



## Talking Blood Glucose Meter

**Please retain these instructions for future reference.**

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## **General Description**

### **Introduction**

Thank you for choosing the SensoCard Plus Talking Blood Glucose Meter. Please be aware that for the purpose of these instructions the product will be simply referred to as the SensoCard Plus. This meter has been carefully designed to enable you to easily, reliably and accurately monitor your blood glucose level. The SensoCard Plus meter meets the International Standards, which belong to the applicable EMC emission, electrostatic discharge, radio frequency radiation.

To get the best from your SensoCard Plus meter, please take the time to become familiar with the meter by reading the instructions before use. Also, follow the instructions included in the Maintenance section to prolong the life and accuracy of your meter.

It is recommended that you visit your diabetes advisor or doctor if you need further advice.

If you have any technical queries with this product please contact BBI Healthcare, on 01792 229333 or email [info@bbihealthcare.com](mailto:info@bbihealthcare.com) between Monday-Friday 8.30am – 5pm (excluding Bank Holidays).

## **Quick-start guide**

### **Measurement**

1. Wash hands.
2. Insert grooved end of test strip into meter, black side facing upwards.
3. Apply blood.
4. The result will be announced after five seconds.

### **Code setting with code-card**

1. Switch the meter on.
2. Press the “down” button and meter says “code set menu, insert the code card”.
3. Insert and remove the code-card in one fluid movement, in the slot located at the bottom of the left hand side of the meter.
4. The code setting will be announced.

### **System checking with the check strip**

1. Press and hold the “ok” button until meter speaks “check mode, insert a reagent strip or check strip”.
2. Insert the check strip.
3. Compare the announced three-digit reading with the range on the sticker inside the carrying case.

### **Switching on the speaking function**

1. Press and hold the “ok” button until meter speaks “language set menu” it will then announce what is set to, for example “English”.

2. Press either the “up” or “down” buttons to scroll between English, German and off (no announcement will be made when the talking function is switched off) once you have reached the desired setting press the “ok” button.

## **SensoCard Plus meter explained**

SensoCard Plus indicates blood glucose concentration by checking the reaction between chemical reagents and the blood drop on the test strip. The reaction triggers the generation of a current in the test strip’s reagent zone, and this current is then conducted to the meter. The current is in correlation with blood glucose concentration. Therefore the meter can determine blood glucose concentration by measuring the extent of current flow.

The whole measuring process is controlled by a microprocessor inside the SensoCard Plus meter. The microprocessor also controls the internal calibration of the device and if any failure is detected in the operation, a relevant error message is displayed (see section Error messages and Troubleshooting).

SensoCard Plus automatically stores measured data together with the current date and time. The memory capacity is large enough to store the data of the last 500 tests. Stored data can also be uploaded to a host computer via IR interface with the help of an additional device named LiteLink (for more details please contact BBI Healthcare).

## **Unique feature of SensoCard Plus**

This audio feature is a great help for those people who may have difficulty with reading displayed characters from the screen. By using the speaking function of the device, possibility of mis-readings caused by partial or no sight can be reduced significantly.

All the important instructions and values that are displayed on the screen are also spoken by SensoCard Plus. Clear and simple sentences make SensoCard Plus a very easy-to-use blood glucose meter. Data telling is available in two languages by default: English and German. However, other languages may be available. Please contact BBI Healthcare for further information.

## **IMPORTANT:**

### **For users of plasma equivalent calibrated meter**

**Please note:** The SensoCard Plus meter is a plasma equivalent calibrated meter. “Plasma equivalent calibrated” is written on the label on the back of the meter. This means that all of the measurements taken are in mmol/l (millimoles per litre).

Laboratory blood glucose measurements can be made either from whole blood samples or from plasma samples (liquid portion of blood without red blood cells). Both methods are widely used, neither is more accurate than the other. However, there is a slight difference between the results obtained from the two samples. Values of plasma measurements are usually 10 to 15% higher than their whole blood equivalents. So if plasma result is 8mmol/l, you may have your whole blood reading within the range of 8.8mmol to 9.2mmol/l. Because of the slight difference, result values obtained from the different methods cannot be simply compared.

### **Important precautions!**

Always operate the SensoCard Plus blood glucose meter according to these instructions. If the equipment is used in a manner not recommended by these instructions, the warranty provided by the manufacturer may be lost.

SensoCard Plus is designed to be used with SensoCard test strips only and no other strips. Always check if the three-digit code on the vial of strips you are using matches the three-digit code appearing on the meter’s screen. If it does not, then enter the correct code into the meter (see the Strip code setting section).

