beurer

BM 51 easyClip

EN Blood pressure monitor
Instructions for use

CE 0483

ENGLISH

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

Dear customer,

Thank you for choosing a product from our range. 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, beauty, baby and air.

With kind regards,
Your Beurer team

Table of contents

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.

1x upper arm blood pressure monitor
1x easyClip upper arm cuff (22–42 cm)
1x instructions for use
1x storage bag
4x 1.5V AA LR6 batteries

2. 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** Warning notice indicating a risk of injury or damage to health
	**IMPORTANT** Safety note indicating possible damage to the device/accessory
	**Note** Note on important information
	**Observe the instructions** Read the instructions before starting work and/or operating devices or machines

	**Isolation of applied parts** **Type BF** Galvanically isolated applied part (F stands for “floating”); meets the requirements for leakage currents for type B
	Direct current The device is suitable for use with direct current only
	Disposal in accordance with the Waste Electrical and Electronic Equipment EC Directive – WEEE
	Do not dispose of batteries containing hazardous substances with household waste
	Separate the packaging elements and dispose of them in accordance with local regulations.
	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.
	Manufacturer
	Permissible storage and transport temperature and humidity

Operating 	Permissible operating temperature and humidity
SN	Serial number
IP 22	Device protected against foreign objects ≥ 12.5 mm and against water dripping at an angle
CE	This product satisfies the requirements of the applicable European and national directives.

3. Intended use

Intended use

The blood pressure monitor is intended for the fully automatic, non-invasive measurement of arterial blood pressure and pulse values on the upper arm.
It is designed for self-measurement by adults in the home environment.

Target group

The blood pressure measurement is suitable for adult users whose upper arm circumference is within the range printed on the cuff.

Clinical benefits

The user can record their blood pressure and pulse values quickly and easily using the device. The recorded values are classified according to internationally applicable guidelines and evaluated graphically. Furthermore, the device can detect any irregular heart beats that occur during measurement and inform the user via a symbol in the display. The device saves the recorded measurements and can also output average values of previous measurements.
The recorded data can provide healthcare service providers with support during the diagnosis and treatment of blood pressure problems, and therefore plays a part in the long-term monitoring of the user's health.

Indication

In the event of hypertension or hypotension, the user can independently monitor their blood pressure and pulse values as well as arrhythmia at home. However, the user does not need to be suffering from hypertension or arrhythmia in order to use the device.

⚠ Contraindications

- Do not use the blood pressure monitor on newborns, children or pets.
- People with restricted physical, sensory or mental skills should be supervised by a person responsible for their safety and receive instructions from this person on how to use the device.
- If you have any of the following conditions, it is essential you consult your doctor before using the device: cardiac arrhythmia, circulatory problems, diabetes, pregnancy, pre-eclampsia, hypotension, chills, shaking.
- People with pacemakers or other electrical implants should consult their doctor before using the device.
- 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.
- 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 therapy, or an arteriovenous (AV) shunt.
- Do not use the device with persons with sensitive skin or allergies.

4. Warnings and safety notes

⚠ General warnings

- The measured values taken by you are for your information only – they are no substitute for a medical examination. Discuss the measured values with your doctor and never make your own medical decisions based on them (e.g. regarding dosages of medicines).
- 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 incorrect use.
- 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.
- Cardiovascular diseases may lead to incorrect measurements or have a detrimental effect on measurement accuracy.
- Do not use the device at the same time as other medical electrical devices (ME equipment). This could lead to a malfunction of the device and/or an inaccurate measurement.
- Do not use the device outside of the specified storage and operating conditions. This could lead to incorrect measurements.
- Only use the cuffs included in delivery or cuffs described in these instructions for use for the device. Using another cuff may lead to measurement inaccuracies.
- Please note that when inflating the cuff, the functions of the limb in question may be impaired.
- Do not perform measurements more frequently than necessary. Due to the restriction of blood flow, some bruising may occur.
- 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.
- Place the cuff on your upper arm only. Do not place the cuff on other parts of the body.
- The air line poses a risk of strangulation for small children. Furthermore, included small parts pose a risk of suffocation for small children if swallowed. They should therefore always be supervised.

