## beurer

## **BM 85**



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#### **ENGLISH**

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#### Included in delivery

- Blood pressure monitor
   Unper arm suff
- Upper arm cuff
- Cuff holder
- USB mains part
- USB cable
- Quick start guide
- Storage bag
- Instructions for use

#### Dear Customer,

Thank you for choosing one of our products. Our name stands for high-quality, thoroughly tested products for applications in the areas of heat, weight, blood pressure, body temperature, pulse, gentle therapy, massage and air. Please read these instructions for use carefully and keep them for later use, be

sure to make them accessible to other users and observe the notes they contain.

With kind regards, Your Beurer team

#### 1. Getting to know your device

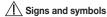
Check that the device packaging has not been tampered with and make sure that all contents are present. Before use, ensure that there is no visible damage to the device or accessories and that all packaging material has been removed. If you have any doubts, do not use the device and contact your retailer or the specified Customer Services address.

The upper arm blood pressure monitor is used to carry out non-invasive measurement and monitoring of the arterial blood pressure values in adults.

This allows you to quickly and easily measure your blood pressure, save the measurements and display the development and average values of the measurements taken.

You are also warned of possible existing cardiac arrhythmia. The recorded values are classified and evaluated graphically. This blood pressure monitor also has a haemodynamic stability display, which is referred to as a resting indicator throughout these instructions for use. This shows whether you, and consequently your circulatory system, are sufficiently at rest when the blood pressure measurement is being taken and is therefore a more precise indicator of your resting blood pressure. Read more about this in section 6.

#### 2. Important notes



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

Ţ	Attention
i	Note Note on important information
<b>(3)</b>	Observe the instructions for use
<b>†</b>	Application part, type BF

===	Direct current
X	Disposal in accordance with EC Directive WEEE (Waste Electrical and Electronic Equipment)
21) PAP	Dispose of packaging in an environmentally friendly manner
***	Manufacturer
Storage/Transport	Permissible storage and transport temperature and humidity
Operating 2	Permissible operating temperature and humidity
<del>*</del>	Protect from moisture
SN	Serial number
<b>C</b> € <sub>0483</sub>	The CE labelling certifies that the product complies with the essential requirements of Directive 93/42/EEC on medical products.
ERC	Certification symbol for products that are exported to the Russian Federation and members of the CIS



- In order to ensure comparable values, always measure your blood pressure at the same time of day.
- Before every measurement, relax for about five minutes.
- If you want to perform several measurements on the same person, wait five minutes between each measurement.
- Do not take a measurement within 30 minutes of eating, drinking, smoking or exercising.
- Repeat the measurement if you are unsure of the measured value.
- The measurements taken by you are for your information only – they are no substitute for a medical examination!
   Discuss the measurements with your doctor and never base any medical decisions on them (e.g. medicines and their administration)!
- Using the blood pressure monitor outside your home environment or whilst on the move (e.g. whilst travelling in a car, ambulance or helicopter, or whilst undertaking physical activity such as playing sport) can influence the measurement accuracy and cause incorrect measurements.
- Do not use the blood pressure monitor on newborns or patients with preeclampsia. We recommend consulting a doctor before using the blood pressure monitor during pregnancy.
- Cardiovascular diseases may lead to incorrect measurements or have a detrimental effect on measurement accuracy. The same also applies to very low blood pressure, diabetes, circulatory disorders and arrhythmias as well as chills or shaking.

- This device is not intended for use by people (including children) with restricted physical, sensory or mental skills or a lack of experience and/or a lack of knowledge, unless they are supervised by a person who is responsible for their safety or are instructed by such a person in how to use the device. Supervise children around the device to ensure they do not play with it.
- The blood pressure monitor must not be used in connection with a high-frequency surgical unit.
- Only use the unit on people that have the specified upper arm measurement for the unit.
- Please note that when inflating, the functions of the limb in question may be impaired.
- During the blood pressure measurement, the blood circulation must not be stopped for an unnecessarily long time. If
- the device malfunctions remove the cuff from the arm.
  Avoid any mechanical restriction, compression or bending of the cuff line
- Do not allow sustained pressure in the cuff or frequent measurements. The resulting restriction of the blood flow may cause injury.
- Make sure that the cuff is not placed on an arm in which the arteries or veins are undergoing medical treatment, e.g. intravascular access or intravascular or therapy, or an arteriovenous (AV) shunt.
- Do not use the cuff on people who have undergone a mastectomy.
- Do not place the cuff over wounds as this may cause further injury.

