

User Instructions SISS BABYCONTROL

Control elements

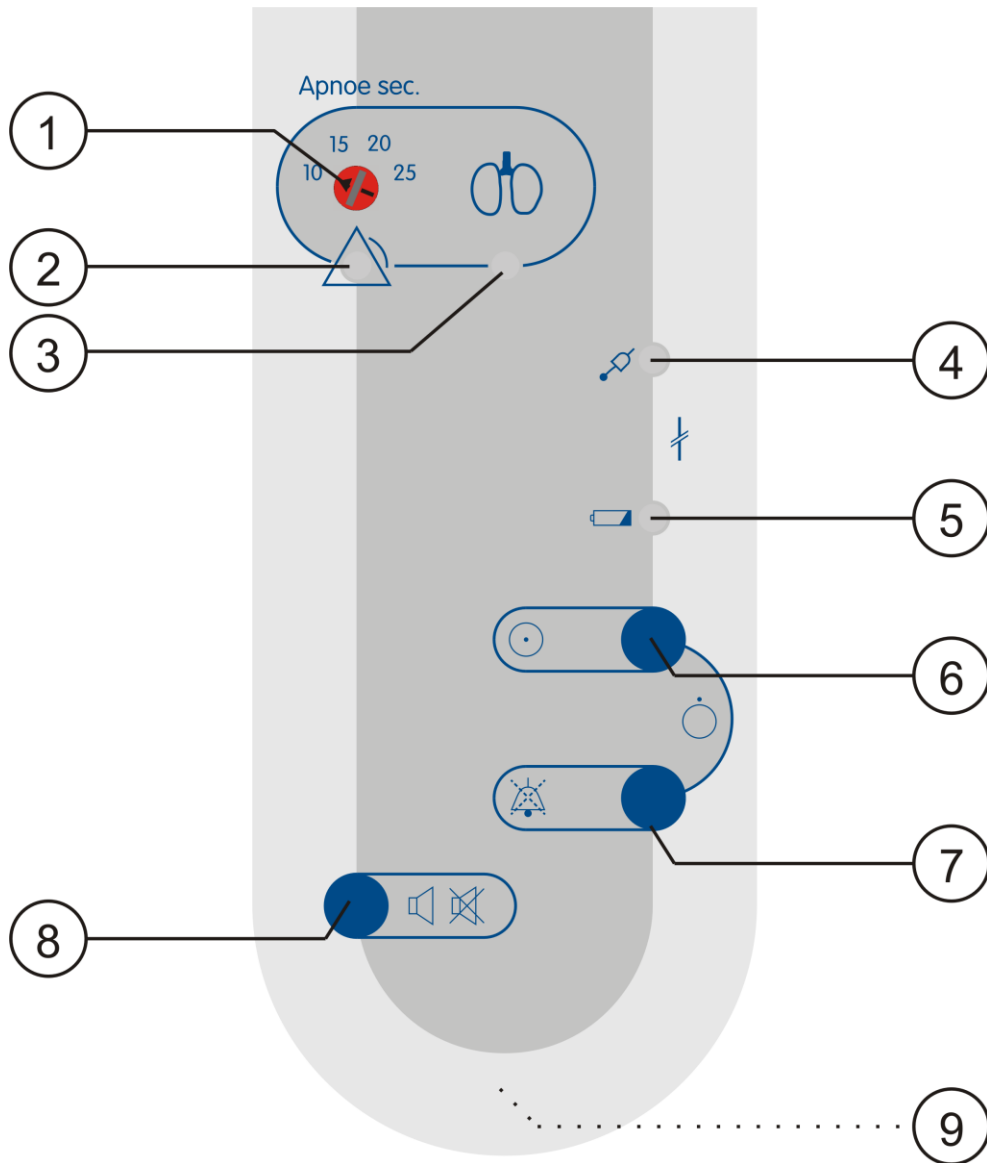

















Fig. 1: Control elements

Control elements

1		Switch for respiration alarm delay
2		Alarm signal: respiration
3		Function signal: respiration (green)
4		Respiration sensor fault (yellow)
5		Alarm signal: battery discharged
6		ON button / to switch on BABYCONTROL
7		Reset button for Alarm
8		Button for respiration monitoring tone: On/Off
9		Battery compartment (back of monitor)

Key to Symbols

	Respiration monitoring
	Respiration monitoring tone ON / OFF
	Body sensor
	Malfunction
	ON button
	Switches off the instrument (press buttons 6 and 7 simultaneously - this serves as child protection)
	Reset alarm button

