.g. in the bathroom) or when bathing or showering
- Do not use after consuming alcohol
- If connected to a high-frequency surgical device
- In the case of acute or chronic diseases of the gastrointestinal tract
- The stimulation should not be applied above or through the head, directly onto the eyes, covering the mouth, to the front of the neck (especially not to the carotid artery), or with the electrode surfaces placed on the chest and upper back or across the heart.

Before using the device, consult your doctor if any of the following apply to you:

- Serious illnesses, in particular if you suspect or have been diagnosed with high blood pressure, a blood coagulation disorder, propensity to thrombo-embolic conditions or recurrent malignant growths
- Any skin conditions
- If you have unexplained chronic pain in any part of the body
- Diabetes
- If you have any sensory impairment that reduces the feeling of pain (e.g. metabolic disorders)
- If you are receiving medical treatment
- In the event of complaints linked to stimulation treatment
- If you suffer from persistently irritated skin due to long-term stimulation at the same electrode site

⚠ CAUTION

Only use digital EMS/TENS units:

- On adults
- For the purpose for which it was developed and as specified in these instructions for use. Any improper use can be dangerous
- For external use
- With the original accessories supplied, which can be re-ordered. Failure to do so invalidates the warranty.

PRECAUTIONS:

- Always pull firmly on electrodes to remove them from the skin to prevent injuries in the unusual case of highly sensitive skin.

- Keep the device away from sources of heat (heating devices such as driers or ovens) and do not use it in close proximity (approx. 1 m) to shortwave or microwave devices (e.g. mobile phones), as doing so can result in unpleasant current peaks.
- Do not expose the device to direct sunlight or high temperatures.
- Protect the device from dust, dirt and humidity.
- Never immerse the device in water or other liquids.
- The device is suitable for self-treatment.
- For hygiene reasons, the electrodes may only be used on one person.
- If the device does not work properly, or if you feel unwell or experience pain, stop using it immediately.
- Switch off the unit or the respective channel first before removing or relocating electrodes to prevent unintentional stimulation.
- Do not modify electrodes (e.g. by cutting them), as this increases the current density, which is potentially hazardous (max. recommended output value for the electrodes is 9 mA/cm^2, an effective current density beyond 2 mA/cm^2 requires increased awareness).
- Do not use the device whilst asleep, driving a vehicle or operating machinery.
- Do not use whilst undertaking any activity where an unexpected reaction (e.g. strong muscle contractions even at low intensity) could be dangerous.
- Ensure that no metallic objects (e.g. belt buckles or necklaces) come into contact with the electrodes during stimulation. If you are wearing jewellery or have piercings in the area to be treated (e.g. a navel piercing), these must be removed before using the device. Failure to do so could result in spot burns.
- Keep the device away from children.
- Make sure not to confuse the electrode cables including contacts with your headphones or other devices, and do not connect the electrodes to other devices.
- Do not use the device whilst using other devices that transmit electrical impulses to your body.
- Do not use in the vicinity of highly flammable substances, gases or explosives.
- The actual temperature may vary depending on the condition of your skin, your age, the location of the pain, etc.
- If the heat function feels too hot, stop treatment immediately. You can continue the TENS, EMS or massage treatment without the heat function.
- During the initial few minutes, use the device while sitting or lying down to minimise the risk of injury resulting from isolated cases of vagal responses (feeling of faintness). If you feel faint, immediately switch off the device, lie down and support your legs in an elevated position (approx. 5–10 min.).
- Treatment of the skin with moisturising lotions or ointments beforehand is not recommended as this considerably increases the gel pad wear and may cause unpleasant current peaks.
- This device is not intended for use by children or people with restricted physical, sensory (e.g. reduced sensitivity to pain) or mental skills or a lack of experience and/or lack of knowledge, unless they are supervised by a person who is responsible for their safety or who are instructed by such a person in how to use the device.
- If the adhesive capability of the gel pads decreases, please replace them immediately. Do not use the device until you have the new gel pads. Otherwise the unequal adhesion of the gel pads may lead to skin injuries. Replace the gel pads with new ones at the latest after having used them 20 times.

