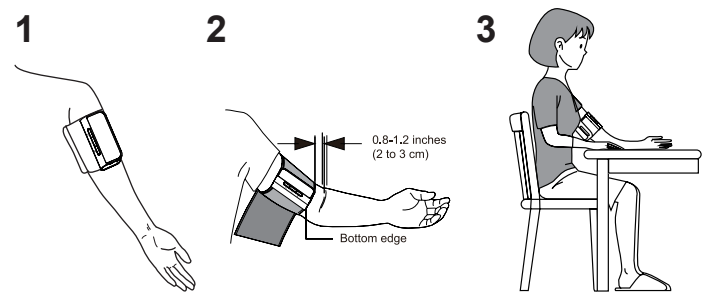
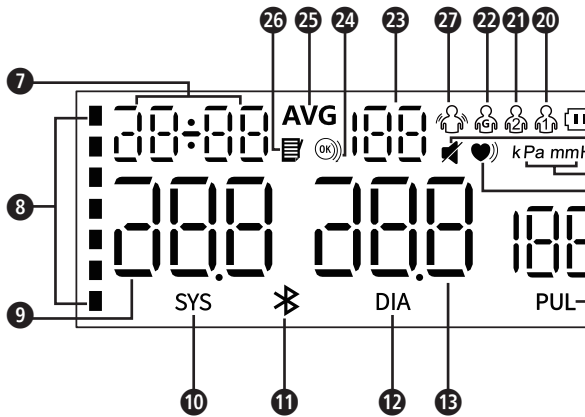
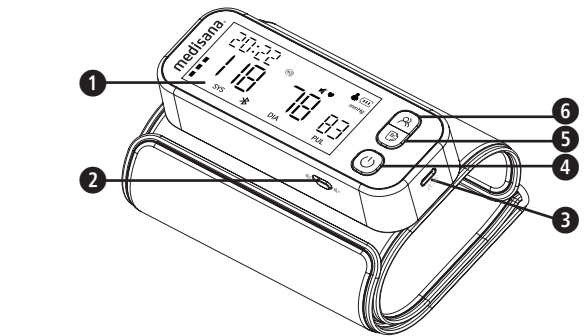


GB Instruction manual
Upper Arm Blood Pressure Monitor
BU 650 connect

Unit and Display



Explanation of symbols

IMPORTANT
Non-observance of these instructions can result in serious injury or damage to the device.

WARNING
These warning notes must be observed to prevent any injury to the user.

CAUTION
These notes must be observed to prevent any damage to the device.

NOTE
These notes give you useful additional information on the installation or operation.

Device classification: type BF applied part

IP22 Ingress protection rating

RoHS RoHS mark

LOT LOT number **SN** Serial number

MD Medical device **UDI** Unique device identifier

Importer Non-ionizing electromagnetic radiation

Manufacturer Date of manufacture

Device information:
• Internally powered equipment
• Not suitable for use in presence of flammable anesthetic mixture with air or with oxygen or nitrous oxide
• Continuous operation with short-time loading

Intended use
• The Upper Arm Blood Pressure Monitor is intended to measure the systolic pressure and diastolic pressure, as well as the pulse rate of adult person via non-invasive oscillometric technique at medical facilities or at home.

Contraindication
• The device is not suitable for use on pregnant women and patients with implanted, electronical devices (e.g. pacemaker or defibrillator).

GB Safety instructions



Read the instruction manual carefully before using this device, especially the safety instructions, and keep the instruction manual for future use. Should you give this device to another person, it is vital that you also pass on these instructions for use.