⚠ General precautions

- 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.

- Ensure the device is at room temperature before measuring. If the measuring device has been stored close to the maximum or minimum storage and transport temperatures and is placed in an environment with a temperature of 20 °C, it is recommended that you wait approx. 2 hours before using the measuring device.
- 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.
- We recommend that the batteries be removed if the device is not to be used for a prolonged period of time.
- Avoid any mechanical restriction, compression or bending of the cuff line.

Measures for handling batteries

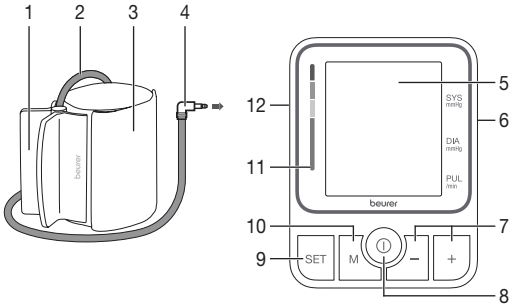
- If your skin or eyes come into contact with battery fluid, rinse the affected areas with water and seek medical assistance.
- Choking hazard! Small children may swallow and choke on batteries. Therefore, store batteries out of the reach of small children.
- Risk of explosion! Do not throw batteries into a fire.
- If a battery has leaked, put on protective gloves and clean the battery compartment with a dry cloth.
- Do not disassemble, open or crush the batteries.

- Observe the plus (+) and minus (-) polarity signs.
- Protect the batteries from excessive heat.
- Do not charge or short-circuit batteries.
- If the device is not to be used for a relatively long period, take the batteries out of the battery compartment.
- Use identical or equivalent battery types only.
- Always replace all batteries at the same time.
- Do not use rechargeable batteries!

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.

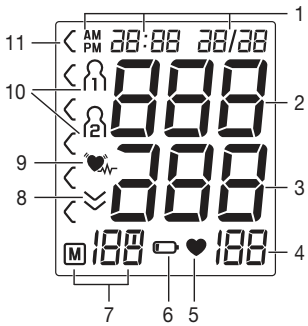
5. Device description



1. Bracket
2. Cuff line
3. Cuff
4. Cuff connector
5. Display
6. Connection for mains part (right side)
7. **-/+** function buttons
8. **START/STOP** button ⏻
9. **SET** setting button
10. **M** memory button
11. Risk indicator
12. Connection for cuff connector (left-hand side)

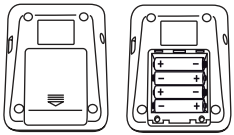
Information on the display:

1. Date/time
2. Systolic pressure
3. Diastolic pressure
4. Calculated pulse rate
5. Pulse symbol ♥
6. Battery replacement symbol
7. Number of memory spaces / memory display for average value (A), morning (AM), evening (PM)
8. Release air
9. Cardiac arrhythmia symbol
10. User memory
11. Risk indicator



6. Initial use

Inserting the batteries



4x 1.5V AA (LR6)

- Remove the battery compartment lid on the rear of the device.
- Insert four 1.5 V AA (alkaline type LR6) batteries. Make sure that the batteries are inserted the correct way round in accordance with the markings. Do not use rechargeable batteries.
- Carefully close the battery compartment lid again.
- All display elements are briefly displayed, 24 h flashes in the display. Now set the date and time as described below.

If the battery replacement symbol is permanently displayed, you can no longer perform any measurements and must replace all batteries. Once the batteries have been removed from the device, the date and time must be set again. Any saved measured values are retained.

Setting the hour format, date and time

It is essential that you set the 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.

There are two different ways to access the menu from which you can adjust the settings:

- Before initial use and after each time you replace the battery: When inserting batteries into the device, you will be taken to the relevant menu automatically.
- If the batteries have already been inserted: Press and hold the **SET** setting button on the device for approx. 5 seconds with the device **switched off**.

In this menu you can adjust the following settings in succession:

Hour format → **Date** → **Time**

Hour format

The hour format flashes on the display.