Damage

- If the device is damaged, do not use it and contact your retailer or the specified Customer Services address.
- To ensure that the device functions effectively, do not drop it or dismantle it.
- Check the device for signs of wear and tear or damage. If there are such signs of wear and tear or damage or if the device was used improperly, it must be returned to the manufacturer or retailer before further use.
- Switch the device off immediately if it is faulty or not working properly.
- Never attempt to open and/or repair the device yourself. Repairs may only be carried out by Customer Services or authorised retailers. Failure to comply with this instruction will void the warranty.
- The manufacturer is not liable for damage resulting from improper or careless use.

Notes on handling batteries

⚠WARNING

- **Risk of explosion! Risk of fire!** Failure to comply with the points mentioned can result in personal injury, overheating, leakage, venting, breakage, explosion, or fire.
- Always use the correct or supplied charging cable/charger/mains adapter for charging.

- Avoid continuous charging or overcharging Unplug the charger when charging is complete.
- Charge the device under supervision, paying attention to any heat generated, deformation, or release of gases. If in doubt, stop charging.
- If batteries/charging cables/chargers are defective, stop using them and dispose of them properly as soon as possible (see chapter on disposal).
- Do not throw the device or batteries into a fire.
- Never forcibly discharge, heat, disassemble, open, crush, deform, encapsulate, modify, or knock the device or batteries.
- Never short-circuit batteries or the connections of the battery-powered device.
- Protect the device or batteries from direct sunlight, rain, heat, and water.
- Exposure of batteries to an environment with extremely high temperatures or an extremely low air pressure may result in explosion or leakage of flammable liquids and gases.
- If fluid from a battery comes into contact with your skin or eyes, wash the affected areas with water and seek medical assistance.

NOTICE

- This device contains a battery that is not replaceable. Once a battery has reached the end of its service life, the device must be disposed of properly (see chapter on disposal).

6. DEVICE DESCRIPTION

Buttons:

The associated drawings are shown on page 2.

1 ON/OFF button ⏻

2 **ENTER** button

3 Setting buttons (Ch1 ∧/∨ left, Ch2 ∧/∨ right)

4 **MENU** button

5 Heat button

Display (full screen):

6 Menu TENS / EMS / MASSAGE

7 Battery status

8 Program number

9 Button lock

10 Timer function (remaining time display)

11 Display for frequency (Hz) and pulse width (µs)

12 Impulse intensity channel 1 Ch1

13 Impulse intensity channel 2 Ch2

14 Heat function low/high LOW / HI

15 Electrode positioning indicator

7. INITIAL USE

Before you use the EM 59 Heat for the first time, let it charge for a minimum of 4 hours. Proceed as follows.

1. Connect the USB charging cable to a mains adapter (max. output 5V/2A) and the EM59 Heat
2. Then insert the mains adapter into a suitable socket.
3. Alternatively, you can charge the device using your computer/laptop. To do so, connect the device to a USB port on your PC/laptop via the USB charging cable. You cannot use the device while it is being charged.
4. Turn the belt clip if required.
5. Guide the connection cable plugs into the socket on the bottom of the device B1.
6. Do not pull, twist or kink the cables B2.
7. After the charging process is complete, apply the provided gelpads to the electrodes. First carefully remove the protective films B3. Then carefully apply the gel pads to the electrodes B4. Ensure that the edges of the gel pads do not protrude over the electrodes. Applying gel pads slightly askew will not affect their function

⚠WARNING

Remove the protective film slowly and carefully. Make sure that the self-adhesive gel fpad is not damaged, as damage or unevenness on the gel pad may cause skin irritation.

8. USE

Starting use

Step 1: Look for a suitable program from the program tables (see section “Program overview”).

Step 2: Place the electrodes on the desired area for treatment (for positioning suggestions see section “Information regarding the positioning of electrodes”) and connect them to the device.

Step 3: Press the ON/OFF button ⏻ to switch on the device.

Step 4: Press the **MENU** button to navigate through the TENS / EMS / MASSAGE menus and press the **ENTER** button to confirm your selection.

Step 5: Use the ∧/∨ setting buttons to select the program number you want and press the **ENTER** button to confirm your selection. At the start of the stimulation treatment, the impulse intensity of Ch1 and Ch2 is set to ▯▯ by default. No impulses are sent to the electrodes yet.

Step 6: Use the left and right ∧/∨ setting buttons for Ch1 and Ch2 to select the impulse intensity you want. The indicator for impulse intensity in the display changes accordingly. If the program is in a pause phase, the intensity cannot be increased.