- Place the cuff on your upper arm only. Do not place the cuff on other parts of the body.
- Please note that data transfer and data storage is only possible when your blood pressure monitor is supplied with power. As soon as the battery is empty, the blood pressure monitor loses the date and time setting.
- To conserve the battery, the blood pressure monitor switches off automatically if you do not press any buttons for 3 minutes.
- The device is only intended for the purpose described in these instructions for use. The manufacturer is not liable for damage resulting from improper or careless use.

### 1 Instructions for storage and maintenance

- The blood pressure monitor is made from precision and electronic components. The accuracy of the measurements and service life of the device depend on its careful handling:
  - Protect the device from impacts, humidity, dirt, marked temperature fluctuations and direct sunlight.
  - Do not drop the device.
  - Do not use the device in the vicinity of strong electromagnetic fields and keep it away from radio systems or mobile telephones.
  - Only use the cuff included with the delivery or original replacement parts. Otherwise incorrect measurements will be recorded.

## Notes on handling rechargeable batteries

 If your skin or eyes come into contact with fluid from the battery cell, flush out the affected areas with water and seek medical assistance.

- Choking hazard! Small children may swallow and choke on rechargeable batteries. Store rechargeable batteries out of the reach of small children.
- Observe the plus (+) and minus (-) polarity signs.
- If a battery has leaked, put on protective gloves and clean the battery compartment with a dry cloth.
- · Protect batteries from excessive heat.
- A Risk of explosion! Never throw batteries into a fire.
- If the device is not to be used for a long period, take the rechargeable batteries out of the battery compartment.
- Always replace all rechargeable batteries at the same time.
- Do not disassemble, split or crush the rechargeable batteries.
- Only use chargers specified in the instructions for use.
- Batteries must be charged correctly prior to use. The instructions from the manufacturer and the specifications in these instructions for use regarding correct charging must be observed at all times.

## (i) Instructions for repairs and disposal

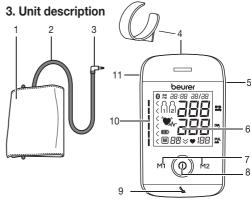
- Do not repair or adjust the device yourself. Proper operation can no longer be guaranteed in this case.
- Repairs must only be carried out by Customer Services or authorised suppliers.
- Do not open the device, except during disposal. In this case, remove the installed battery. Failure to comply will invalidate the warranty.

- Batteries must not be disposed of with household waste.
   Please dispose of batteries at the collection points intended for this purpose.
- Remove the battery before disposing of the device. Undo the four, round rubber covers on the rear of the device to remove the battery. Unscrew the housing. Remove the battery and dispose of it correctly.
- For environmental reasons, do not dispose of the device in the household waste at the end of its useful life. Dispose of the unit at a suitable local collection or recycling point. 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.

#### Notes on electromagnetic compatibility

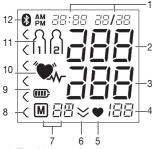
- The device is suitable for use in all environments listed in these instructions for use, including domestic environments.
- The use of the device may be limited in the presence of electromagnetic disturbances. This could result in issues such as error messages or the failure of the display/device.
- 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.

 Failure to comply with the above can impair the performance of the device.



- 1. Cuff
- 2. Cuff line
- 3. Cuff connector
- 4. Cuff holder
- USB interface
- 6. Display
- 7. Memory buttons M1/M2
- 8. START/STOP button ①
- 9. Resting indicator display
- 10. Risk indicator
- 11. Connection for cuff connector (left-hand side)

#### Information on the display:



- 1. Time/date
- 2. Systolic pressure
- 3. Diastolic pressure
- 4. Calculated pulse value
- 5. Pulse symbol 🖤
- 6. Release air (arrow)
- 7. Number of memory space/memory display average value (月), morning (月門), evening (月門)
- 8. Risk indicator
- 9. Battery level symbol
- 10. Cardiac arrhythmia symbol 📆
- 11. User memory 份 &
- 12. Symbol for Bluetooth® transfer §

#### **USB** interface

The blood pressure monitor also allows you to transfer your measured values to the PC.

To do this you require a commercially available USB cable (included in delivery) and the "beurer HealthManager" PC software.