- The unit is intended only for use in the home. Consult your doctor prior to using the blood pressure monitor if you are concerned about health matters.
- Only use the unit for its intended purpose in accordance with the instructions for use. Warranty claims become void if the unit is misused.
- Please consult your doctor prior to using the unit if you suffer from illnesses such as arterial occlusive disease.
- The unit may not be used to check the heart rate of a pacemaker.
- Pregnant women should take the necessary precautions and pay attention to their individual circumstances. Please consult your doctor if necessary.
- Consult your physician to get more information about your blood pressure. A self-diagnosis and self-treatment based on the measured values may be dangerous. Always follow the instructions given by your physician!
- If you experience discomfort during a measurement, such as pain in the upper arm or other complaints, press the START/STOP Button **7** immediately to stop the measurement, loosen the cuff and remove it from your arm.
- The device only works correct with the fitting cuff.
- The unit is not suitable for children.
- Do not allow children to use the unit. Medical products are not toys!
- Please ensure that the unit is kept away from the reach of children.
- Do not put the air tube around your neck - danger of suffocation!
- Do not put the equipment where flammable gas (such as anaesthetic gas, oxygen or hydrogen) or flammable liquids (such as alcohol) are present.
- No modification of this unit/device is allowed.
- Please do not attempt to repair the unit yourself in the event of malfunctions, since this will void all warranty claims. Only have repairs carried out by authorized service centers.
- Protect the unit against moisture. If liquid does manage to penetrate into the unit, remove the batteries immediately and do not continue to use the unit. In this case contacts your specialist dealer or notify us directly.
- Please do not use a dilution agent, alcohol or petrol to clean the unit.
- Please do not hit the device heavily or let it fall down from a high place.
- Do not use mobile phones in the range of the device. This may lead to malfunctions.

for power supply

- The USB-C Power Supply Port **3** is used for charging the device only. The adapter used should comply with the requirement of IEC 60601-1 standard, and the specifications must meet the requirements: input: AC 100~240V 50/60 Hz, output: DC 5V 1.0A. Other AC adapters may vary in output voltage and polarity, which may pose a risk to your safety and damage the device.
- Only charge the unit's battery using the USB charging cable supplied. Never leave the unit unattended when it is connected to the mains (for charging) or in operation.
- Never charge the device in a flammable environment (e.g. flammable objects, gasoline, flammable gases, paint, etc.)
- Only connect the unit for charging so that the cable and power connector are freely accessible.
- The built-in batteries are not intended for replacement or removal by the end user. If problems occur with the power supply, contact the customer service.
- To disconnect the unit from the mains, always pull the plug out of the power connection. Do not pull on the cable!

Unit and Display

- 1** LED Display

3 USB-C Power Supply Port

5 Memory Button

7 Date and Time

9 Systolic Blood Pressure Value

11 Bluetooth Icon

13 Diastolic Blood Pressure Value

15 Pulse Rate Value

17 Unit of Blood Pressure

19 Battery Indicator

21 User 1 Icon

23 Memory Group

25 Average Value Icon

27 Motion Detection Icon
- 2** Voice Output Switch

4 START/STOP Button

6 User Selection/ Setting Button

8 Blood Pressure Indicator

10 Systolic Blood Pressure Icon

12 Diastolic Blood Pressure Icon

14 Pulse Rate Icon

16 Heartbeat Icon/ Irregular Heartbeat Indicator

18 Mute Indicator

20 User 1 Icon

22 User (Guest) Icon

24 Cuff Fitness Indicator

26 Memory Icon

Scope of supply

Please check first of all that the device is complete and is not damaged in any way. In case of doubt, do not use it and contact your dealer or your service centre.
The following parts are included:
• 1 **medisana** blood pressure monitor **BU 650 connect** • 1 USB-C charging cable
• 1 instruction manual

Please contact your supplier if you notice any transport damage on unpacking the unit.

WARNING - Please ensure that the polythene packing is kept away from the reach of children! Risk of suffocation!

How is blood pressure measured?

The **medisana** BU 650 connect is a blood pressure unit which is used to measure blood pressure at the upper arm. The measurement is carried out by a microprocessor, which, via a pressure sensor, measures the vibrations resulting from the inflation and deflation of the cuff over the artery.

Blood pressure classification

systolic mmHg	diastolic mmHg	Classification	Blood pressure indicator
≥ 160	≥ 100	Stage 2 Hypertension (emergency)	red
140 - 159	90 - 99	Stage 1 Hypertension (mild)	yellow
90 - 139	60 - 89	Normal	green
< 90	< 60	Abnormal	green

WARNING - Blood pressure that is too low represents just as great a health risk as blood pressure that is too high! Fits of dizziness may lead to dangerous situations arising (e.g. on stairs or in traffic)!

Influencing and evaluating readings

- Measure your blood pressure several times, then record and compare the results. Do not draw any conclusions from a single reading.
- Your blood pressure readings should always be evaluated by a doctor who is also familiar with your personal medical history. When using the unit regularly and recording the values for your doctor, you should visit the doctor from time to time to keep him updated.
- When taking readings, remember that the daily values are influenced by several factors. Smoking, consumption of alcohol, drugs and physical exertion influence the measured values in various ways.
- Measure your blood pressure before meals.
- Before taking readings, allow yourself at least five minutes rest.
- If the systolic and diastolic readings seem unusual (too high or too low) on several occasions, despite correct use of the unit, please inform your doctor. This also applies to the rare occasions when an irregular or very weak pulse prevents you from taking readings.