Step 7: You can activate the heat function using the heat function button. The first press of the button activates the low heat level, the second button press activates the high heat level, and the third button press deactivates the heat function.

NOTICE

- The device switches itself off automatically if it is not used for one minute (automatic switch-off). When the unit is switched on again, the LCD screen displays the menu selection and the most recently used menu flashes.
- A brief acoustic signal is output when a valid button is pressed. Two brief acoustic signals are output when an invalid button is pressed.
- You can pause the stimulation at any time by briefly pressing the ON/OFF button ⏻. To continue the stimulation, briefly press the ON/OFF button ⏻ again and set the desired impulse intensity again.

If you wish to return to the previous selection menu, press the **MENU** button. By pressing and holding the **ENTER** button, you can skip individual setting steps and start directly with the stimulation treatment.

Keylock 🔑

Locks the buttons to avoid them being pressed unintentionally.

1. To activate the keylock, hold down the **ENTER** button until the 🔑 symbol is visible in the display (approx. 3 seconds).
2. To deactivate the keylock, hold down the **ENTER** button again until the 🔑 symbol disappears from the display (approx. 3 seconds).

Pausing use

You can pause the stimulation at any time by briefly pressing the ON/OFF button ⏻. To continue the stimulation, briefly press the ON/OFF button ⏻ again and set the desired impulse intensity again.

9. HEAT

In addition to the TENS/EMS/Massage programs, the EM59 Heat also offers two heat levels, which can be activated as required for all programs, see section “Starting use”. The heat emitted by the gel pads relaxes the muscle and improves circulation. You can activate the first level of the heat function by pressing the Heat button. Then wait a moment until the temperature stops increasing. If the temperature is too low for you, you can activate the second level of the heat function by pressing the Heat button again. If you would like to deactivate the heat function, you can do so by pressing the Heat button again

If you want to use the heat function separately, without additional stimulation, proceed as follows:

Step 1: Position the electrodes in your desired target area. (See section “Information regarding the positioning of electrodes” for placement suggestions) and connect them with the device

Step 2: Press the ON/OFF button to switch on the device

Step 3: Press the Heat button in order to access the Heat settings

Step 4: Use the ∧/∨ setting buttons to select the treatment time you want and press the ENTER button to confirm your selection

Step 5: Press the Heat button again in order to switch on the first level of the heat function. Then wait a moment until the temperature stops increasing. If the temperature is too low for you, you can activate the second level of the heat function by pressing the Heat button again.

10. PROGRAM OVERVIEW

The digital EMS/TENS unit features a total of over 70 programs:

- 15 TENS programs
- 35 EMS programs
- 20 MASSAGE programs

In all programs you can set the impulse intensity of both channels individually. You can also set various parameters in TENS programs 13–15 and EMS programs 33–35 to adjust the stimulating effect to the application area.

10.1 TENS program table

Progr. no.	Practical areas for application, indications	Running time (min)	Possible electrode positions
1	Pain in upper limbs 1	30	12–17
2	Pain in upper limbs 2	30	12–17
3	Pain in lower limbs	30	23–27
4	Ankle pain	30	28
5	Shoulder pain	30	1–4
6	Pain in the back	30	4–11
7	Pain in bottom and back of thighs	30	22, 23
8	Pain relief 1	30	1–28
9	Pain relief 2	30	1–28
10	Endorphin effect (burst)	30	1–28
11	Pain relief 3	30	1–28
12	Pain relief – chronic pain	30	1–28

TENS programs 13–15 can be set individually (see section „Customisable programs“).

10.2 EMS program table

Progr. no.	Practical areas for application, indications	Running time (min)	Possible electrode positions
1	Warming up	30	1–27
2	Capillarisation	30	1–27
3	Strengthening the upper arm muscles	30	12–15
4	Maximising the strength of the upper arm muscles	30	12–15
5	Explosive force of the upper arm muscles	30	12–15
6	Tightening the upper arm muscles	30	12–15
7	Shaping the upper arm muscles	30	12–15
8	Tightening the lower arm muscles	30	16–17
9	Maximising the strength of the lower arm muscles	30	16–17
10	Shaping the lower arm muscles	30	16–17
11	Tightening the abdominal muscles	30	18–20
12	Maximising the strength of the abdominal muscles	30	18–20
13	Shaping the abdominal muscles	30	18–20
14	Toning the abdominal muscles	30	18–20
15	Strengthening the thigh muscles	30	23, 24
16	Maximising the strength of the thigh muscles	30	23, 24
17	Explosive force of the thigh muscles	30	23, 24
18	Shaping the thigh muscles	30	23, 24
19	Toning the thigh muscles	30	23, 24
20	Strengthening the lower leg muscles	30	26, 27
21	Maximising the strength of the lower leg muscles	30	26, 27
22	Explosive force of the lower leg muscles	30	26, 27