The software can be downloaded free of charge from the download area under Service at www.beurer.com.

## System requirements for the "beurer HealthManager" PC software

- from Windows 7 SP1
- from USB 2.0 (Type-A)

#### System requirements for the "beurer HealthManager"-App

- iOS ≥ 8.0, Android<sup>TM</sup> ≥ 4.4
- Bluetooth® ≥4.0

List of compatible devices:



#### 4. Preparing for the measurement

Completely charge up the blood pressure monitor before taking your first measurement:

 Using a PC: Insert the USB cable into the USB interface on the device and directly connect it to your PC. Charge the battery if the battery level symbol flashes. If the device's battery has been completely drained and you are unable to switch it on again, you must reset the date, time and <code>Bluetooth®</code> settings. In this process, any saved measurements are retained.

## Ŵ

#### Rechargeable battery disposal

- The empty, completely flat rechargeable batteries must be disposed of using specially designated collection boxes, recycling points or electronics retailers. You are legally required to dispose of the rechargeable batteries.
- The codes below are printed on rechargeable batteries containing harmful substances:

Pb = Battery contains lead,

Cd = Battery contains cadmium,

Hg = Battery contains mercury.



#### Set the hour format, date, time and Bluetooth® settings

The following section describes the functions and settings available on the blood pressure monitor.



It is essential to set the correct date and time. Otherwise, you will not be able to save your measured values correctly with a date and time and access them again later.

if you press and hold the **M1** or **M2** memory button, you can set the values more quickly.

Press and hold the START/STOP button ① for 5 seconds.

Hour format

The hour format now flashes on the display.

• Select the desired hour format using the

 Select the desired hour format using the M1/M2 memory buttons and confirm with the START/STOP button ①.



The year flashes on the display.

 Select the year using the M1/M2 memory buttons and confirm with the START/ STOP button (I).

-20 13-

The month flashes on the display.

 Select the month using the M1/M2 memory buttons and confirm with the START/STOP button ①. 1 : 1;

The day flashes on the display.

 Select the current day using the M1/M2 memory buttons and confirm with the START/STOP button ①. -11

i If you have set the 12h hour format, the month is displayed before the day.

3/uetooth® settings

The hours flash on the display.

• Select the current hours using the M1/ M2 memory buttons and confirm with the START/STOP button (1).



The minutes flash on the display.

 Choose the current minutes using the M1/ M2 memory buttons and confirm with the START/STOP button (1).



The Bluetooth® symbol flashes on the display.

- Use the M1/M2 memory buttons to choose whether automatic Bluetooth® data transfer is activated (Bluetooth® symbol flashes) or deactivated (Bluetooth® symbol is not shown) and confirm with the START/STOP button (1).
- Bluetooth® transfers will reduce the rechargeable battery capacity.

#### 5. Measuring blood pressure

Please ensure the unit is at room temperature before measuring. The measurement can be performed on the left or right arm.

#### Attaching the cuff

Place the cuff on to the bare upper arm. The circulation of the arm must not be hindered by tight clothing or similar.



The cuff must be placed on the upper arm so that the bottom edge is positioned 2-3 cm above the elbow and over the artery. The line points to the centre of the palm.



Now place the free end of the cuff snugly, but not too tightly, around the arm, and fix it with the hook and loop fastener. The cuff should be fitted tight enough to allow just two fingers to fit beneath the cuff.



Now insert the cuff line into the connection for the cuff connector.



This cuff is suitable for you if the index mark (▼) is within the OK range after fitting the cuff on the upper arm.



If the measurement is performed on the right upper arm, the line should be located on the inside of your elbow. Ensure that your arm is not pressing on the line.

Blood pressure may vary between the right and left arm, which may mean that the measured blood pressure values are different. Always perform the measurement on the same arm.

If the values between the two arms are significantly different. please consult your doctor to determine which arm should be used for the measurement

**Important:** The unit may only be operated with the original cuff. The cuff is suitable for an arm circumference of 22 to 42 cm.

#### Adopting the correct posture







- Before every measurement, relax for about five minutes. Otherwise deviations can occur.
- You can take the measurement while sitting or lying. Make sure that the cuff is at heart level.
- To take your blood pressure, make sure you are sitting comfortably with your arms and back leaning on something. Do not cross your legs. Place your feet flat on the ground.
- To avoid falsifying the measurement, it is important to remain still during the measurement and not to speak.