SensoCard Plus meter is calibrated to be used only with fresh blood taken from a capillary (eg. finger prick sample). Venous blood is not suitable for accurate monitoring of glucose levels using the SensoCard Plus.

### **Technical data**

Power supply: Two 3V CR2032 type batteries

Battery lifetime: approximately one year or 1000 measurements

Calibrated for: SensoCard test strip

Average test time: Five seconds

Sample volume needed: min 0.5ul capillary blood

Measuring range: 1.1 – 33.3mmol/l

Display: under 1.1mmol/l: Lo, above 33.3mmol/l: Hi

Memory capacity: last 500 results with time and date

Strip-code range: 1-UU6 (alphanumeric)

Coding system: internal with Code-card

Automatic switch on: Upon insertion of test strip, black side upwards

Automatic switch off: Two minutes after the last button activation

Operating temperature: 15 – 35 degrees centigrade (room temp)

Relative humidity: <90% RH

Size: 55x90x115mm

Weight: 96g (batteries included)

## **Product contents**

Inside the box you will find a zipped carrying case, a written instruction manual and a leaflet describing the operation of the lancing pen.

Unzip the carrying case. Inside you will find the following:

The SensoCard Plus Talking Blood Glucose Meter

The lancing pen

A small plastic packet of sterile lancets

One check-strip

A carrying wallet for the meter

A fold-out instruction manual in pictures

## **SensoCard Plus – Orientation**

The meter is easily held in the palm of the hand. The front side is flat; the rear of the meter is where you will feel the raised loudspeaker.

On the front side you will feel the square display window, which is slightly recessed. At the bottom right on the front you will find a round on/off switch. We are going to call this the “ok” button.

Run your finger along the bottom edge of the meter, and you will feel a slot. This is where you will insert the test strips each time you test your blood glucose, and the check strip when you test the meter’s accuracy from time to time. This will be referred to as the “strip holder slot.”

Run your finger up the right hand edge of the meter. You will feel two buttons on the side towards the top. The lower button we shall call the “down” button. The one above it we shall call the “up” button. Now run your finger down the left hand edge of the meter. Right at the bottom you will feel a small, thin hole. This is where you insert the plastic code card that you will get with every box of test strips. We will call this hole the “code card slot”.

Finally, although this is very difficult to detect with touch, run your finger along the top edge of the meter. In the top left hand corner you may feel a small hole. This is an IR data output interface, which can transmit your result to a computer. We shall talk about this feature later on.

Turn the meter over. You will feel a raised part, which is round at the bottom end. This is the loudspeaker for the talking function. Below the speaker is the battery compartment. The battery lid is oblong with rounded ends. There is a narrow gap in the battery compartment lid, which will help you to remove it when you come to change the batteries. We shall come back to this point later.

## **Test strips**

Test strips are available on prescription from your healthcare professional, using the following order code, called a ‘PIP’ code:

PIP code: 317 – 9892

SensoCard Plus is designed only for in vitro use with SensoCard test strip. No other strips will give you an accurate result.

The test strips come in a box containing 2 plastic vials each containing 25 test strips, and one code card strip.

The test strip is approximately one inch long and is flat and ridged at one end and pointed at the other. The flat ridged end is where the wire conductor is, and this is the end that is put into the meter. The pointed end is where contact is made with your blood sample.

The test strip can only be inserted into the meter one way up. The top of the test strip is glossy black in colour and you can feel ridges towards the flat end. The bottom of the test strip is white in colour and completely smooth to the touch. The strip must be inserted with the black side facing upwards.

Always check if the three-digit code on the vial of strips you are using, matches the three-digit code you have entered in your meter. If they are not the same your measuring result will be incorrect (see section Strip-code setting).

Each vial of strips is labelled with a date of expiry. Always use the strips within three months from the date of opening and never use the strips if they have expired the date on the vial. Before testing always make sure both the meter and the strips are at room temperature.

**NB:** SensoCard test strips react with blood glucose forming a current. The intensity of the current is proportional to blood glucose concentration. SensoCard Plus meter detects the generated micro-current and calculates the glucose concentration.

SensoCard test strips are sensitive to heat and mechanical damage – do not use strips if you suspect they have been damaged. Always keep the strips in their original package, close the vial each time when you have removed a strip.

Do not expose the vial of strips to direct sunlight or store it near any heating device such as a radiator. Unused strips which are stored in the original capped vial under the circumstances described in this section remain stable until the expiration date (indicated on the test strip bottle). The test strips must be stored at room temperature 4-35 degrees centigrade/40-95 degrees Fahrenheit. Avoid both freezing temperatures and extreme heat.

## **Important!**

Read the instructions for use of the SensoCard test strip before you start to use it.

Always note the date of the first opening of the vial of strips and use the strips within three months from that date.