Progr. no.	Practical areas for application, indications	Running time (min)	Possible electrode positions
23	Shaping the lower leg muscles	30	26, 27
24	Toning the lower leg muscles	30	26, 27
25	Strengthening the shoulder muscles	30	1–4
26	Maximising the strength of the shoulder muscles	30	1–4
27	Tightening the shoulder muscles	30	1–4
28	Strengthening the lower back muscles	30	4–11
29	Maximising the strength of the lower back muscles	30	4–11
30	Tightening the gluteal muscles	30	22
31	Strengthening the gluteal muscles	30	22
32	Maximising the strength of the gluteal muscles	30	22

EMS programs 33–35 can be set individually (see section „Customisable programs“).

10.3 MASSAGE program table

Progr. No.	Practical areas for application, indications	Running time (min)	Possible electrode positions
1	Tapping massage 1	20	1–28
2	Tapping massage 2		
3	Tapping massage 3		
4	Kneading massage 1		
5	Kneading massage 2		
6	Pressure massage		
7	Relaxing massage 1		
8	Relaxing massage 2		
9	Relaxing massage 3		
10	Relaxing massage 4		
11	Spa massage 1		
12	Spa massage 2		
13	Spa massage 3		
14	Spa massage 4		
15	Spa massage 5		
16	Spa massage 6		
17	Spa massage 7		
18	Relaxing massage 1		
19	Relaxing massage 2		
20	Relaxing massage 3		

⚠ WARNING

Do not apply the electrodes to the front wall of the chest, i.e. do not massage the large left and right pectoral muscles.

10.4 Information on electrode positioning

The associated drawings are shown on page 5.

It is fundamental to the intended success of electrostimulation applications that electrodes are sensibly positioned.
We recommend that you consult your doctor to establish the ideal electrode positions for your intended application area.

The figure on the display is intended as an initial aid to help you position the electrodes.
The following applies to the selection of electrode positions:

Electrode distance
The greater the distance between electrodes, the larger the stimulated tissue volume. This applies to the area and depth of the tissue volume. At the same time, however, the stimulation intensity of the tissue decreases the further the electrodes are apart. As a result, greater distances between electrodes mean a larger tissue volume is stimulated, but less intensively. Consequently, you must increase the impulse intensity to boost stimulation.

The following guidelines apply to the selection of the electrode distances:

- Sensible distance: approx. 5–15 cm
- At distances below 5 cm, the unit primarily stimulates surface structures intensively
- At distances in excess of 15 cm, large areas and deep structures are stimulated very weakly

Relation between electrodes and muscle fibre structures C
Adapt the current flow direction to the fibre structure of the muscle according to the muscle layer you would like to treat. If you are targeting superficial muscles, position the electrodes parallel to the fibre structure (A–B / C–D) and if you are targeting deeper layers of tissue, position the electrodes across the fibre structure. You can do this by positioning electrodes as crosses (i.e. diagonally), such as A–D / B–C.

As part of pain relief treatment (TENS) using the digital EMS/TENS unit and its 2 separately adjustable channels and 2 electrodes each, it is advisable either to position the electrodes of a channel so that the area affected by the pain is between the electrodes or to position one electrode directly on the area affected by the pain and the other electrode at a minimum distance of 2–3 cm.
You may use the electrodes of the second channel to simultaneously treat additional areas affected by pain or use them in conjunction with the electrodes of the first channel to restrict the area affected by pain (position electrodes opposite). In this case, we once again recommend positioning electrodes as crosses.

Tip for the massage function: always use all four electrodes for optimum treatment.

Use the electrodes on clean skin, which is preferably free from hair and grease, in order to prolong the life of the electrodes. If required, clean the skin with water and remove hair prior to treatment.

If an electrode comes loose during use, the pulse intensity of the corresponding channel is reduced to the lowest level. Apply the electrode again and reset your preferred pulse intensity.