Monitor Connections

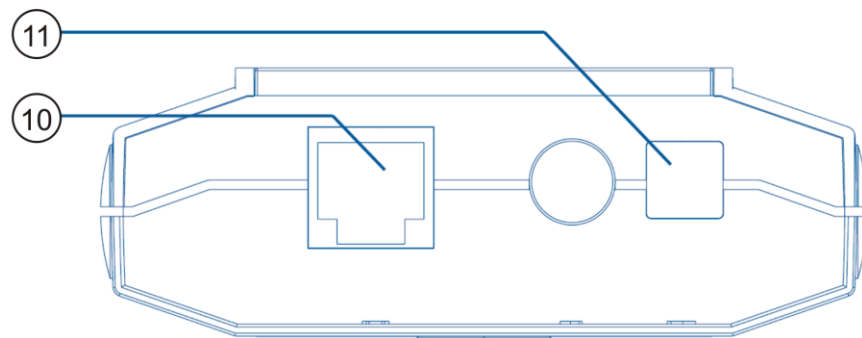


Fig. 2: Monitor connections

10	Alarm output
11	Socket for body sensor

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Purpose and Function

Dear Customer,

With SISS BABYCONTROL, you have purchased an easy-to-use device for monitoring the respiration in babies and infants.

SISS BABYCONTROL issues an Alarm as soon as a dangerously long interruption to respiration occurs.

SISS BABYCONTROL saves all processes automatically with an accuracy of seconds. Specific operating procedures for this purpose are not necessary. The processes saved include:

- on and off switching of the instrument,
- resetting of the alarms,
- all types of alarms,
- respiration rate by alarm

The optionally available USB adapter with software allows the events recorded to be displayed and evaluated on a commercially available PC.

The SISS BABYCONTROL is suitable for monitoring the respiration of babies and infants in a mobile and domestic environment, as well as in hospitals and similar establishments.

Notes Concerning these Instructions

WARNING	Warning, noncompliance with which can endanger the child.
HINT	Special notes, tips
GROSS	Indicates a button on the instrument
Courier	Indicates a software menu item
Fett	Particular highlighting in the text
=>	<i>Refer to...</i>

Important Notes

WARNING

Warning:

Noncompliance with the User Instructions can result in malfunctions or less effective monitoring, and this in turn can result in injury or death of the child.

WARNING

Warning:

The SISS BABYCONTROL monitor can be of assistance only if the person caring for the child is always within the audible range of any possible alarm. Only by this means can vital assistance be given in the event of an emergency.

Also the supervisory person must convince the undisturbed operation of the monitor.

Thus the proper functions of the buzzer (alarm tone / soft clicking tone) and the announcement elements (puls-LED's) are to be controlled with every turning on and in the running operation regularly.

Before putting your SISS BABYCONTROL monitor into operation, please comply with the following instructions: These User Instructions must be carefully studied by all persons looking after your child. This will avoid errors in operation and misunderstandings. These User Instructions form part of the SISS BABYCONTROL monitor and must always be kept in its vicinity.


Safety Notes

WARNING

1. The monitor is not defibrillation-proof. Disconnect the monitor from the patient before using a defibrillator.
2. The monitor is not designated for explosion-endangered areas.
3. Mobile communication devices (e.g. radio telephones, radio equipment) must not be used within a 1 m distance of the monitor (look at the technical description at page 28). These devices can disrupt or render impossible the safe functioning of the SISS BABYCONTROL monitor.
4. Do not leave small parts (packaging materials etc.) in your child's bed. He/she could swallow them.
5. For safe operation of the monitors, please use only the batteries/rechargeable batteries recommended and the recommended charging method.
*=>Battery and rechargeable battery supply /
Battery changing /Battery alarm Page 19*

Brief Instructions: First Use

The following notes on first use will help you to quickly get used to operating the monitor.

1. Apply the blue respiration sensor as in Fig. 3. Secure the respiration sensor to the child's body with the Leukosilk or Leukopor sticking plaster supplied. One horizontal strip across the sensor will suffice. The respiration sensor must not be kinked.
2. Connect the respiration sensor to the 3-pole socket of the monitor.
3. Check the alarm limit set on the monitor.
4. Switch on the monitor by pressing the button  (6) and keeping it pressed for about 1 second.
5. The monitor then carries out a self-test and, after emitting an acknowledge tone, starts reliable monitoring.