Use the removed strip immediately and always close the vial carefully.

If the strips were stored below room temperature, wait at least 30 minutes before opening the vial.

## **Strip insertion and use**

The test strip must be inserted into the meter's strip holder slot with the glossy black side with tactile ridged end facing upwards and pointing towards the device. The meter will turn on automatically by inserting the test strip. Always ensure that the strip is fully and securely inserted into the centre of the test strip holder slot. Make sure that enough blood is applied to the very tip of the test strip. If there is not enough blood applied the meter will give an error message (this will be covered in detail in the error messages and troubleshooting section).

## **Before starting measurement**

Readings might be affected by:

Skin contaminations. Always wash and dry your hands thoroughly before taking your blood sample and using SensoCard Plus. Wash your hands with warm water, this also stimulates blood-stream. If you have difficulties in obtaining your blood sample, try hanging your arm down before pricking your finger. It helps to increase the blood flow.

Severe dehydration may lead to low measurement results.

Abnormally high concentration of vitamin C (Ascorbic Acid) may lead to high results.

Hematocrit (red blood cells volume) level in blood also has an influence on measurement results. If the hematocrit level is over 55% the measurement results may be too low. If, however, the hematocrit level is below 30% the meter may yield unusually high results.

In case of dialysis the hematocrit level of blood may vary. This may influence the displayed glucose level. It is recommended that individuals using dialysis should interpret their results with caution and seek further advice from their healthcare practitioner.

## **Blood sampling**

It is recommended to use the lancing device and disposable lancets packed together with the meter to prick your finger. If you use them, please read the following instructions too:

Before using the lancet, please make sure to wash your hands thoroughly with warm water and then dry them before pricking your finger. Use the side of the finger-tip for pricking. It hurts less if you prick the middle or ring finger of the hand you normally use less. Once you have a blood drop insert it onto the pointed end of the test strip. You can either do this by moving your finger towards the strip in the meter, or it may be easier to move the meter towards your finger in order to get the blood droplet in the correct place.

### **Warning!**

Excessive rubbing may influence measurement results.

Read the lancing device's instructions for use before you start to use it.

Dirt or contaminants on a finger, or insufficient blood may lead to inaccurate measurement results.

## **Strip-code setting**

Your SensoCard Plus meter and SensoCard test strips form together an accurate measuring system. To ensure that the meter and the strips work together properly, the SensoCard Plus meter must be coded to the strips you are going to use. Coding the meter means entering the code value which is assigned individually to each vial of strips. The code is a three-digit alphanumerical number affixed to the strips' vial which influences the accuracy of the meter while it calculates glucose concentration.

There are two ways of entering the strip-code;

By using the code-card (included in every vial of strips), or

By setting the code value manually – which is printed on the bottle of the strips' vial.

### **Important!**

Verify that the code announced and displayed on the LCD matches the code number on the vial of test strips each time you use your meter. The code needs to be entered only once for each vial of strips. The meter will memorise the code until you need to change it again.

If your code-card is broken or missing, please follow instructions for “setting strip-code manually” in this section.

### **Setting strip-code with code-card**

The code card is packed in with the test strips in the vial and is larger in size. One end is flat and this is the end that is inserted into the meter. The other end of the code card is round. Again, this card can only be put into the meter one way up, with the printed text facing upwards. This can be distinguished by touch as the upper side is slightly more rough to the touch.

Switch the meter on (with the “ok” button or by inserting a SensoCard test strip into the strip holder). After doing this, the actual code value will be announced and will also appear on the LCD. The meter will speak “current code is...” followed by the three-digit code. A large three-digit alphanumerical value “code” caption and a strip icon with a flashing arrow will also be displayed. The code value displayed on the screen and announced must be compared to the code value printed onto the label of the SensoCard test strips' vial. If they are not the same, go on with the code setting process.

**NB:** Some people may require sighted assistance to establish the code value printed on the vial of test strips.

Once the meter announces “current code is...” it will state “insert a reagent strip or press a button.” Press the “down” button on the right side of the meter to enter the “code setting” function. A simple animation displayed on the screen will request the code-card to be inserted into its slot on the bottom left side of the meter. The meter will speak “code set menu, insert the code card.”

Insert and remove the code card with the flat end in one smooth movement. Once you have done this the meter will announce “current code is... insert a reagent strip or press a button.” If this is unsuccessful, the meter will say “error.” After this press the “down” button again and try again or alternatively try the manual code setting.

If successful the meter will return automatically to the test screen where the recently set code value is displayed, showing that it has been stored in SensoCard Plus. Now the meter is ready to perform the blood glucose test with the new code value.