11. CUSTOMISABLE PROGRAMS

(Applies for TENS 13–15, EMS 33–35)
The TENS 13–15 and EMS 33–35 programs can be customised according to your needs.

TENS 13 program

TENS 13 is a program that you can also customise. In this program, you can set the impulse frequency to between 1 and 150 Hz and the impulse width to between 80 and 250 µs.

1. Place the electrodes on the desired area for treatment (for positioning suggestions see section “Information regarding the positioning of electrodes”) and connect them to the device.
2. Select the TENS 13 program as described in section “Starting use” (step 3 to step 5).
3. Use the **Λ/V** setting buttons to select the impulse frequency you want and press the **ENTER** button to confirm your selection.
4. Use the **Λ/V** setting buttons to select your preferred impulse width and press the **ENTER** button to confirm.
5. Use the **Λ/V** setting buttons to select the treatment time you want and use the **ENTER** button to confirm.
6. Use the left and right **Λ/V** setting buttons for **Ch1** and **Ch2** to select the impulse intensity you want.

TENS 14 program

The TENS 14 program is a **burst** program that you can also customise. Various impulse sequences run in this program. Burst programs are suitable for all areas of application to be treated with changing signal patterns (to minimise the level of becoming accustomed to the treatment). In this program you can set an impulse width of between 80 and 250 µs.

1. Place the electrodes on the desired area for treatment (for positioning suggestions see electrode positions in section “Information regarding the positioning of electrodes”) and connect them to the device.
2. Select the TENS 14 program as described in section “Starting use” (step 3 to step 5).
3. Use the Λ/V setting buttons to select your preferred impulse width and press the **ENTER** button to confirm.
4. Use the Λ/V setting buttons to select the treatment time you want and use the **ENTER** button to confirm.
5. Use the left and right Λ/V setting buttons for **Ch1** and **Ch2** to select the impulse intensity you want.

TENS 15 program

TENS 15 is a program that you can also customise. In this program, you can set the impulse frequency to between 1 and 150 Hz. The impulse width changes automatically during the stimulation treatment.

1. Place the electrodes on the desired area for treatment (for positioning suggestions see electrode positions in section “Information regarding the positioning of electrodes”) and connect them to the device.
2. Select the TENS 15 program as described in section “Starting use” (step 3 to step 5).
3. Use the Λ/V setting buttons to select the impulse frequency you want and press the **ENTER** button to confirm your selection.
4. Use the Λ/V setting buttons to select the treatment time you want and use the **ENTER** button to confirm.
5. Use the left and right Λ/V setting buttons for **Ch1** and **Ch2** to select the impulse intensity you want.

EMS 33 program

EMS 33 is a program that you can also customise. In this program, you can set the impulse frequency to between 1 and 150 Hz and the impulse width to between 80 and 320 µs.

1. Place the electrodes on the desired area for treatment (for positioning suggestions see electrode positions in section “Information regarding the positioning of electrodes”) and connect them to the device.
2. Select the EMS 33 program as described in section “Starting use” (step 3 to step 5).
3. Use the Λ/V setting buttons to select the impulse frequency you want and press the **ENTER** button to confirm your selection.
4. Use the Λ/V setting buttons to select your preferred impulse width and press the **ENTER** button to confirm.
5. Use the Λ/V setting buttons to select the treatment time you want and use the **ENTER** button to confirm.
6. Use the left and right Λ/V setting buttons for **Ch1** and **Ch2** to select the impulse intensity you want.

EMS 34 program

EMS 34 is a program that you can also customise. In this program, you can set the impulse frequency to between 1 and 150 Hz and the impulse width to between 80 and 450 µs. You can also set the working time and pause time for this program to between 1 and 30 seconds each.

1. Place the electrodes on the desired area for treatment (for positioning suggestions see electrode positions in section “Information regarding the positioning of electrodes”) and connect them to the device.
2. Select the EMS 34 program as described in section “Starting use” (step 3 to step 5).
3. Use the Λ/V setting buttons to select the ‘on time’ you want and press the **ENTER** button to confirm your selection..
4. Use the Λ/V setting buttons to select your preferred ‘off time’ and press the **ENTER** button to confirm.
5. Use the Λ/V setting buttons to select the impulse frequency you want and press the **ENTER** button to confirm your selection.
6. Use the Λ/V setting buttons to select your preferred impulse width and press the **ENTER** button to confirm.
7. Use the Λ/V setting buttons to select the treatment time you want and use the **ENTER** button to confirm.
8. Use the left and right Λ/V setting buttons for **Ch1** and **Ch2** to select the impulse intensity you want.