#### Performing the blood pressure measurement

As described above, attach the cuff and adopt the posture in which you want to perform the measurement.

All display elements are briefly displayed.

Measurement

• Press the **START/STOP** button (1) to start the blood pressure monitor.

The blood pressure monitor will begin the measurement automatically after 3 seconds. The measurement is taken during the inflation phase.

You can cancel the measurement at any time by pressing the **START/STOP** button (**①**).

As soon as a pulse is found, the pulse symbol  $\P$  is displayed.

 Systolic pressure, diastolic pressure and pulse readings are displayed. The resting indicator display (see section 6) illuminates in accordance with the positive or negative classification.



 Er appears if the measurement could not be performed properly (see section 10 "Error messages/troubleshooting"). Repeat the measurement.



- Press the START/STOP button ① to switch off the blood pressure monitor. The measurement is then stored in the selected user memory.

If *Bluetooth®* data transfer has been activated, data is transferred to the "beurer HealthManager"-App after confirming the user memory (see chapter 8 "Transferring measured values"). The blood pressure monitor shows the *Bluetooth®* symbol during data transfer. Press the **START/STOP** button ① again to switch off the blood pressure monitor.

Please note that you must add the blood pressure monitor in "My devices" in the "beurer HealthManager"-App to enable data transfers. The "beurer HealthManager"-App must be active to allow data transfers.

If the current data is not displayed on your smartphone, repeat the transfer as described in Chapter 8.

If you forget to turn off the blood pressure monitor, it will switch off automatically after approximately 3 minutes. In this case too, the value is stored in the selected or most recent user memory and the data is transferred if *Bluetooth®* data transfer has been activated. The *Bluetooth®* symbol appears on the blood pressure monitor display during data transfer.

 Wait at least 5 minutes before taking another measurement!



#### 6. Evaluating results

#### Cardiac arrhythmia:

This unit can identify potential disruptions of the heart rhythm when measuring and if necessary, indicates this after the measurement with the symbol \*\*...\*

This can be an indicator for arrhythmia. Arrhythmia is a condition in which the heart rhythm is abnormal because of flaws in the bioelectrical system that regulates the heartbeat. The symptoms (skipped or premature heart beats, pulse being slow or too fast) can be caused by factors such as heart disease, age, physical make-up, excess stimulants, stress or lack of sleep. Arrhythmia can only be determined through an examination by your doctor.

If the symbol  $\mathcal{W}_{N}$  is shown on the display after the measurement has been taken, it should be repeated. Please ensure that you rest for 5 minutes beforehand and do not speak or move during the measurement. If the symbol  $\mathcal{W}_{N}$  appears frequently, please consult your doctor.

Self-diagnosis and treatment based on the measurements can be dangerous. Always follow your GP's instructions.

#### Risk indicator:

The measurements can be classified and evaluated in accordance with the following table.

However, these standard values serve only as a general guideline, as the individual blood pressure varies in different people and different age groups etc.

It is important to consult your doctor regularly for advice. Your doctor will tell you your individual values for normal blood pres-

sure as well as the value above which your blood pressure is classified as dangerous.

The classification on the display and the scale on the unit show which category the recorded blood pressure values fall into. If the values of systole and diastole fall into two different categories (e.g. systole in the "High normal" category and diastole in the "Normal" category), the graphical classification on the device always shows the higher category; for the example given this would be "High normal".

Blood pressure value category	Systole (in mmHg)	<b>Diastole</b> (in mmHg)	Action
Grade 3: severe hypertension	≥180	≥110	seek medical at- tention
Grade 2: moderate hypertension	160-179	100-109	seek medical at- tention
Grade 1: mild hypertension	140-159	90-99	regular monitoring by doctor
High normal	130-139	85-89	regular monitoring by doctor
Normal	120-129	80-84	self-monitoring
Optimal	<120	<80	self-monitoring

Source: WHO, 1999 (World Health Organization)

#### Measuring the resting indicator (using the HSD diagnosis)

The most frequent error made when measuring blood pressure is taking the measurement when not at rest (haemodynamic

stability), which means that both the systolic and the diastolic blood pressures are distorted.

While measuring the blood pressure, the device automatically determines whether you are at rest or not.