- Use the **-/+** function buttons to select the relevant hour format and confirm using the **SET** setting button.

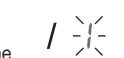
Date

The year flashes on the display.

- Using the **-/+** function buttons, select the relevant year and confirm using the **SET** setting button.

The month flashes on the display.

- Use the **-/+** function buttons to select the relevant month and confirm using the **SET** setting button.



Date

The day flashes on the display.

- Use the **-/+** function buttons to select the relevant day and confirm using the **SET** setting button.

ⓘ If the hour format is set as 12h, the day/month display sequence is reversed.

Time

The hour flashes on the display.

- Using the **-/+** function buttons, select the relevant hour and confirm using the **SET** setting button.

The minute flashes on the display.

- Using the **-/+** function buttons, select the relevant minute and confirm using the **SET** setting button.

Operation with the mains part

You can also operate this device with a mains part (not included in delivery). The mains part can be obtained from specialist retailers or from the service address using order number 071.95. However, before connecting the device with the mains part, please ensure that you have removed the batteries from the device. During mains operation, there must not be any batteries in the battery compartment, as this could damage the device.

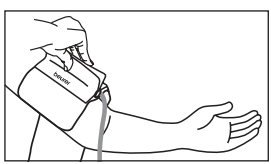
- To avoid any potential damage, the device may only be operated with a mains part that meets the specifications described in chapter “Technical specifications”.
- Furthermore, the mains part must only be connected to the mains voltage that is specified on the type plate.
- Insert the mains part into the connection provided for this purpose on the right-hand side of the blood pressure monitor.
- Then insert the mains plug of the mains part into the mains socket.
- After using the blood pressure monitor, unplug the mains part from the mains socket first and then disconnect it from the blood pressure monitor. As soon as you unplug the mains part, the blood pressure monitor loses the date and time setting but the saved measured values are retained.

7. Usage

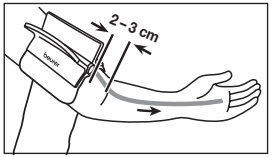
Please ensure the unit is at room temperature before measuring. The measurement can be performed on the left or right arm. Circulation in the arm must not be restricted by tight clothing or similar.

Attaching the cuff

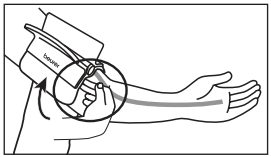
1. Place the cuff onto the bare upper arm. Press the bracket together using your fingers, in such a way that the area where the upper arm should be placed opens.



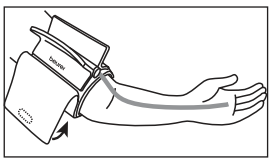
2. The cuff must be placed on the upper arm so that the bottom edge is positioned 2-3 cm above the elbow and over the artery. The line should point to the centre of the palm.



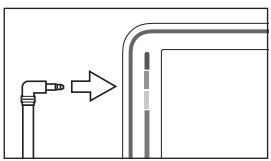
3. Close the hook-and-loop fastener. In doing so, the cuff should be fastened so that two fingers fit under the cuff.



4. Now fold the protruding part down. Secure the protruding part using the additional hook-and-loop fastener on the cuff.



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

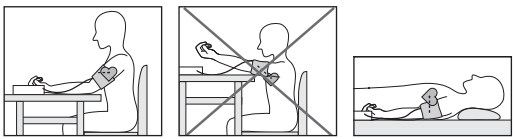


ⓘ Ensure that your arm is not pressing on the line.

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 device 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 the initial blood pressure measurement, always make sure to rest for about 5 minutes! Otherwise deviations can occur.
- You can take the measurement while sitting or lying. Always make sure that the cuff is at heart level.
- To carry out a blood pressure measurement, 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.
- Wait at least 1 minute before taking another measurement!

Selecting memory

Press the **SET** setting button. Select the relevant user memory (1 or 2) by pressing the **-/+** function buttons.
You have 2 memories, each with 100 memory spaces, to enable the separate storage of measurements for 2 different people. Confirm your selection with the **START/STOP** button ⏻ or wait for 3 seconds. Your selection is then automatically stored.