EMS 35 program

The EMS 35 program is a burst program that you can also customise. Various impulse sequences run in this program. Burst programs are suitable for all areas of application to be treated with changing signal patterns (to minimise the level of becoming accustomed to the treatment). In this program, you can

set the impulse frequency to between 1 and 150 Hz and the impulse width to between 80 and 450 µs. You can also set the working time and pause time for this program to between 1 and 30 seconds each.

1. Place the electrodes on the desired area for treatment (for positioning suggestions see electrode positions in section “Information regarding the positioning of electrodes”) and connect them to the device.
2. Select the EMS 35 program as described in section “Starting use” (step 3 to step 5).
3. Use the Λ/V setting buttons to select the ‘on time’ you want and press the **ENTER** button to confirm your selection..
4. Use the Λ/V setting buttons to select your preferred ‘off time’ and press the **ENTER** button to confirm.
5. Use the Λ/V setting buttons to select the impulse frequency you want and press the **ENTER** button to confirm your selection.
6. Use the Λ/V setting buttons to select your preferred impulse width and press the **ENTER** button to confirm.
7. Use the Λ/V setting buttons to select the treatment time you want and use the **ENTER** button to confirm.
8. Use the left and right Λ/V setting buttons for Ch1 and Ch2 to select the impulse intensity you want.

12. FAVOURITE PROGRAM

With the favourites program, you can define a favourite from the 70 TENS/EMS/MASSAGE programs.This makes it easier and quicker for you to access your favourite program. If you have set a favourite program, when you switch on the device the favourite program will be automatically accessed and started. You can then start stimulation directly in your favourite program. The choice of favourite program may be based on your personal preference or, for example, the advice of your doctor.

Setting the favourite program

1. Select your preferred program from the 70 programs and the corresponding settings as described in the “Starting use” section.
2. To set the selected program as a favourite, press and hold the Ch2 V button for 5 seconds.
3. The saving of the favourite program is confirmed by a long acoustic signal. When the device is switched on again, your favourite program is accessed directly.

Now you can no longer change to a different program. To access the other programs again, you must delete your favourite program (see the following section).

Deleting favourite program

To delete the favourite program and access the other programs again, press and hold the Ch2 V button for approx. 5 seconds. The pulse intensity of Ch1 and Ch2 must be set to 00 in this process. Deletion of the favourite program is confirmed by a long acoustic signal.

13. THERAPY MEMORY

Your device records the treatment time in the therapy memory. This allows you to record how long you have been using the device in total or for a specific period of time for your treatments. This may be helpful when consulting your doctor.

Accessing the therapy memory

To access the therapy memory, switch the device on using the ON/OFF ⏻ button and press and hold the button Ch2 Λ for 2 seconds. The treatment time elapsed appears in the display. The top two numbers stand for minutes; the hours are shown below.

Resetting the therapy memory

To reset the treatment time memory (therapy memory) to 00 press and hold the Ch2 V button for 2 seconds.

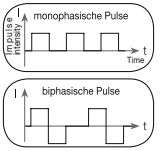
Press the MENU button to return to selecting a program, or switch the device off.

The treatment time memory cannot be accessed if a favourite program is activated.

14. ELECTRIC CURRENT PARAMETERS

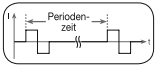
Electrostimulation devices operate with the following electric current settings, which may affect the stimulation results differently, depending on the setting:

14.1 Impulse shape



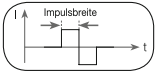
This describes the time function of the electrical impulse. It distinguishes between monophasic and biphasic pulse currents. In monophasic pulse currents, the current flows in one direction and in biphasic pulse currents the electrical impulse alternates its direction.
The digital EMS/TENS unit only provides biphasic pulse currents as these relieve muscles, cause little muscle fatigue and provide safer application.