### **Warning!**

SensoCard Plus waits for the insertion of the code-card for 60 seconds. If the code-card is not inserted within 60 seconds the meter displays and announces “error” and the actual code value will remain the same as before. In this case please repeat the coding process again.

### **Setting strip-code manually**

In the case of a missing or damaged code-card, you will need to set the strip code manually. The code of each lot is printed on the side of each vial of strips and can be either three numbers, or a number and two letters. The range of the available code values covers 1 – UU6. Digits that can be set vary between 0-U (18 unique values each: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, C, E, F, H, L, P, U). The value of the third digit can vary between 0-6, only if the first two digits' values are ,U. In order to set the code manually follow the instructions below.

Press the “ok” button once. The meter will tell you the code that it is currently set to, and asks you to “insert a reagent strip or press a button”. Now press the “down” button on the edge of the SensoCard Plus. The meter will tell you “code set menu, insert the code card”. Press the “down” button once more. The meter will tell you the current code, and the first of the three digits or numbers will start to flash. You can now adjust the code value of the first digit by pressing the “up” and “down” buttons on the edge of the SensoCard Plus. The meter will tell you each digit it has reached. When you find the required digit press “ok”. The second digit or number will then start to flash and you should repeat the process as before. Press the “ok” button once more and the third digit or number will flash. When you find the correct third digit or number press the “ok” button for the final time. The meter will then tell you the code that you have set, please check

for a final time that it matches the code on the vial. You can then proceed to measure your glucose level, or switch the meter off.

**NB:** If no buttons are pressed within two minutes, the meter will store the displayed code value and will automatically switch off.

## Lancing pen

The lancing pen is used to prick your finger in order to get blood and it comprises three separate parts. The middle part is blue and has two indentations on either side to fit neatly between your thumb and forefinger. There is also the trigger button to release the lancet, which is yellow and triangular. The main barrel is the longer of the two other parts, is yellow and has a smooth base. The top of the lancing pen, what you might call the “sharp end” has an indentation at the very end, and the barrel swivels clockwise and anti-clockwise depending on the setting. This top part swivels in order to set the correct depth for your finger.

There are five depth settings, one to five. Hold the pen firmly by the middle section with the two indentations between your thumb and forefinger. Turn the barrel anti-clockwise as far as it will go. You have reached setting number one, which is for very soft skin (it maybe pre-set to this setting). Turn the barrel clockwise until you feel it engage into a new position – two, three, four, and finally five. Five is for much harder skin.

You should decide which setting is most appropriate for your skin. We recommend starting at number three, the middle intensity, and adjusting upwards and downwards accordingly.

## Lancets

Before using the lancing pen you will need to put a lancet (needle) into the device. In the carry case is a plastic bag containing the lancets. Each lancet is about one inch long and has a plastic cover. It also has a protective cover at the top covering the needle. The lancets are Facet Cleanlet Fine lancets size 28G and are available on prescription. The PIP code is 227 9677. Should you experience any difficulty in obtaining these strips, alternative lancets are available from Bayer, the Ascensia Microlet lancets, 28G. PIP code for 100 is 280 0043 and for 200 is 280 0050.

## **How to use the lancing pen**

Before using the pen a lancet will need to be put into it. Hold the pen with the thumb and forefinger of one hand at the indented parts of the middle blue section. With the other hand hold the bottom, longer part of the pen and turn it clockwise until the two sections come apart. Inside the longer section is a plastic lancet holder on a spring. This is where the lancet needs to go.

Insert a new, sterile lancet firmly into the lancet holder, by holding the bottom half of the pen with one hand and pressing the lancet into the holder with the other hand. When the lancet is in position carefully remove the round plastic cover at the top of the lancet by unscrewing it gently. The needle is now exposed.

Put the top part of the pen back over the lancet and screw it clockwise until it is closed onto the other part of the pen.

Set the pen to the desired depth setting, which is detailed above, and then the pen is ready to use.

Hold the bottom part of the pen (longer section) with one hand and pull the top part up with the other hand until you hear a click. The lancet is now in position and the pen can be placed against your finger. Press the yellow trigger button and the needle will gently pierce your skin allowing you to apply your blood sample to the test strip.

Once tested carefully remove and safely dispose of the lancet. Your local council will be able to advise you on the safest way to do this.

### **Precautions!**

Store the lancing pen in a place where minors can not have access to it.

Use the pen exclusively for the purpose in which it is intended.

Never use the pen if it does not work properly.

### **Warning!**

Always clean the lancing pen after use with soapy water. Also remember to sterilize the pricking layer (top part) by wiping it with an antiseptic. Finally, rinse and dry completely.