Performing the blood pressure measurement

Measurement

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

- Press the **START/STOP** button ⏻ to start the blood pressure monitor. All display values light up briefly. After the full-screen display, the last stored measurement appears. If there is no measurement in the memory, the unit displays the value 0.

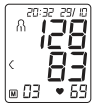
The blood pressure monitor will begin measurement automatically after 5 seconds.

Measurement

The cuff automatically inflates. The measurement itself is taken during the inflation phase.
As soon as a pulse is found, the pulse symbol ♥ will be displayed.

ⓘ You can cancel the measurement at any time by pressing the **START/STOP** button ⏻.

- Systolic pressure, diastolic pressure and pulse measurements are displayed.



- Err_ appears if the measurement has not been performed properly. Refer to chapter “10. What if there are problems?” in these instructions for use and repeat the measurement.

- Press the START/STOP button ⏻ to switch off the blood pressure monitor. The measurement is then stored in the selected user memory.
  If you forget to turn off the device, it will switch off automatically after approx. 1 minute. Even in this event, the value is stored in the selected or most recently used user memory.
- Wait at least 1 minute before taking another measurement!

Evaluating results

Cardiac arrhythmia:

This device can identify potential disruption 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 is shown on the display after the measurement has been taken, repeat the measurement. Please ensure that you rest for 5 minutes beforehand and do not speak or move during the measurement. If the symbol appears frequently, please consult your doctor.

Self-diagnosis and treatment based on the measurements can be dangerous. Always follow your doctor'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 pressure as well as the value above which your blood pressure is classified as dangerous.

The bar chart on the display and the scale on the device 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)	**Diastole** (in mmHg)	**Action**
Level 3: severe hypertension	red	≥180	≥110	Seek medical attention
Level 2: moderate hypertension	orange	160–179	100–109	Seek medical attention
Level 1: mild hypertension	yellow	140–159	90–99	Regular monitoring by doctor
High normal	green	130–139	85–89	Regular monitoring by doctor
Normal	green	120–129	80–84	Self-monitoring
Optimal	green	<120	<80	Self-monitoring

Source: WHO, 1999 (World Health Organization)

Saving, displaying and deleting measured values

User memory

The results of every successful measurement are stored together with the date and time. If there are more than 100 measurements, the oldest measurements are lost.

- Press the **SET** setting button. Select the relevant user memory (1 or 2) by pressing the **-/+** function buttons. Confirm your selection using the **START/STOP** button ⏻.

Average values

Press the **M** memory button.

A lights up on the display.
The average value of all saved measured values in this user memory is displayed.

Press the **M** memory button.

AM lights up on the display.
The average value of the morning measurements for the last 7 days is displayed (morning: 5 a.m. – 9 a.m.).

Press the **M** memory button.

PM lights up on the display.
The average value of the evening measurements for the last 7 days is displayed (evening: 6 p.m. – 8 p.m.).

Individual measured values

When the **M** memory button is pressed again, the last individual measured values in each case are displayed with the date and time (for example measurement 03).

When the memory button **M** is pressed again, you can view your individual measured values.

To switch the device off again, press the **START/STOP** button ⏻. If you forget to switch off the unit, it will switch off automatically after 1 minute.

ⓘ You can exit the menu at any time by pressing the **START/STOP** button ⏻.

Deleting measured values

To delete the memory of the selected user memory, press the **M** memory button in switched-off state. The average value of all measurements appears on the display; A in parallel, lights up.
Press and hold down both function buttons **-/+** simultaneously for 5 seconds.

CL 00 appears on the display. All the values in the selected user memory have now been deleted.

8. Cleaning and maintenance

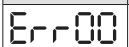
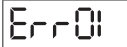
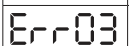
- Clean the device and cuff carefully using only a slightly damp cloth.
- Do not use any cleaning agents or solvents.
- Under no circumstances hold the device and cuff under water, as this can cause liquid to enter and damage the device and cuff.
- If you store the device and cuff, do not place heavy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

9. Accessories and replacement parts

Accessories and replacement parts are available from the corresponding service address (according to the service address list). Please state the corresponding order number.