14.2 Impulse frequency



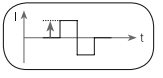
The frequency indicates the number of individual impulses per second and is displayed in Hz (Hertz). It can be calculated by determining the cyclic value for the time period. The relevant frequency determines which types of muscle fibres react best. Slow-reacting fibres react more easily to lower impulse frequencies of up to 15 Hz, whereas fast-reacting fibres only respond from approximately 35 Hz onwards.
Impulses of approx. 45–70 Hz are linked with constant tension in the muscles and quicker fatigue. Higher impulse frequencies are therefore better to use for high-speed strength and maximum power training.

14.3 Impulse width



This indicates the duration of an individual impulse in microseconds. The impulse width therefore determines, among other things, the penetration of the electricity, where usually larger muscle mass requires a larger impulse width.

14.4 Impulse intensity



Setting the intensity level depends on the individual sensitivity of each user and is determined by a variety of variables, such as site of application, blood supply to the skin, skin thickness and the quality of the electrode contact. The settings should be effective but should never cause an unpleasant sensation, such as pain at the site of application. While a gentle tingling indicates sufficient stimulation energy levels, any setting that causes pain should be avoided.

When using the device for an extended period, you may need to adjust the intensity level, as your muscles may start to adapt to the impulse intensity.

14.5 Cycled impulse parameter variation

In many cases it is necessary to cover the overall tissue structure at the site of application by applying several impulse parameters. In the digital EMS/TENS unit, this is achieved by the provided programs, which automatically make a cyclical impulse parameter change. This also prevents individual muscle groups at the site of application being affected by fatigue.
The digital EMS/TENS unit provides sensible default current parameter settings. With this, you can change the impulse intensity at any time during use. In 6 programs you can also set various parameters for stimulation yourself.

15. CLEANING AND STORAGE

Gel pads

- To ensure that the gel pads remain adhesive for as long as possible, clean them carefully with a damp, lint-free cloth or clean the underside of the electrodes under lukewarm, running water and pat dry with a lint-free cloth.

Before cleaning with water, remove the connection cable from the device.

- Following treatment, stick the gel pads back onto the carrier foil of the gel pads.

Cleaning the device

- After use, clean the device with a soft, slightly damp cloth. If it is very dirty, you can also moisten the cloth with a mild soapy solution.
- Do not use any chemical or abrasive cleaning agents.

Ensure that no water enters the device.

Reusing the device

Once it has been properly prepared, the device can be used again. Preparation includes replacement of the gel pads as well as cleaning of the surface of the device using a cloth moistened with a mild soapy solution

Storage

- Do not make sharp kinks in the connection cables and electrodes.
- After use, stick the gel pads back onto the carrier foil of the gel pads.
- Store the device and accessories in a cool, well-ventilated space.

- Never place any heavy objects on the device.
- In order to achieve as long a battery service life as possible, fully charge the battery at least every 6 months.

16. DISPOSAL

The empty, completely flat batteries should be disposed of through specially designated collection boxes, recycling points or electronics retailers. You are legally required to dispose of devices including batteries.

The codes below are printed on batteries containing harmful substances:
Pb = Battery contains lead,
Cd = Battery contains cadmium,
Hg = Battery contains mercury.

For environmental reasons, do not dispose of the device in the household waste at the end of its useful life. Dispose of the device at a suitable local collection or recycling point in your country. Dispose of the device in accordance with EC Directive – WEEE (Waste Electrical and Electronic Equipment). If you have any questions, please contact the local authorities responsible for waste disposal.

17. WHAT IF THERE ARE PROBLEMS?

The device does not switch on when the ON/OFF button ⏻ is pressed. How to proceed?
(1) Make sure that the battery is fully charged.
(2) Charge the battery if necessary.
(3) Contact Customer Services.

The electrodes do not stick to the body. How to proceed?
(1) Clean the gel pads using a damp, lint-free cloth. The electrodes must be replaced if they still do not stick securely.
(2) Clean the skin prior to any application; do not use skincare lotions or oils prior to treatment. Shaving may increase the life of electrodes.

There is no noticeable stimulation. How to proceed?
(1) Press the ON/OFF button ⏻ to interrupt the program. Check that the connection cables are correctly connected to the electrodes. Ensure that the electrodes are in firm contact with the treatment area.
(2) Ensure the connection plug is firmly connected to the device.
(3) Press the ON/OFF button ⏻ to restart the program.
(4) Check electrode positions and ensure that the adhesive electrodes do not overlap.
(5) Gradually increase the impulse intensity.
(6) The battery is flat; please charge it.

The battery symbol is shown. How to proceed?
Charge the device, following the instructions from section "Initial use".