Applying the respiration sensor

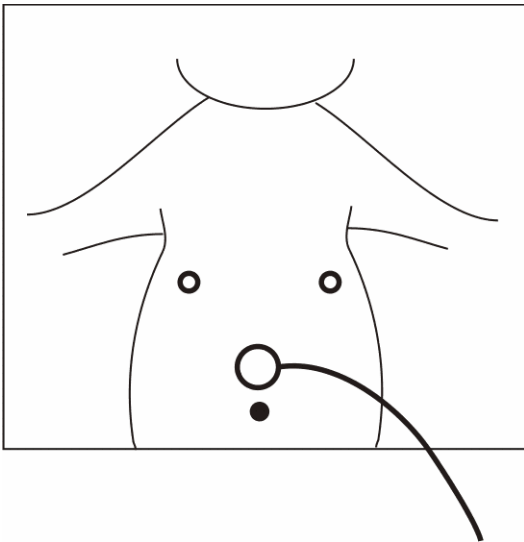



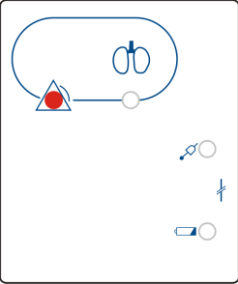
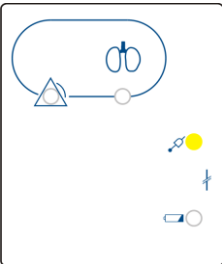


Fig. 3: Recommended location of the respiration sensor

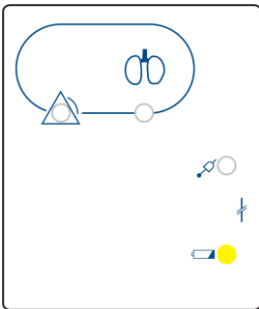
Overview of Alarm and Fault Indications

Significance of the LED colors	
Green: 	Activity display of the respiration function
Red: 	Patient alarm: the permitted pause in respiration has been exceeded
Yellow: 	<ul style="list-style-type: none"> - Technical alarm: sensor error - Battery alarm

Patient alarms are high-priority alarms.	
	<p>They indicate a situation requiring immediate attention to your child.</p> <p>This includes the respiration alarm. It indicates that the permitted pause in respiration has been exceeded. The alarm is indicated by the red LED (2). In addition, the sequence of tones for the patient alarm is emitted repeatedly:</p> <p>‘ Beep - Beep - Beep- short interval - Beep - Beep – long interval ‘</p> <p>=>Monitor behavior during patient alarm Page 17</p>

Technical alarms are medium-priority alarms	
	<p>These indicate a longer lasting fault or malfunction of the monitoring channel, e.g. a defective or disconnected respiration sensor. Correct monitoring cannot be continued.</p> <p>The alarm is indicated by the yellow LED (4). In addition, the sequence of tones for the medium-priority technical alarm is emitted repeatedly:</p> <p>‘ Beep – Beep – Beep – long interval – Beep – Beep –Beep – long interval ‘</p> <p>=>Monitor behavior during medium-priority technical alarms Page 18</p>

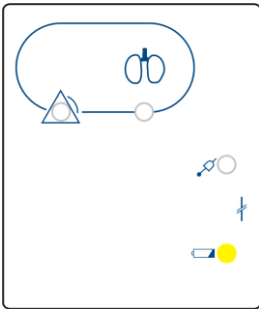
Battery warning



The yellow LED (5) lights up every 10 sec. Monitoring will continue but the battery / rechargeable battery should be exchanged as soon as possible.

=> *Battery and rechargeable battery disposal / battery changing / battery alarm Page 19*

Battery alarm



Indicated by the lighting of the yellow LED (5) with the sequence of tones for the medium-priority technical alarm emitted. Monitoring is no longer carried out. Exchange the battery / rechargeable battery immediately to continue monitoring.

=> *Battery and rechargeable battery disposal / battery changing / battery alarm Page 19*

Installing and switching on the monitor

Place the monitor in a position where the displays are easily visible on entering the room. With the optionally available multifunction case the SISS BABYCONTROL is optimally protected.

Warning:

WARNING

Do not place the SISS BABYCONTROL directly over the bed. Otherwise the monitor could fall into the bed and injure your child if the cable is pulled.

Before switching on the SISS BABYCONTROL, first apply the respiration sensor to your child.

=> *Brief Instructions: First Use Page 10*

It is best to lead out the sensor cable at the foot end of the bed, so that your child will not use it as a toy.

Switch on the monitor with the ON button  (6).



Warning:

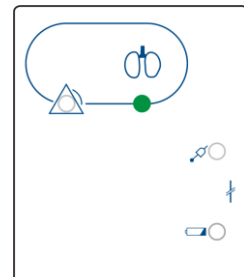
WARNING

Before switching on, check that the rotary switch is set correctly for the alarm value to be monitored .

As soon as it is switched on, the monitor carries out a self-test: all monitoring LED's light up in turn. A short signal tone also sounds at the beginning and end of the test.

This allows you to check the LED's and the audible signal generator for correct function each time you switch on the monitor.

The flashing green monitoring LED (3) together with a soft clicking tone on the SISS BABYCONTROL indicate regular respiration. You can enable/disable the monitoring tone by pressing the "Respiration monitoring tone" button   (8) .