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Getting started - Charging the battery

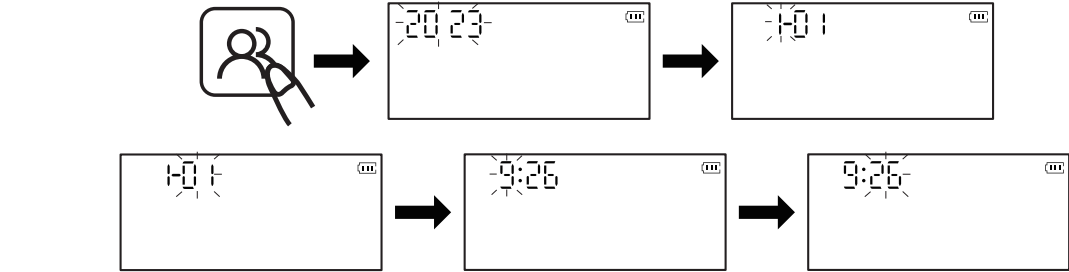
Use a 5V mains adapter with an output current of 1A. Connect the supplied USB charging cable to the adapter and to the USB-C port **3** of the device (The USB-C charging cable is included in the packaging). The Battery Indicator **19** keeps flashing when charging.

Voice output setting

Slide the Voice Output Switch **2** to activate or deactivate the English voice output. When the voice output is deactivated, the Mute Indicator **18** appears on the display.

Settings - Date, time and unit

In the power-off mode, press the Setting button **6** for about 4 seconds to enter the date setting interface, and the "year" will flash. Press the Memory button **5** to adjust the year, and press the Setting button **6** to confirm the selection. When the year is set, it will automatically enter the month setting. Press the Memory button **5** to adjust the month, and press the Setting button **6** to confirm the selection. Follow the same steps to adjust the date/hour/minute.



After the time setting is completed, the device will enter the measuring unit setting. The unit of blood pressure **17** icon will flash. Press the Memory button **5** to switch between mmHg and kPa. Then, press the Setting button **6** to save the setting and the device will automatically switch off.

Fitting the cuff

1. Slide the open end of the cuff through the metal bracket so that the Velcro fastener is on the outside and it becomes a cylindrical form (Fig.1). Slide the cuff over your left upper arm.
2. Position the device's screen in the middle of your arm in line with your middle finger (Fig.2). The lower edge of the cuff should be 2 - 3 cm above the crease of the elbow. Pull the cuff tight and close the Velcro fastener.
3. Tighten the end of the cuff so that it wraps evenly around your arm, leaving room for 2 fingers between the cuff and your arm.
4. Measure the blood pressure on your bare arm.
5. Only position the cuff on the right arm if it cannot be used on the left arm. Always carry out measurements on the same arm.
6. Correct measuring position for sitting (Fig.3). Make sure that the cuff does not slip during measurement and that the printed arrow points to the crook of the arm.

User memory setting

The **medisana** blood pressure monitor features 2 separate memories, each with a capacity of 180 memory slots. In the power-off mode, press the User selection button **6** to enter the user selection interface. Then press the User selection button **6** to select between User 1 **20** / User 2 **21** / User (Guest) **22**. (There is no memory log for Guest **22**).

Taking a blood pressure measurement

1. Press the START/STOP button **4** to start the measurement.
2. The device then automatically inflates the cuff slowly in order to measure your blood pressure. The rising pressure in the cuff is shown on the display. The Cuff Fitness Indicator **24** is always displayed on the screen when the cuff is worn correctly. When the cuff is worn too loosely, the icon will flash to remind you.
The Movement Detection Icon **27** flashes when body movement is detected. It may cause inaccurate measurement results. Please restart the measurement.
3. The unit inflates the cuff until sufficient pressure has built up for a measurement. When the device detects the heartbeat signal, the Heartbeat Icon **16** on the display starts to flash
4. When the measurement is finished, the systolic and diastolic blood pressure and the pulse value appears on the display. The Blood Pressure Indicator **8** is displayed next to the relevant colored bar depending on the blood pressure classification. If the unit has detected an irregular heartbeat, the Irregular Heartbeat Indicator **16** also appears.