You are experiencing an unpleasant sensation at the electrodes. How to proceed?
(1) The electrodes are not positioned correctly. Check their positions and re-position, if necessary.
(2)The gel pads are worn. This may cause irritated skin, as even distribution of the current across the entire area is no longer guaranteed. For this reason, the electrodes should be replaced.

Skin in the treatment area turns red. How to proceed?
Immediately stop treatment and wait until your skin has returned to its normal condition. If the redness is under the electrode and disappears quickly, there is no risk – this is caused by the locally stimulated, increased blood flow.
However, consult your doctor before you continue treatment if the skin irritation persists and if it is accompanied by an itchy sensation or inflammation. This may be caused by an allergic reaction to the adhesive surface.

The device is getting too hot. How to proceed?
Switch to the lower heat level or switch the heat function off entirely.

18. ACCESSORIES AND/OR REPLACEMENT PARTS

To purchase accessories and/or replacement parts, visit www.beurer.com or contact the corresponding service address (as per the service address list) for your country. Accessories and/or replacement parts are also available from retailers.

Designation	Item number and/or order number
8 x gel pads (45 x 45 mm)	Item 646.55
EU mains adapter	110.299
UK mains adapter	110.300

19. TECHNICAL SPECIFICATIONS

Type	EM 59
Output waveform	Biphasic rectangular pulses
Pulse length	50–450 µs
Pulse frequency	1–150 Hz
Output voltage	Max. 100 Vpp (500 ohm) max. 7.3 Vrms
Output current	Max. 200 mApp (500 ohm) max. 14.6 mArms
Voltage supply	Lithium-ion rechargeable battery, 2000mAh, 3.7V
Treatment time	Adjustable from 5 to 100 minutes
Intensity	Adjustable from 0 to 50
Heating levels	low (41 °C) ; high (43 °C)
Operating conditions	5°C–40°C (41°F–104°F) at a relative air humidity of 15–90%
Storage conditions	0°C–40°C (32°F–104°F) at a relative air humidity of ≤90%
transport conditions:	-25°C- 70°C (-13°F-158°F) at a relative air humidity of ≤90%
Dimensions	Approx. 139 x 66 x 26 mm (including belt clip)
Weight	Approx. 125 g (including belt clip),
Height limit for use	3,000 m
Maximum permissible atmospheric pressure:	700–1,060 hPa

The serial number is located on the device.

If the device is not used according to the instructions specified, perfect functionality cannot be guaranteed!

We reserve the right to make technical changes to improve and develop the product.

This device complies with the European standard EN 60601-1-2 (Group 1, Class B, in compliance with IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-8 and IEC 61000-4-39) and is subject to special precautionary measures with regard to electromagnetic compatibility. Please note that portable and mobile HF communication systems may interfere with this device.

More details can be requested from the stated Customer Service address or found at the end of the instructions for use.

For this device, a functional test and instruction in accordance with the German Medical Devices Operator Ordinance (MPBetreibV) is not required. It is also not necessary to carry out safety checks in accordance with the German Medical Devices Operator Ordinance.

20. NOTES ON ELECTROMAGNETIC COMPATIBILITY

⚠ WARNING

- The device is suitable for use in all environments listed in these instructions for use, including domestic environments.
- The use of the device may be limited in the presence of electromagnetic disturbances. This could result in issues such as error messages or the failure of the display/device.
- Avoid using this device directly next to other devices or stacked on top of other devices, as this could lead to faulty operation. If, however, it is necessary to use the device in the manner stated, this device as well as the other devices must be monitored to ensure they are working properly.
- The use of accessories other than those specified or provided by the manufacturer of this device can lead to an increase in electromagnetic emissions or a decrease in the device's electromagnetic immunity; this can result in faulty operation.
- Keep portable RF communication devices (including peripheral equipment, such as antenna cables or external antennas) at least 30 cm away from all device parts, including all cables included in delivery. Failure to comply with the above can impair the performance of the device.

21. WARRANTY/SERVICE

Further information on the guarantee and guarantee conditions can be found in the guarantee leaflet supplied.

Notification of incidents

For users/patients in the European Union and identical regulatory systems, the following applies: If a major incident occurs during or through use of the product, notify the manufacturer and/or their representative of this as well as the respective national authority of the member state in which the user/patient is located.

Subject to errors and changes

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