Respiration monitoring

Respiration sensing

Respiration movements (diaphragm movements) are transformed into electrical signals by the piezo-element in the respiration sensor via compression / bending moments. The sensor sensitivity is largely determined by its location (next to the navel) and the strength of the diaphragm movement prevailing in that position.

In special cases of shallow breathing, the respiration sensing on the monitor can be switched to a more sensitive setting:



Fig.4: Sensitivity switch of the respiration channel in the battery compartment.

Position N: Normal
Position E: Sensitive

=> Messages, Faults and Troubleshooting Page 21

Alarm delay

Babies occasionally experience interruptions in respiration of more than 10 seconds. This is not unusual. These irregularities in the respiratory rhythm decline with increasing age and, in most cases, they have disappeared by three years of age. If, however, the respiratory arrest exceeds the above-specified period and/or occurs more frequently, then your baby may be at risk. To compensate for individual fluctuations, the delay time after which the alarm is given can be adjusted.

Setting the respiration alarm time

Attention: Alter the limit values only when the monitor is switched off. Changes to the limit values become effective only when the monitor is switched on again (child safeguard).

Adjustments are made with the rotary switch (1). Set the limit value as directed by your doctor. A time of 20 seconds (for babies) or 15 seconds (from about the second month of life onwards) is often used. If alarms often occur without there being an actual danger situation, the alarm time can be increased after consultation with the attending pediatrician (20 or 25 seconds).

Respiration alarm

The alarm is triggered as soon as no pulse from the respiration sensor has been detected over the duration of the set respiration alarm time. The red LED (2) lights and the sequence of tones is emitted for the patient alarm.

WARNING

No respiration, emergency situation!

See the details on Page 17 "Action in the event of an alarm".

WARNING

Central and obstructive apneas

SISS BABYCONTROL can wrongly interpret vibration-induced movements as respiration, e.g. during transport by ambulance, car or perambulator. The same applies when the child is held in your arms. Central apneas (no respiration or activity of the respiratory muscles) can therefore be detected only under the proviso that the child is sleeping, lying quietly, not moving or being moved.

Obstructive apneas, i.e. apneas caused by occlusion or blockage of the respiratory passages are not detected by the SISS BABYCONTROL.

Memory Function

The memory function is always enabled. No special operating procedures are required for this function.


The memory is a 'non-volatile ring memory', i.e. the stored data are not lost if the battery is removed. When the memory capacity is exceeded, the oldest data are overwritten.

However, the battery should remain in the monitor, otherwise the date and time information in the software will not be correctly indicated. The internal clock is buffered for short time removal (approx. 1-2 days) or battery changing.

Action in the event of an alarm

What to do in the event of a patient alarm

The following information represents only a very short summary of the measures which must be taken in the event of an emergency:

1. Switch off the alarm by pressing the RESET button  .
2. Check for breathing:
 - Notice if the baby's colour is paler than normal or blue.
 - Place your cheek next to the baby's face to see whether you can feel or hear any breathing.
 - Look down for movement of the baby's chest and tummy.
 - Stimulate the baby by talking, tickling the soles of the feet or picking the baby up.
3. If the baby is not breathing carry out the resuscitation techniques that you have learned and immediately seek medical assistance

Warning:

WARNING

Specifically, the actions taken in Point 2 can be taught only by a trained person. Also knowledge of resuscitation measures for adults is not sufficient, since with children there are a number of specific differences involved.

Monitor behavior during alarm

Monitor behavior during patient alarm

Alarm indication: => *Overview of alarm and fault indications Page 11*



Reset the patient alarm by pressing the button :

- The alarm tone stops and the alarm LED (2) goes out.
- No further respiration alarm will be given for the next 30 secs. (alarm suppressed).
The green respiration indication LED (3) remains activated.

If, after the alarm suppression time, the alarm condition persists, an alarm is triggered again.

Monitor behavior during medium-priority technical alarms

Alarm indication: => *Overview of alarm and fault indications Page 11*

Reset a medium-priority technical alarm by switching off the monitor (press buttons  and ).

Care and maintenance of the monitor

Monitor test

Switch on the monitor once a week with the respiration sensor plugged in but without applying the sensor to your child. Ensure that the sensor lies completely undisturbed.

1. After the set time, the respiration alarm must occur (red LED (2)) followed by the high-priority alarm tone.
2. Remove the respiration sensor. The fault display should now light up (yellow LED (4)).
The tone will change to the medium-priority alarm tone.

=> *Overview of alarm and fault indications Page 11*

Cleaning Instructions for the device and Reusable Sensor.

WARNING

Warning:

Do not autoclave or immerse the device or sensor in liquid.