## Measuring with the meter

Before you start the test make sure you have everything ready that you might need: meter, test strips, lancing pen and some tissues. Now, put your meter on a clean flat surface and wash your hands thoroughly.

Switch SensoCard Plus on by inserting a test strip into the strip holder or by pressing the “ok” button. By inserting the test strip the meter automatically switches itself on and announces the current code, it then beeps and says “apply a drop of blood.” When you have pricked your finger you may apply the blood into the pointed end of the test strip. The meter will beep when blood is detected on the test strip and the glucose reading will be announced after five seconds. Please do not remove the test strip or press any buttons during these five seconds. It will then say that the test is complete and the test strip can be removed from the meter. The glucose reading will automatically be stored into the memory with the actual date and time. When you take the test strip out the meter beeps three times, and this indicates that it has switched off. If there is not enough blood put onto the test strip the meter will announce “error”, indicating that the process must be repeated with a new test strip. The measurement can be announced again after the test if you press the up button with the test strip still in the meter.

After the result has been announced, it is possible to mark it with the “up” button. By pressing “up” again the mark will disappear. Marked results will be neglected from the average glucose level calculations of the last 7, 14 and 28 days test results. This can be done if you know why a blood glucose reading may be significantly different from normal, because of maybe sporting activity or because of eating something very sweet. More information is in the Memory/Storing data section.

**NB:** Marks can only be added or removed right after the measurement. They cannot be changed when recalling them from memory.

The meter will display “lo” if the measured value is under 1.1mmol/l and “hi” if the value is above 33.3mmol/l

The test result can be seen on the screen for two minutes or until the test strip is removed or the meter is switched off. The meter stores your reading but it is recommended that the result is also recorded in a diabetes diary before turning the meter off.

Used strips and lancets are contaminated with blood. Be careful, and follow the relevant local instructions when you throw away the strips or lancets.

During the measurement SensoCard Plus checks across a wide range of different parameters. If a problem appears during checking, SensoCard Plus will announce “error” followed by a relevant number, which indicate possible errors.

Explanations of these and other errors are given in the section Error messages and troubleshooting.

## **Warning!**

High or low results may have serious medical consequences. If your blood glucose is unusually high (greater than 14mmol/l) or low (lower than 4mmol/l), or if you question your results, repeat the test more carefully with a new test strip. Consult your healthcare professional before making significant changes to your diabetes medication. Do not ignore physical symptoms.

Electromagnetic interference and electrostatic discharge may interfere with the meter. Do not use near highly radiant devices such as a mobile phone or a microwave oven.

Do not perform a test with a damaged test strip.

Make sure that the test strip is inserted properly. Improper position of the test strip will cause an inaccurate test result.

Do not move or remove the test strip during measurements.

Do not perform a test in extreme conditions. Different external temperature from the specified operating temperature range or too high humidity (eg. Humid bathroom) might affect the accuracy of the test result.

If the meter was stored in a cold place, wait for at least 30 minutes until the meter and the strips have reached room temperature.

## **Memory**

The SensoCard Plus meter’s memory capacity is large enough to store the results of 500 measurements with related times and dates.

## Storing data

SensoCard Plus meter automatically stores each result when it switches off. If the memory is full, the oldest result will be lost while the latest result will be added. False or control measurements can be marked, thus not to be calculated in the average glucose level of the last 7, 14 and 28 day time periods. Results can be marked after measurements by pressing the “down” button directly after the glucose level is announced. An exclamation mark will also appear on the display’s lower left side when recalling marked results from memory.

## Recalling data from memory

Stored data can be retrieved from the memory by selecting the memory mode. Switch the meter on by pressing the “ok” button. After the meter announces the current code, it will say “insert a reagent strip or press a button”. Press the “up” button once and the meter will say “memory mode” and then read the last glucose reading with the date and time. You can scroll through the memory using the “up” and “down” buttons and the meter will announce each recorded reading specifying the date and time the reading was taken too. When you reach the earliest memory record, the meter stops scrolling. Those results that were marked after measurement will be displayed with an exclamation mark when recalled. By pressing the “ok” button the meter will return to the test mode.

## Average calculation

SensoCard Plus is able to calculate the average glucose level of the last 7, 14, 28 days test results. The calculated average contains all test results from the selected 7, 14 or 28 day long time periods, except the marked ones. However, this function only operates accurately if the date and time are precisely set.

To study the average value of your glucose level, enter the memory menu by pressing the “ok” button and turning the meter on. Then press the “up” button to access the memory menu. Then press the “ok” button to display the average glucose level of the last 7 day period. The meter will say “the average value of 7 days is...” Use the “up” and “down” buttons to switch between the average of the last 7, 14 and 28 day time periods. By pressing the “ok” button again you will return to the test screen.