Triple measurement mode

1. While the device is power off, press and hold the START/STOP button **4** for 3 seconds to activate the triple measurement mode.
2. The Average Value Icon **25** flashes for 3 times and then the device takes the first measurement.
3. After the first measurement is completed, the value is displayed for about 5 seconds, and then the device takes a 60-second break with a countdown display.
4. Once the countdown ends, the second and third measurement begin with the same procedure as the first measurement.
5. After all three measurements are completed, the device calculates the average blood pressure and pulse rate. The results are displayed on the screen.

Transfer via Bluetooth®

This device offers the possibility to transfer your measured values via Bluetooth® to the VitaDock® app. The VitaDock® app allows the evaluation, storage and synchronisation of your data between multiple iOS- and Android-devices to have access to it anytime and anywhere. You may share your results with your friends or your doctor. Therefore you need a free user account, which you can create on the website www.vitadock.com. For Android or iOS mobile devices, you may download the respective apps. You will find a detailed instruction for how to install and use the software on the mentioned website. After each measurement an automatic transfer of the values will take place (provided that Bluetooth® is activated and configured on the receiving device).

WARNING

- Keep the device at least 20 centimeters away from the human body (especially the head) when the Bluetooth® data transmission is proceeding after measurement.
- The distance between the device and the receiver should be between 1 meter to 10 meters to avoid possible disturbances.

Bluetooth® type: 4.2 BLE; System requirements: Android 6.0 or newer; iOS 7.0 or newer
RF Frequency range: 2402 MHz - 2480 MHz; Equivalent isotropic radiant power: 3.99 dBm;
Maximum permitted power: 0.47 mW; Transmitting distance: 10 m (Class 2); Data throughput: 1 Mbps

Displaying stored results

This unit features 2 separate memories, each with a capacity of 180 memory slots. Results are automatically stored in the memory selected by the user. Press the Memory button **5** when power off, to call up the average measured values of the last 3 measurements (displayed with Average Value Icon **25**).

Press the Memory button **5** again to call up the last measurement value. Repeatedly pressing the Memory button **5** displays the respective values measured previously. If you have reached the final entry and do not press a button, the unit automatically switches itself off after approximately 1 minute in memory recall mode. Memory recall mode can be exited at any time by pressing the START/STOP button **4**, which will also switch the unit off. Once the memory log is full, old values will be refreshed with new ones.

Deleting stored values

If you are sure that you want to permanently remove all stored memories, press the User selection button **6** in power-off mode to select the user group whose measured values need to be deleted. Press the START/STOP button **4** to power off and then press the Memory button **5** to activate the screen. Press and hold the Memory button **5** for about 3 seconds to delete the memories of the selected user and the icon "rTq" will be shown on the display.

Abnormal phenomena and handling troubleshooting

Abnormal displays	Cause	Solution
Er U	The pressure cannot reach 30 mmHg (4 kPa) in 15 seconds	Please follow the correct method and try again
Er H	The inflation reaches 295mmHg	
Er 1	The pulse rate is not detected correctly	
Er 2	Too much disturbance (Move, talk, or magnetic disturbance during a measurement)	Move to a closer distance
Er 3	The measurement result is abnormal	Please follow the correct method and try again
Er 23	SYS value reads lower than 60mmHg	
Er 24	SYS value reads higher than 250mmHg	
Er 25	DIA value reads lower than 40mmHg	
Er 26	DIA value reads higher than 195mmHg	

Abnormal phenomena and handling

Abnormal displays	Cause	Solution
Failure to power on	Whether the power is insufficient	Recharge the device with USB-C charging cable till the Battery Indicator 19 stops flashing
No inflation	Whether the cuff is broken or leaked	Please contact the dealer to replace with a new cuff
Unable to measure due to the display error	Whether the arm is moved when pressurization	Keep your arm and body still
	Whether you talk during the measurement	Keep quiet while measuring the blood pressure
Air leakage of the cuff	Whether the cuff is twined too loose	Please tighten the cuff
	The airbag of the cuff is ripped	Please contact the dealer to replace with a new cuff

WARNING - If the blood pressure still cannot be measured after trying the above-stated solutions, please contact the dealer. Do NOT attempt to disassemble the device by yourself.