Device:

Clean the surface of the device with a soft cloth moistened with water or a mild soap solution. If disinfecting is necessary, wipe the surfaces of the device with isopropyl alcohol (eg. Clinell solution/wipes) Then wipe over with a soft water-moistened cloth. Do not allow any liquid to enter any of the devices openings.

Sensor:

Disinfecting the reusable sensor – wipe/spray the sensor with isopropyl alcohol following the disinfectant manufacturers guidelines for relevant disinfection timescales. Then, wipe over with a soft water-moistened cloth prior to use.

Battery and rechargeable battery disposal / battery changing / battery alarm


With average use, the life of a battery will be approximately 6 to 8 weeks.

Before the actual battery alarm, the monitor will give a battery warning: the yellow LED will flash every 10 seconds during operation.

The battery should then be changed within the next 1-2 days.

A rechargeable battery should be changed immediately.

You can suppress the flashing for a short time

with the button .

When the battery voltage drops further during operation, the actual battery alarm occurs. A medium-priority tone sounds and the yellow display "Battery alarm" (5) lights up.

To change the battery, open the battery compartment and insert the new battery in accordance with the label in the battery compartment.

Note:

Discharged batteries which are not removed from the monitor can damage the monitor by leaking acid.

When discharged, take the batteries to the correct special waste disposal or your dealer's collection point. Do not throw them in your domestic waste!

HINT

The following batteries / rechargeable batteries are urgently recommended to ensure safe operation of monitors:

Batteries:	9 V block battery, alkaline type, e.g. Duracell Plus
Rechargeable batteries	9 V block rechargeable battery, 200 mAh NiMH e.g. ANSMANN 9V Block PP3 6F22


Using rechargeable batteries:

Avoid unnecessary battery alarms by changing rechargeable batteries regularly and promptly. Always keep a charged-up rechargeable battery ready.

Batteries/rechargeable batteries differing from the types listed above can lead to operating faults in the event of a weak charge.

Messages, faults and troubleshooting

Note: The following tables assist in the rapid understanding of messages and for the detection and remedy of possible faults and problems. Please also refer to the information in the previous sections on the relevant subjects. In case of doubt, contact your dealer or the manufacturer.

Technical faults	
Fault / Indication	Cause / Remedy
Yellow battery LED (5) lights up, tone sequence emitted for medium-priority tech. alarm (Beep – Beep –Beep –Pause - ...)	Battery alarm. Insert a new battery / rechargeable battery immediately.
Yellow battery LED (5) flashes	Battery warning. Battery / rechargeable battery still have a residual charge: monitoring is still possible for a short time (1 – 2 days) depending on battery / rechargeable battery type You can reset the warning LED by pressing the button  . You will avoid an unnecessary battery alarm by immediately inserting new battery / rechargeable battery.

Fault / Indication	Cause / Remedy
Medium-priority technical alarm. Yellow LED (4) lights up in addition with tone sequence emitted for medium-priority tech. alarm (Beep – Beep - Beep – Pause - ...)	Check the connection of the respiration sensor or exchange it.

False alarms	
Alarm	Cause / Remedy
(Frequent) unwarranted respiration alarms, particularly with babies aged from 1-4 weeks	<p>Shallow breathing. Increase the monitor sensitivity of the respiration detection.</p> <p>Note: After respiration stabilizes, reset the sensitivity to normal sensitivity => Respiration sensing Page 14</p>
(Frequent) unexplained alarms on all channels	<p>Disturbance to the monitor due to electromagnetic interference. Remove electrical and electronic equipment e.g. listening device or mobile 'phones from the immediate vicinity of the monitor => <i>Technical description</i> Page 28</p>

Reading out the data with a PC

For this you will need the optionally available user software as well as the transponder pad.

The transponder pad is available in two versions:

- USB transponder pad (with USB port)
- Transponder pad (with serial port)

System requirements:

- PC with operating system Windows 95/98/NT/2000/XP ¹
-
- 1 unassigned USB-port or serial port (COM 1-4)
- 2 MB available hard disk space

Program installation

1. Connect the transponder pad to a free USB port or serial port of your computers.
2. Insert the CD with the user software into the appropriate computer drive.
3. Follow the instructions in the installation program.

The transponder pad can be permanently connected to the computer.

¹ Windows und Windows 98 / ME / 2000 / XP (home) are typed in
Trademark of Microsoft corporation

Reading out the data

1. Start the user software by double clicking on the program icon on the Desktop or via the Start menu.
2. Under “Options / Hardware Settings”, select the appropriate interface (USB or RS-232 and COM port).
3. Select data transfer.
4. Place the SISS BABYCONTROL on the transponder pad and follow the directions.

Deleting data from the monitor:

After transfer you can clear the memory in the device by pressing RESET. The device switches off automatically. If the data are not deleted, the device switches off automatically after 2 minutes.