**NB:** If there is no test result in the memory – after memory deletion or before the first test of a new device – no average value will be displayed.

## Overview of function menus

By keeping the “ok” button pressed after switching on, the meter will offer alternatively six functional menus:

1. Calibration screen – the meter will announce “check mode” and will show the letters “cal” on the display.
2. Data upload – meter speaks “data upload” and the letters “pc” shown on the screen.
3. Date update - the meter speaks “date set menu” and shows the letters “set” on the screen.
4. Memory data delete – the meter speaks “memory erase menu” and shows the letters “del” on the screen.
5. Measurement unit selection – meter speaks “unit set menu” and the letters “set” are shown on the display.
6. Speaking function – meter speaks “language set menu” and shows the letters “set” on the display.

These function modes will follow each other in the order mentioned above as you keep the “ok” button pressed. To enter one of the function menus, simply release the “ok” button when the desired function’s menu is announced.

## Setting date and time

SensoCard Plus meter is used world-wide, therefore it works both with a 12 and 24 hour system. It is not able to recognise “leap” years.

The time is displayed in the top left corner of the meter’s display, while the date appears in the top right corner of the screen.

Switch the meter on with the “ok” button and keep it pressed until the meter speaks “date set menu”. Once you release the “ok” button you will enter the time setting menu with only the hours showing on the display. The meter will announce “hour” and then whatever it is set to. Scroll through using the “up” and “down” buttons and when you have the correct hour press the “ok” button and it will confirm the hour and then move to the minute. As you scroll through the hours the clock mode changes at each rolling over between 12 hour clock mode and 24

hour clock mode. Use the “up” and “down” buttons again and then press “ok” to set, and the meter will then speak “month” followed by the month it is set to, then “day” followed by the date in number. Again, these can be changed by using the “up” and “down” buttons, and can be confirmed by pressing the “ok” button.

After the time and date are set, the meter can be switched off by pressing the “ok” button. Changes will be stored automatically.

**NB:** The meter switches off automatically after two minutes if you do not press any button.

## **PC mode**

In PC mode the data stored in the meter’s memory can be downloaded to a PC based computer. To download data, an additional adapter – called LiteLink Infrared (IR) adapter – is needed to establish data communication connection between PC and SensoCard Plus meter. The LiteLink adapter together with the data communication control program is shipped separately. For more details please contact BBI Healthcare. All details of data management on PC and information on data downloading, installation, operational settings are attached on the CD with the LiteLink.

Switch the meter on by pressing the “ok” button and keep it pressed until the meter speaks “data upload” and then release the button. The LiteLink IR adapter’s needs to be connected to the PC and the IR interface must be aligned to the SensoCard Plus’ IR output. To start data transfer press the “up” or “down” button on the meter. When the data transfer is finished, the meter will automatically switch off.

## **Measurement range (mmol/l)**

The results for meters purchased from BBI Healthcare are pre-set to be displayed in mmol/l. If you require an alternative measurement unit, for example if you are moving abroad, please contact BBI Healthcare.

## **Deleting data stored in the memory**

All data in the memory can be deleted in the “memory erase menu”. After deletion the default data setting will be restored (set by manufacturer: 5.4mmol/l) this measurement cannot be deleted but is marked and will not be included in the averages.

Switch the meter on by pressing the “ok” button and keep it pressed until the meter speaks “memory erase menu”. To delete data press the “down” button followed by the “up button”. Once this has happened all data will have been deleted, so if you’re not sure whether to delete the data you can exit the menu by pressing the “ok” button. Data will not be lost either if the meter switches off automatically after two minutes.

## **Switching to speaking function**

The SensoCard Plus meter can speak in two different languages by default: English and German. To switch between these two languages or to switch the loudspeaker off enter the “language set menu”. Enter this menu by pressing the “ok” button and keep it pressed until the meter speaks “language set menu”, then release the button.

The preset language of English will be announced. To change to German or to switch off press either the “up” or “down” button. When German is selected the meter will speak “Deutsche”. When the loudspeaker is selected as off the meter will go quiet. To select English again, press either the “up” or “down” button until the meter speaks “English”. Press the “ok” button to confirm your selection. The meter will then switch off.

NB: When the speaking function is switched on to either English or German, the sign of a loudspeaker will be displayed on the screen permanently, or until the speaking function is switched off.

## **Battery replacement**

SensoCard Plus meter is powered by two round cell batteries, type CR2032. Its capacity is sufficient for about 1000 test measurements assuring at least one year of operation.