Cleaning and maintenance

Clean the unit using a soft cloth lightly moistened with a mild soapy solution. Never use abrasive cleaning agents, alcohol, naptha, thinner or gasoline etc. Never immerse the unit or any component in water. Be cautious not to get any moisture in the main unit. Do not wet the cuff or attempt to clean the cuff with water. Using a dry cloth, gently wipe away any excess moisture that may remain on the cuff. Lay the cuff flat in an unrolled position and allow the cuff to air dry. Do not expose the unit to direct sunlight; protect it against dirt and moisture. Do not expose the unit to extreme hot or cold temperatures. Keep the device in the storage case when not in use. Store the unit in a clean and dry location.

Disinfection

1. If used by yourself in a home environment, wipe the cuff once a month with a commercially available cotton cloth with 75% alcohol for more than 1 minute at a time for disinfection in addition to the normal cleaning routine.
2. If used for more than one person (home use), wipe the cuff once a week with a commercially available cotton cloth with 75% alcohol for more than 1 minute at a time for disinfection in addition to the normal cleaning routine.
3. After cleaning/disinfection and before use, make sure that there are no blood stains or dirt on the display, the device or the cuff. If there are blood spots or dirt that cannot be removed, please dispose of the device without reusing it.
4. If used in a complex environment (e.g. in a hospital) or by persons outside your own family, replace the cuff with a new one after use.

Disposal

This product must not be disposed of together with domestic waste. All users are obliged to hand in all electrical or electronic devices, regardless of whether or not they contain toxic substances, at a municipal or commercial collection point so that they can be disposed of in an environmentally acceptable manner. Remove the batteries before disposing of the device/unit. Do not dispose of old batteries with your household waste, but at a battery collection station at a recycling site or in a shop. Consult your local authority or your supplier for information about disposal.

Guidelines / Standards

This blood pressure monitor meets the requirements of the EU standard for noninvasive blood pressure monitors. It is certified in accordance with EC Guidelines and carries the CE symbol (conformity symbol) "CE 0123 The blood pressure monitor corresponds to European standards EN 1060-3, EN 81060-1 and EN 81060-2. The specifications of EU Guideline "93/42/EEC of the Council Directive dated 14 June 1993 concerning medical devices" are met.

Technical specifications

Name and model	: medisana Upper arm blood pressure monitor BU 650 connect
Display system / Memory slots	: Digital display / 2 x 180
Measuring method	: Oscillometric
Power supply	: 3.7V 450 mAh rechargeable lithium battery
Charging method	: USB-C charging port, charging voltage DC5V 1A
Blood pressure measuring range	: SYS: 57-255 mmHg DIA: 25-195 mmHg
Pulse measuring range	: 40 - 199 beats per minute
Maximum error tolerance for static pressure	: ± 3 mmHg
Maximum error tolerance for pulse rate	: ± 5 % of the value
Pressure generation	: Automatic with pump
Deflation	: Automatic
Auto power-off	: 1 minute after use
Battery life	: Approx. 250 measurements
Product life span	: Approx. 5 years with 4 times daily use
Operating conditions	: +5°C to +40°C, 15 to 90 % max. relative humidity
Storage / Transportation conditions	: -20°C to +55°C, 10 to 93% max. relative humidity
Dimensions / Cuff	: Approx. 125 x 48 x 24 mm / 22 - 42 cm
Weight (main unit)	: Approx. 225 g
Item number	: 50031
EAN number	: 48971 38 50031 3

In accordance with our policy of continual product improvement, we reserve the right to make technical and visual changes without notice.

Warranty and repair terms

Please contact your supplier or the service centre in case of a claim under the warranty. If you have to return the unit, please enclose a copy of your receipt and state what the defect is. The following warranty terms apply:
1. The warranty period for medisana products is 5 years 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.
2. Defects in material or workmanship will be removed free of charge within the warranty period.
3. Repairs under warranty do not extend the warranty period either for the unit or for the replacement parts.
4. The following is excluded under the warranty:
a. All damage which has arisen due to improper treatment, e.g. nonobservance of the user instructions.
b. All damage which is due to repairs or tampering by the customer or unauthorised third parties.
c. Damage which has arisen during transport from the manufacturer to the consumer or during transport to the service centre.
d. Accessories which are subject to normal wear and tear.
5. 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.

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