Evaluating data:

Click on an event. The screen shows additional information relating to the event selected. Click on "Evaluation" to view the statistics of events. Select "Print" to print out the values displayed. You can store patients in the archive and save their data.

Technical Data

	Article:	Article number
Scope of delivery:	1 SISS BABYCONTROL 1 respiration sensor 1 User instruction 1 training file on DVD 1 adjustment aid 1 case	B00001 BZ0005

Electrical data	
Operating mode:	Battery operation, 9 V monobloc battery type Alkaline or 9 V monobloc rechargeable battery , 200 mAh NiMH
Battery changing:	Depending on battery type after approx. 6 to 8 weeks with the named batteries, with rechargeable batteries also less.
Applied part:	BF
Equipment protection	IPX1

Functional data		
Function displays	Respiration signal	visual (green LED (3))
Signals	Respiration monitoring	audible, can be cancelled
	Respiratory arrest	visual (red LED (2)), audible
	Battery empty	visoual, (yellow LED (5))
	Sensor defective or not connected	visual(yellow LED (4), audible
Sound level	Depending on the pitch 66 – 80 dB(A)	
Alarm sound characteristics	6 pitches selectable, frequency range from 2,4 up to 8,5 kHz	

Technical Data

Adjustment facilities:	Alarm delay respiration Sensitivity respiration sensor (in battery compartment)
Alarm delay times [sec.]	10, 15, 20, 25
Connections	Respiration sensor External alarm

Geometrical data, ambient conditions	
Operating temperature:	10 – 40° C
Storage temperature:	4 – 50° C
Dimensions:	L x B x H (in mm): 152x78x29
Weight:	Approx. 245 g, incl. battery

Regulatory data	
Classification according to the German Medical Product Act, MPG:	II B
CE mark:	CE 1275

We reserve the right to make any modifications.



Disposal instructions:

Dispose of the packaging sorted according to type of material. When you want to dispose of the product, ensure that this is done according to legal requirements. Your local authority will provide you with information.

Maintenance and calibration

SISS BABYCONTROL monitors does not require a regular annual check according to the MPG.

However, the manufacturer recommends the following:

- Function test of monitors and accessories with every change of patient (referred to as a minor service)
- Monitor testing including possible updating of the internal software after 3 calendar years (referred to as a major service)

On request, the manufacturer will also provide circuit diagrams, spare parts lists, descriptions, calibration aids and setting instructions for the monitors specified, which will assist the user's qualified staff in carrying out repairs.

However, the manufacturer is not liable for repairs, modifications, adjustments or similar interventions when these are undertaken by the dealer's or user's technical staff. This also applies when these devices are designated by the manufacturer as "repairable by the customer" and suitable documents are available. Also no claims under warranty can be validated following the above mentioned interventions.

Costs:

When maintenance is carried out by the manufacturer, the details in the existing up-to-date price list apply.

Training materials

The manufacturer will on request provide training materials for the monitors specified. These cover more detailed descriptions on the monitor family, training aids, FAQ lists, etc.


Technical description

Accessories		
Accessory	Length of cables	manufacturer, designation
Body sensor	1.0 m	Schulte-Elektronik GmbH,
USB-Transponder-Pad	2.2 m	Schulte-Elektronik GmbH
<p>note:</p> <p>The use of not listed or not released accessory (e.g. other producer's electrodes / other types) at the SISS BABYCONTROL monitors may cause reduced immunity or rather enhanced electromagnetic emission.</p> <p>The use of the accessory listed above is – as far as the function makes possible – also practicable with SISS-observation-monitors of SCHULTE-ELEKTRONIK GMBH, which will keep to the compliance with the corresponding standard regarding immunity and emission behavior.</p> <p>Concerning the USB -Transponder-Pad an analysis of risk has given, that there is no influence on the essential performance criteria of SISS BABYCONTROL monitors. The immunity against electromagnetic environmental phenomena was not tested.</p> <p>The use of the accessory listed above with other electrical medical devices can lead to their reduced immunity and their enhanced electromagnetic emission.</p>		

Technical description

Guide and manufacturer's declaration – electromagnetic emission		
The SISS BABYCONTROL monitors are intended for use as described below. The client or user of the SISS BABYCONTROL monitors should make sure, that it is used in such an environment.		
Emission	Compliance	Electromagnetic environment -Guide
RF-Emission acc. CISPR 11	Group 1	The BC SPO2 / ECG uses RF-Energy only for its internal function. Therefore its RF-Emission is very low and it is improbable that electronic devices nearby will be disturbed. The BC SPO2 is suitable for use everywhere, inclusive home area and such, which are connected directly to a public supply network, that also supplies buildings used for habitation.
RF-Emission acc. CISPR 11	Class B	
Emission of harmonics acc. IEC61000-3-2	Not applicable	
Emission of voltage deviation/ Flicker acc. IEC 61000-3-3	Not applicable	