When the batteries are getting low, a battery icon is displayed on the screen. It indicates that batteries are needed to be replaced soon. When the battery icon is displayed the meter is still operating accurately, but replacement of batteries should be done no later than when finishing the next 10 test measurements. After the battery icon is displayed, SensoCard Plus tells you every time you switch off the meter to replace the batteries.

If 10 test measurements are done after the first appearance of the battery icon, the error message E-6 will be displayed on the screen when the meter is switched on. It means that it is not allowed to perform any more tests until the batteries are changed.

### **Important!**

Keep the meter switched off while replacing batteries.

Some people may require sighted assistance when changing the batteries.

The battery compartment is located on the back of the meter below the loudspeaker. The battery cover can be opened by putting a finger nail in the gap below the long, narrow hole and then levering it up and away from the meter. Remove the batteries by turning the meter over so the two batteries fall out into the palm of your hand.

Replace the batteries by putting one battery in the left sided hole with the smooth “-” pole facing upwards. This side has a lip around its edge, whilst the “+” pole has a smooth edge. The other battery should be put in the right sided hole with the smooth “-” pole facing downwards and into the meter. Once both batteries are correctly positioned, replace the battery cover and check that it clicks back into place. The meter will then automatically switch itself on and announce the current code.

### **Important!**

If the instrument does not work after battery replacement: take the batteries out again, press and hold the “ok” button for about 15-20 seconds, then replace the batteries.

If batteries are replaced within 60 seconds, the date and time do not need to be reset. After 60 seconds the time and date will need re-setting.

The code number and test data stored will not be lost due to battery replacement.

Electrostatic discharge may interfere with the meter. In the case of unusual effects then follow the instructions in the Error messages and troubleshooting section.

## **Maintenance**

If SensoCard Plus is used in accordance with these instructions, then only minimal maintenance will be necessary. However, to always have accurate test results, we recommend that you to perform the following operations:

If necessary, use a damp cloth to clean the meter but avoid immersing the meter with water.

After cleaning, check the meter's functionality, which is covered in the next section "system checking".

### **Warning!**

Protect the inside of the meter from water.

Never immerse the meter or hold it under running water.

Avoid disassembling the meter, repairs should be done exclusively by an authorised service.

## **SensoCard Plus System Checking**

The check test of SensoCard Plus can be carried out by the supplied check-strip or with CareSens control solution, which is available from BBI Healthcare. Please contact them for more information on 01792 229333 or email [info@bbihealthcare.com](mailto:info@bbihealthcare.com).

### **Checking with check-strip**

This method is carried out in order to check that the meter is working properly, and should be done so every 2-4 weeks or if you are experiencing any problems.

To do this, first locate the check strip, which is packed into the carry case near the lancets. The check strip is approximately one inch long and has two parts. The smaller, thinner end is the strip end that should be inserted into the test strip holder of the meter. The wider part of the check strip is grey plastic and has the word "check" written on it. The strip needs to be inserted into the meter with the "check" writing on the strip facing upwards. This can be distinguished by touch, as it is slightly more tactile than the underside.

Press the “ok” button on the meter and keep it pressed until the meter says “check mode” followed by “insert a reagent strip or check strip”. Insert the check strip that is packed into the carry case. The meter will announce a three-digit number.

If this is within the range indicated on the sticker in the carry case, which found in on the side where the lancets and extra information is kept, take the check strip out and the meter will speak “insert a reagent strip or check strip”. If the number announced is not within the range on the sticker please contact BBI Healthcare for help. If you want to test your blood glucose insert a test strip, if you have finished just switch the meter off by pressing the “ok” button once and the meter will beep three times to indicate it is off. Alternatively, leave the meter for two minutes and it will switch off automatically.

### **Important!**

Do not apply blood on the check strip.

Protect the check strip against physical damage and keep it in a safe place. If the check strip is damaged or lost, please contact BBI Healthcare for advice.

### **Checking with CareSens control solution**

Before carrying out this check, please ensure that the three-digit code on the vial of test strips matches the three-digit number announced when you switch the meter on (refer to Strip code setting for more details). If they do match, proceed with the next check. If the numbers are different, please set them accordingly.

Press the “ok” button and keep it pressed until the meter speaks “check mode, insert a reagent strip or test strip”. Insert the test strip and the meter will speak “apply a drop of blood”. Apply a drop of the CareSens solution and the meter will announce a measurement in mmol/l. Check that the displayed result is within range of the L1 and L2 value indicated on the label of the vial of test strips. **NB: Some sighted assistance maybe required when carrying out this check.**

If the result announced is within range the meter is fine and you can either switch it off or carry out a blood test. If the result is out of range, repeat the process. If the second check is still out of range please refer to the Error messages and troubleshooting section and if it fails again please contact BBI Healthcare for further assistance.