If there is no indication that your circulatory system is not sufficiently at rest, the symbol (haemodynamic stability) lights up green and the measurement can be recorded as a reliable resting blood pressure value.

#### GREEN: Haemodynamic stability

Measurement of the systolic and diastolic pressure is increased when the circulatory system is sufficiently at rest and is a very reliable indicator of resting blood pressure. However, if there is an indication that the circulatory system is

not sufficiently at rest (haemodynamic instability), the symbol lights up red.

In this case, the measurement should be repeated after a period of physical and mental rest. The blood pressure measurement must be taken when the patient is physically and mentally rested, as it will be the basis for diagnosing the blood pressure level and regulating the patient's medical treatment.

#### RED: Lack of haemodynamic stability

It is very probable that the systolic and diastolic blood pressures have not been measured whilst the patient is at rest and the resting blood pressure measurement has therefore been distorted. Repeat the measurement after a rest and relaxation period of at least five minutes. Go to a sufficiently quiet and comfortable spot and remain there calmly; close your eyes, breathe deeply and evenly and try to relax.

If the next measurement also shows insufficient stability, you can repeat the measurement after another resting period. If the measurements continue to show some instability, identify these blood pressure measurements as having been taken when the circulatory system had not been sufficiently rested. In this case, nervousness or inner anxiety may be the cause and this cannot be cured by brief periods of rest. Existing cardiac arrhythmias may also prevent a stable blood pressure measurement. A lack of resting blood pressure can have various causes, such as physical or mental strain or distraction, speaking or experiencing cardiac arrhythmias during the measurement. In an overwhelming number of cases, the HSD diagnosis will give a very good guide as to whether the circulatory system is rested when taking the measurement. Certain patients suffering from cardiac arrhythmia or chronic mental conditions can remain haemodynamically unstable in the long-term, something which persists even after repeated periods of rest. The accuracy of the resting blood pressure results is reduced in these users. Like any medical measurement method, the precision of the HSD diagnosis is limited and can lead to incorrect results in some cases. The blood pressure measurements taken when the circulatory system was at rest represent particularly reliable results.

# **User memory**

## 7. Saving, displaying and deleting measured values

The results of every successful measurement are stored together with the date and time. The oldest measurement is overwritten in the event of more than 60 measurements.

 To access memory recall mode, the blood pressure monitor must first be started. To do this press the START/STOP button ().

- Within 3 seconds of the full-screen display appearing, select the desired user memory (⟨⟨⟨⟩⟩ (⟨⟨⟩⟩) with the M1 or M2 memory button.
- To view the measurements for user memory  $\widehat{\Pi}$  , press the  $\bf M1$  memory button.
- To view the measurements for user memory
   (₂) , press the M2 memory button.

   Your last measurement will appear on the display.

If Bluetooth® is activated (the **3** symbol appears on the display), measurements are automatically transferred.

Press the **M1/M2** button to cancel data transfer. The device will show average values. The **3** symbol is no longer shown.



Press the **M1** memory button if you have selected user memory 1.

Press the **M2** memory button if you have selected user memory 2.

User memory

A flashes on the display.

The average value of all saved measured values in this user memory is displayed.



An flashes on the display.

The average value of the morning measurements for the last 7 days is displayed (morning: 5.00 a.m. - 9.00 a.m.).



Individual measured values

• Press the relevant memory button (M1 or M2).

Pff flashes on the display.

The average value of the evening measurements for the last 7 days is displayed (evening: 6.00 p.m. - 8.00 p.m.).



• When the relevant memory button (M1 or M2) is pressed again, the last individual measurement is displayed (in this example. measurement 03).



- When the relevant memory button (M1 or M2) is pressed again, you can view your individual measurements.
- To switch the device off again, press the START/STOP button (1).
- You can exit the menu at any time by pressing the START/STOP button (1).
- To clear the memory of the relevant user memory, you must first select a user memory.
- Start individual measurement access.
- Press and hold the M1/M2 memory buttons for 5 seconds.

measured values All the values in the current user memory are deleted.



It is not possible to delete individual measurements.

#### 8. Transferring measurements

#### Transfers using the USB interface

Connect the blood pressure monitor to your PC using the USB cable.

No data transfer may be launched whilst performing a measurement.

PC is shown on the display.