Guide and manufacture's declaration – electromagnetic immunity			
The SISS BABYCONTROL monitors are intended for use in electromagnetic environment as described below. The client or user of The SISS BABYCONTROL monitors should make sure that it is used in such an environment.			
Immunity test	IEC 60601-1-2 test level	compliance-level	Electromagnetic environment - Guide
Electro static discharge (ESD) acc. IEC 61000-4-2	±6 kV contact discharge ±8 kV air discharge	±6 kV contact discharge ±8 kV air discharge	The floor should be made of wood or concrete or should be tiled with ceramic flag. If the floor contains synthetic material, the relative humidity must be at least 30 %.
Fast transients / Bursts acc. IEC 61000-4-4	±1kV for input and output lines	±1kV for input and output lines	
Magnetic field at frequency of supply (50/60 Hz) acc. IEC 61000-4-8	3 A/m	3 A/m	Magnetic fields at mains frequency should be in accordance with the relevant level of business- or clinical environment.

Guide and manufacture's declaration – Electromagnetic immunity			
The The SISS BABYONTROL monitors are intended for use in electromagnetic environment as described below. The client or user of The SISS BABYONTROL monitors should make sure, that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment – guide
conducted RF-immunity acc. IEC 61000-4-6	3Veff 150kHz – 80 MHz	1,5Veff (c)	Portable and mobile radio equipment should keep to the recommended protective distance to the BC SPO2 / ECG inclusive the lines. which is calculated acc. that equation, that is applicable for the transmitter frequency. Recommended protective distance $d = 1,17 * \sqrt{P}$
Radiated RF-Immunity acc. IEC 61000-4-3	3V/m 80MHz – 800MHz	3 V/m	$d = 1,77 * \sqrt{P}$ 80MHz-800 Mhz
	800MHz – 2,5GHz	1,5V/m (c)	$d = 2,33 * \sqrt{P}$ 0.8GHz – 2,5GHz
			with P as nominal radiated power of the transmitter in Watt (W) acc. to the declaration of the manufacturer of transmitter and d as recommended protective distance in meter (m)
			The field strength of stationary radio transmitter should be lower at all frequencies than the compliance level (b) acc. to an investigation on site (a) .
			Nearby devices, which are marked with the following sign, interferences are possible.
			

Technical description

Note 1: At 80 and 800 MHz the higher frequency range is applicable.

Note 2: This guide may not be applicable in all cases. The electromagnetic propagation depends on the absorption and reflection of buildings, objects and persons.

Because it is not possible to predetermine exactly the field strength of stationary transmitters, like e.g. basis stations of wireless telephones and land mobile service, amateur wireless station, AM and FM broadcast and TV broadcast, the electromagnetic environment of the location of the stationary transmitters should be considered and investigated. If the measured field strength at the location, where BC / BCp is used, does not keep the compliance level above, the BC / BCp should be observed to prove the function according its designation. If unusual performance criteria are noticed, additional measures could have to be taken, like e.g. changing the adjustment or the standing place of the BC SPO2 / ECG.

In the frequency range from 150 kHz to 80 MHz the field strength should be less than 1,5 V/m .

The intention is, to make the Observing-function of the BC / BCp available to a large number of patients. Therefore the BC / BCp works in all measuring channels with high sensitivity - modulation.

Regarding sensitivity the BC / BCp has a marginal immunity level of 3.0 V in the frequency-range 150KHz to 80 MHz and 3.0 V/m in the frequency-range 800 MHz to 2.5 GHz.

Recommended protective distances between portable and mobile RF-telecommunication devices

The SISS BABYCONTROL monitors are intended for use in an electromagnetic environment, where the HR immunity is controlled. The client or user of BC / BCp can help to avoid electromagnetic interference by keeping the minimum distance between portable and mobile RF telecommunication equipment (transmitter) and the BC / BCp – depending on the output-power of the communication device, as described below.

nominal radiated power of the transmitter in Watt	Protective distance in meter dependant on the transmitter frequency		
	150 KHz – 80 MHz	80 MHz – 800 MHz	800 MHz – 2.5 GHz
	$d = 1,17 * \sqrt{P}$	$d = 1,17 * \sqrt{P}$	$d = 2,33 * \sqrt{P}$
0,01	0,12	0,12	0,23
0,1	0,37	0,37	0,74
1	1,17	1,17	2,33
10	3,7	3,70	7,37
100	11,7	11,7	23,3

If the maximum nominal radiated power for transmitter is not specified in the table above, the recommended protective distance d in meter (m) can be calculated acc. the equation, that belongs to the respective column. P is the maximum nominal radiated power of the transmitter in Watt (W) according to the declaration of the manufacturer of the transmitter.