Designation	Item number and/or order number
easyClip universal cuff (22–42 cm)	164.161
Mains part (EU)	071.95
Mains part (UK)	072.05

10. What if there are problems?

Error message	Possible cause	Solution
	Unable to record a pulse.	Please wait one minute and repeat the measurement. Ensure that you do not speak or move during the measurement.
	The cuff was not attached correctly.	Please observe the information in chapter 7 under the heading “Attaching the cuff”.
	An error occurred during measurement.	Please wait one minute and repeat the measurement. Ensure that you do not speak or move during the measurement.
	An error occurred while pumping up the cuff.	Please take another measurement to check whether the cuff can be correctly inflated. Make sure that neither your arm nor other heavy objects are pressing on the line, and that the line is not bent.

Error message	Possible cause	Solution
Err	System error	Please contact customer service.
	The batteries are almost empty.	Insert new batteries into the device.

11. Disposal

Repairing and disposing of the device

- Do not repair or adjust the device yourself. Proper operation can no longer be guaranteed in this case.
- Do not open the device. Failure to comply will invalidate the warranty.
- Repairs must only be carried out by Customer Services or authorised retailers. Before making a claim, please check the batteries first and replace them if necessary.
- 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.

Disposing of the batteries

- Empty, completely flat batteries must be disposed of through specially designated collection boxes, recycling points or electronics retailers. You are legally required to dispose of the batteries.
- The codes below are printed on batteries containing harmful substances:
  Pb = Battery contains lead, Cd = Battery contains cadmium, Hg = Battery contains mercury.

12. Technical specifications

Device

Model no.	BM 51
Type	BPM51
Measurement method	Oscillometric, non-invasive blood pressure measurement on the upper arm
Measurement range	Cuff pressure 0–300 mmHg, systolic 60–255 mmHg, diastolic 40–200 mmHg, pulse 40–199 beats/minute
Display accuracy	Systolic ±3 mmHg, diastolic ±3 mmHg, pulse ±5 % of the value shown
Measurement uncertainty	Max. permissible standard deviation according to clinical testing: Systolic 8 mmHg / diastolic 8 mmHg

Memory	2 x 100 memory spaces
Dimensions	L 138 mm x W 103 mm x H 46 mm
Weight	Approximately 570 g (without batteries, with cuff)
Cuff size	22 to 42 cm
Permissible operating conditions	+10 °C to +40 °C, ≤ 85 % relative humidity (non-condensing), 700 hPa–1060 hPa environmental pressure
Permissible storage conditions	-20 °C to +50 °C, ≤ 85 % relative humidity (non-condensing), 700 hPa–1060 hPa environmental pressure
Power supply	4 x 1.5 V ⎓ AA batteries
Battery life	For approx. 500 measurements, depending on levels of blood pressure and inflation pressure
Classification	Internal supply, IP22, no AP or APG, continuous operation, application part type BF

The serial number is located on the device or in the battery compartment.
Technical information is subject to change without notification to allow for updates.

- This device complies with the European standard EN 60601-1-2 (in compliance with CISPR 11, IEC 61000-4-2, IEC 61000-4-3, and IEC 61000-4-8) 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.
- This device complies with the EU Medical Devices Directive 93/42/EEC, the German Medical Devices Act (Medizinproduktgesetz) and the standards EN 1060-1 (Non- invasive sphygmomanometers – Part 1: General requirements), EN1060-3 (Non-invasive sphygmomanometers – Part 3: Supplementary requirements for electro-mechanical blood pressure measuring systems) and IEC 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 the device is used 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.

Mains part

Model no.	LXCP12-006060BEH
Input	100–240V, 50–60 Hz, 0.5A max
Output	6 V DC, 600 mA, in conjunction with Beurer blood pressure monitors only
Manufacturer	Shenzhen longxc power supply 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. Ensure that you have removed the batteries from the battery compartment before you use the mains part.
	Polarity of 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 finger, needle, checking hook). Do not touch the patient and the output connector of the AC/DC mains part at the same time.

13. Warranty/service

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

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