Begin the data transfer in the "beurer Health-Manager" PC software. During the data transfer, an animation is shown on the display. A successful data transfer is displayed as in figure 1. If the data transfer is unsuccessful, an error message appears as in figure 2. In this case, interrupt the PC connection and start the data transfer again.



After 30 seconds of not being in use or if communication with the PC is interrupted, the blood pressure monitor switches itself off automatically.

#### Bluetooth® low energy technology transfers

It is also possible to transfer the measured values saved on the device to your smartphone using Bluetooth® low energy technology.

You will need the "beurer HealthManager"-App for this. This is available in the Apple App Store and from Google Play. Proceed as follows to transfer values:

data is transferred if Bluetooth® has been activated in the settings menu. The symbol appears in the top left of the display (see section 4 "Preparing for the measurement").



#### Step 1: BM 85

activate Bluetooth® on your device (see section 4 "Preparing for the measurement, Bluetooth®").



#### Step 2: "beurer HealthManager" app



In the "beurer HealthManager"-App, add the BM 85 under "Settings/Mv devices".





Step 3: BM 85 take a measurement.







#### Step 4: BM 85

data transfer immediately following measurements.

 Select the desired user memory. Start Bluetooth® data transfer (chapter 5)



#### Step 4: BM 85

Data transfer at a later point: • go to memory mode

- (chapter 7). Select the desired user memory. Bluetooth® data transfer starts automatically.
- The "beurer HealthManager"-App must be active to allow data transfers.

If your smartphone has a protective cover, remove this to ensure that there is no interference during the transfer. Begin the data transfer in the "beurer HealthManager"-App.

#### 9. Cleaning and storing the device and cuff

- Clean the device and cuff carefully using a slightly damp cloth only.
- Do not use any cleaning agents or solvents.
- Under no circumstances hold the device and cuff under water, as this can cause liquid to enter and damage the device and cuff.
- If you store the device and cuff, do not place heavy objects on the device and cuff. Remove the batteries. The cuff line should not be bent sharply.

#### 10. Error messages/trouble-shooting

In case of faults, the  $\mathcal{E}_{r_{-}}$  message appears in the display. Error messages may appear if:

- systolic or diastolic pressure could not be measured (Er for Er2 appears on the display)
- systolic or diastolic pressure was outside the measurement range (Hi or Lo appears on the display)
- the cuff is fastened too tightly or loosely (Er 3 or Er 4 appears on the display)
- the pump pressure is higher than 300 mmHg (Er 5 appears on the display)
- pumping up takes longer than 160 seconds (Er 5 appears on the display)
- there is a system or device error (ErR, ErD, Er7 or Er8 appears on the display)

- the data could not be sent to the PC (PL Er appears in the display).
- the data could not be sent via *Bluetooth*® ( **9** £r ).

In such cases, repeat the measurement and/or the data transfer. Ensure that the cuff line is correctly attached and that you do not move or speak during the measurement.

## (i) Technical alarm – description

Should the recorded blood pressure (systolic or diastolic) lie outside the limits specified in the section "Technical specifications", the technical alarm will appear on the display indicating either "Hi" or "L0". In such cases, you should seek medical assistance and check the accuracy of your procedure.

The limit values for the technical alarm are factory set and cannot be adjusted or deactivated. These alarm limit values are accorded second priority under the standard IEC 60601-1-8. The technical alarm is a non-locking alarm and must not be reset. The signal shown on the display will disappear automatically after about 8 seconds.

#### 11. Battery

The BM 85 is equipped with a lithium ion battery (3.7V/400 mAh). If the symbol flashes, you must charge the battery for a minimum of two hours using the enclosed cable. Recharge the battery to between 50 and 75 % of its capacity at least twice a year to achieve a maximum battery service life.

<b>@</b>	Device charged (75% - 100%)
	Device charged (50% - 75%)

Device charged (25% - 50%)
< 25%
You can take a maximum of 10 measurements (flashes)

#### 12. Technical specifications

DMAGE

Madalaa

Model no.	BM 85
Measurement method	Oscillometric, non-invasive blood pressure measurement on the upper arm
Measurement range	Cuff pressure 0-300 mmHg, systolic 60-260 mmHg, diastolic 40-199 mmHg, pulse 40-180 beats/minute
Display accuracy	Systolic ±3 mmHg, diastolic ±3 mmHg, pulse ±5 % of the value shown
Measurement inac- curacy	Max. permissible standard deviation according to clinical testing: systolic 8 mmHg/diastolic 8 mmHg
Memory	2 x 60 memory spaces
Dimensions	L 180 mm x W 99 mm x H 40 mm
Weight	Approximately 456 g (with cuff)
Cuff size	22 to 42 cm