Note 1: At 80 MHz and 800 MHz the higher range of frequency is applicable.

Note 2: This guide may not be applicable in all cases. The propagation of electromagnetic parameter is influenced by absorptions and reflection of buildings, objects and persons.

Note 3: If the recommended protective distance can not be kept, BC / BCp should be observed, to check the regular function.

Technical description

The radiated power, frequency, the kind of modulation and the modulation signal itself are relevant for the emission behavior of the transmitter. The list below contains exemplary transmitter and their determined protective distances, which are essentially smaller in parts than listed above.

Due to reflections and emissions in the Near-Field of the transmitter it cannot be excluded, that higher field strength can be caused in larger distances, which can lead to interferences. Following the noted distances the SISS BABYCONTROL monitors should be observed from the beginning to check the regular function. In case of doubt the regulation above about the protective distance has to be kept.

examples:

device	Radio characteristics	no interference above a distance of
Mobile phone	800/900/1800 MHz, 1-2W, GMSK	1.0m
Wireless telephone, DECT	1880-1930 MHz, 250mW, GFSK	0.7m
Wireless telephone, CTx	860-930 MHz, 10mW, AM, GFSK	0.5m
CB Mobile transmitter device AM *)	26/27 MHz, 1W, AM	2.5m
CB Mobile transmitter device FM *)	26/27 MHz, 4W, FM	1.0m
PMR-handheld transmitter device	446 MHz, 0.5W, FM/PM	0.5m
Babycontrol	27 MHz, 0.1W, FM	0.5m
Remote control for toys a.o.	40 MHz, 100mW, AM PWM 35 MHz, 100mW, FM PPM	0.5m

*) with 60 cm antenna

(I) Warranty

We provide a warranty for two years from delivery of the goods to the purchaser.

Complaints concerning incomplete or incorrect deliveries or claims concerning discernible deficiencies shall be notified in writing immediately on receipt of the goods and other deficiencies notified in writing immediately on discovery. The purchaser shall preserve right of recourse against third parties (e.g. statement of facts in the case of transport damage). Processing or resale and/or connection or combination constitute unreserved approval. In the event of prompt notice of defects, we will accept liability within the scope of the following conditions. Our liability for deficiencies (warranty) covers freedom from deficiency of the goods according to the state of the art. Changes to the design or construction, which we undertake prior to delivery against an order, give no entitlement to a claim. To the extent that we have claims under warranty against our suppliers, our warranty is provided by assigning these claims to the purchaser, who herein already accepts this assignment in such a case in advance. If warranty by the supplier is out of the question or if the supplier refuses to provide a warranty in respect of the purchaser, our warranty is limited to subsequent compliance, i.e. provision of spare parts or repairs at our option. The purchaser shall return the deficient goods or exchanged parts to us. If subsequent compliance is unsuccessful or if we are unable to provide compliance, the purchaser is entitled to withdraw from the contract or to reduce the purchase price. All above restrictions in liability do not apply to the purchase of consumer goods. Claims by the purchaser to reimbursement of costs incurred within the scope of pursuing claims under warranty against suppliers is in any case excluded if any cost-incurring actions, in particular the institution of legal proceedings, are not agreed with us in advance.

Notwithstanding the above warranty, we as manufacturers offer the purchaser a guarantee according to the provisions below:

This guarantee covers all deficiencies resulting from material or manufacturing defects; it applies during a period of 24 months from delivery of the goods and covers, at our option, repair or exchange of goods.

(II) Liability

The guarantee does not apply

- to expendable parts or to natural wear and tear,
- to paint damage,
- to damage caused by improper handling,
- if the delivery item is modified by the purchaser or third parties by the fitting of parts from other suppliers,
- if additions, readjustments, modifications or repairs have been carried out by persons not authorized to do so by the manufacturer,
- if the electrical installation of the room concerned does not comply with IEC stipulations,
- in the event of noncompliance with handling directions,
- to changes or defects due to improper storage,
- to damage resulting from climatic or other influences.

The provision of services under warranty does not mean that the warranty period recommences in respect of repaired or exchanged parts.

(II) Liability

Claims by the purchaser beyond those specified in Clause (I), no matter on which legal grounds, are excluded. We do not, therefore, accept liability for damage or loss not occurring in the delivery item itself and not for other damage to the property of the purchaser. The above exemption from liability does not apply to personal injury; it does not apply to other damage or loss resulting from malicious action or gross negligence; finally it does not apply to damage or loss resulting from the absence of a characteristic or quality which we have guaranteed. The exclusion of additional liability to compensation does not apply to claims according to Section 1.4 (German) Product Liability Act.

Manufacturer:



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