## **Error messages and troubleshooting**

When using the SensoCard Plus meter some error messages consisting of a letter “E” followed by a number or letter, might be announced and will also appear on the display. The cause of these errors may be that you are not doing something correctly or that there is a problem with the meter. In case of an error message, pressing any button will automatically switch the meter off.

### **Important!**

Do not continue a test if an error message is displayed/announced.

This chapter lists error messages, gives an explanation for the possible error and provides possible reasons causing the malfunctions.

### **Instrument is not working**

Batteries are discharged and need to be replaced.

If the batteries are not low, remove them and keep the “ok” button pressed for about 15-20 seconds then replace the batteries.

Check that the battery poles are correctly positioned and that the battery cover is closed properly.

### **Meter is very cold or too warm**

Allow meter to gradually warm up to room temperature.

### **E-O error message**

If this error message is announced or shown on the screen after turning the meter on, the meter has got damaged. Please remove the batteries and keep the “ok” button pressed for about 15-20 seconds. Then, replace the batteries and switch the meter on. If the E-O message appears again, please contact BBI Healthcare.

### **E-2 error message**

Test strip has been removed from the meter during measurement.

### **E-3 error message**

Used test strip is inserted. Repeat the measurement with a new test strip.

Check strip is inserted instead of a test strip. Replace it with a test strip.

Test strip is not correctly inserted.

Blood was applied before strip insertion. Repeat measurement with a new test strip.

### **E-5 error message**

Strong electromagnetic field (eg. mobile phone) or high intensity electrostatic discharge interfere with the meter. Repeat the measurement.

Meter is damaged. Check the meter with the check strip, see “SensoCard Plus system checking” section.

### **E-6 error message**

Batteries are low. Replace the batteries.

High intensity electrostatic discharge may influence the meter. Please remove the batteries and keep the “ok” button pressed for 15-20 seconds. Replace the batteries and turn on the meter. If E-6 appears again, please change the batteries.

### **E-7 error message**

Insufficient blood was applied on the test strip. Repeat the test with a new test strip with a bigger drop of blood.

High intensity electrostatic discharge may influence the meter. Please repeat the measurement.

### **E-8 error message**

Test wasn't performed properly. Repeat the test with a new test strip and be more careful when performing each step.

## **E-9 error message**

External temperature is too high or low (out of the range of 15-35 degrees centigrade). Wait at least 30 minutes before using the device, until it completely reaches room temperature. SensoCard Plus is able to check external temperature. If it detects values not conforming to its operational requirements, the following error messages will be displayed.

An arrow icon directed downward and the E-9 error message together indicates a low temperature (below 15 degrees centigrade).

An arrow icon directed upward and the E-9 error message together indicates a high temperature (above 35 degrees centigrade). These are also announced verbally.

## **E-C error message**

This error message may appear when using the code-card. There might be one of the following problems:

Code-card is damaged. Please check the code-card. If you find any mechanical damage on the code-card, please contact BBI Healthcare.

Code-card insertion or movement was not continuous. Insert and remove the code-card with a quicker motion.

Code-card insertion or movement was too slow. Repeat the code-card insertion without interruption.

## **Flashing result**

If the temperature gradient is too high, SensoCard Plus still keeps on operating, but the displayed result will be flashing, indicating the abnormal operational circumstances. Be cautious with these test results, they might be inaccurate.

## **Instrument shows Lo constantly**

Code setting is not correct. Check and set the proper code value. This error is announced.

Insufficient amount of blood was applied on the test strip. Repeat the test strip with a bigger drop of blood.

### **Instrument shows Hi constantly (is this announced?)**

Code setting is not correct. This is also announced.

### **Battery symbol appears on display**

Batteries are low. Replace batteries. When the meter is turned off the meter will announce that the batteries need to be changed.

If error messages cannot be eliminated by applying the recommendations above, please contact BBI Healthcare for advice.

### **Careline number**

If you have any doubts at all about problems with your SensoCard Plus meter you should contact BBI Healthcare. The Careline is open from 08.30hrs to 17.00 hrs Monday to Friday (not bank holidays). The number is:

01792 229333 (UK number) or

+44 1792 229333 (if calling from outside the UK).

#### **Important numbers for Extra Help**

If you have a query about your diabetes, the Diabetes UK Careline team may be able to help by giving support and information. The number is 0845 120 2960. You can also contact your GP, or the diabetes specialist nurse who will work with your GP.

### **Terms and Conditions of Sale**

This product is guaranteed against faults for 12 months from date of invoice.

None of the terms and conditions affect your statutory rights.

If you require further information or clarification of these terms and conditions please contact: -

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SA4 9WN

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