Permissible operating conditions	+10°C to +40°C, ≤ 90 % relative humidity (non-condensing)
Permissible storage conditions	-20 °C to +55 °C, $\leq$ 90 % relative humidity, 800–1050 hPa ambient pressure
Power supply	DC 5V === 600mA lithium ion battery 3.7 V/400mAh
Battery life	For approx. 50 measurements, depending on levels of blood pressure and pump pressure
Classification	Internal supply, IPX0, no AP or APG, continuous operation, application part type BF
Data transfer	2402 MHz – 2480 MHz frequency band Transmission power max. 2.8 dBM The blood pressure monitor uses <i>Bluetooth®</i> low energy technology Compatible with <i>Bluetooth®</i> 4.0 smartphones/tablets
	List of supported smartphones/tablets

Technical information is subject to change without notification to allow for updates.

The serial number is located on the device or in the battery compartment.

 This device complies with European Standard EN60601-1-2 (In accordance with CISPR 11, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC

- 61000-4-8, IEC 61000-4-11) and is subject to particular precautions with regard to electromagnetic compatibility. Please note that portable and mobile HF communication systems may interfere with this unit.
- This device corresponds to the EU Medical Devices Directive 93/42/EEC, the German Medical Devices Act (Medizin-produktgesetz) and the standards EN 1060-1 (non-invasive sphygmomanometers, Part 1: General requirements), EN 1060-3 (non-invasive sphygmomanometers, Part 3: Supplementary requirements for electro-mechanical blood pressure measuring systems) and IEC 80601-2-30 (Medical electrical equipment Part 2–30: Particular requirements for the basic safety and essential performance of automated non-invasive sphygmomanometers).
- The accuracy of this blood pressure monitor has been carefully checked and developed with regard to a long useful life. If using the device for commercial medical purposes, it must be regularly tested for accuracy by appropriate means. Precise instructions for checking accuracy may be requested from the service address.
- We hereby confirm that this product complies with the European RED Directive 2014/53/EU. The CE Declaration of Conformity for this product can be found under: www.beurer. com/web/we-landingpages/de/cedeclarationofconformity. php.

#### 13. Mains part

Model No.	OH-1048A0500600U2 VDE
Input	100-240V AC, 50-60 Hz; 120-60 mA
Output	5V DC, 600 mA, in conjunction with Beurer blood pressure monitors only
Manufac- turer	Dongguan Oriental Hero Ele. Co., LTD.
Protection	The device is double protected and has a primary-side cutout switch which disconnects the device from the mains in case of malfunction.
$\oplus$	Polarity of the the DC voltage connection
	Insulated/protection class 2
Housing and protective covers	The housing of the mains part protects users from touching live parts or parts that could be live (for example with their fingers, or with a needle or checking hook).  The user must not touch the patient and the output connector of the AC mains part at the same time.

#### 14. Replacement parts and wearing parts

Replacement parts and wearing parts are available from the corresponding listed service address under the stated material number.

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Designation	Item number and/or order number
Universal cuff (22-42 cm)	163.946
Mains part (EU)	071.62
USB cable	163.484

#### 15. Warranty/service

In case of a claim under the warranty please contact your local dealer or the local representation which is mentioned in the list "service international"

In case of returning the unit please add a copy of your receipt and a short report of the defect.

The following warranty terms shall apply:

- The warranty period for BEURER products is either 5 years or- if longer- the country specific warranty period from date of Purchase.
   In case of a warranty claim, the date of purchase has to be proven by means of the sales receipt or invoice.
- Repairs (complete unit or parts of the unit) do not extend the warranty period.
- 3. The warranty shall not be valid for damages because of
  - a. improper treatment, e.g. nonobservance of the user instructions.
  - b. repairs or tampering by the customer or unauthorised third parties.
  - c. transport from the manufacturer to the consumer or during transport to the service centre.

- d. The warranty shall not be valid for accessories which are subject to normal wear and tear (cuff, batteries etc.).
- Liability for direct or indirect consequential losses caused by the unit are excluded even if the damage to the unit is accepted as a warranty claim.