

Specifications

Signal processing specification:

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ECG interpretation	Biocare CardioPro ECG analysis program for adults and	
	pediatrics	
Acquisition mode	Simultaneous standard 12-lead acquisition	
A/D conversion	24 bit	
Sampling rate	8,000 samples/s	
Frequency response	0.05 Hz ~ 250 Hz	
Signal measurement range	$-5mV \sim +5mV$	
Common mode rejection ratio	>115dB	
Polarization voltage	± 500 mV	
Input circuit	Floating circuit input	
Input impedance	\geq 50 M Ω	
Input CIR current	≤0.1 μA	
Patient leakage	-40 4	
current	<10 μA	
Time constant	≥3.2 s	
Noise level	\leq 12.5 μ V _{p-p}	
Sensitivity threshold	≤20 μV	
Calibration voltage	1 mV±3 %	
Sensitivity	(0.625, 1.25, 2.5, 5, 10, 20, 40, 10/5, 20/10) mm/mV,	
Sensitivity	Auto Gain	
Filter setting	EMG filter: 25/35/75/100/150/250Hz	
Filter setting	Baseline wander filter: 0.01/0.02/0.05/0.35/0.5/0.8Hz	
AC filter	50Hz, 60Hz	
Heart rate range	30~300 bpm	
Special acquisition	Lead-off detection, lead overflow, AC interference,	
functions	baseline wander interference, EMG interference	
Acquisition time 10~24 seconds		

Display and keyboard specifications:

Display type	5 inch TFT LCD	
Display resolution	800×480	
Display data	Waveforms, heart rate, clock, printing mode, filters,	
	sensitivity, paper speed, system prompt, alarming	
	messages, battery, power indicator, tone level	
Waveform display	1) Same screen display:	
mode	3*4, 3*4+1R, 6*2, 6*2+1R, 12*1	
	2) Split-screen display:	
	3*4, 3*4+1R	
Keyboard type	Silicon quick-access function keys	

Recorder specifications:

Recorder technology	Thermal dot matrix word printing system	
Recorder resolution	8 points/mm (perpendicular)	
	40 points/mm (horizontal, 25 mm/s)	
Recorder speed	(5, 6.25, 10, 12.5, 25, 50) mm/s±5 %	
Recording paper	80 mm, roll paper	

Standard software specifications:

Measurement and	Supports measurement and interpretation with Biocare	
interpretation	CardioPro ECG analysis program for adults and	
	pediatrics	
Measurement values	HR, PR interval, QRS duration, QT/QTC interval,	
	P/QRS/T axis, RV5/SV1 amplitude, RV5+SV1	

	amplitude	
Minnesota code	With newest Minnesota code	
Working mode	Automatic mode, Manual mode, Rhythm mode, Upload	
	mode	
DEMO mode	Normal ECG, Arrhythmia ECG	
QTC formula	Bazett, Fridercia, Framingham, Hodges	
Rhythm analysis	Single rhythm mode: 30-300 seconds	
Extended printing in	Supports extended arrhythmia waveform printing in	
arrhythmia	automatic mode	
Waveform frozen	Supports 300 seconds of waveform frozen	
Pacemaker detection	Weak, Normal, Enhance	
Report auto-saved	Selectable auto-saved file	
Interpretation printout	Selectable interpretation printing	
Report preview	Preview the report before printing	
Data format	ECG, DICOM, XML, JPEG, PDF	
Patient information	Record No., Name, Gender, D.O.B, Height, Weight, BP,	
setting	Race, Pacemaker, Medication, Accession No.,	
	Ref-physician, Technician, Physician, Room No.,	
	User-define	
Language	Chinese, English, Spanish, Portuguese, Russian, Polish,	
	German, Czech, French, Italian, Ukrainian, Turkish	
Local memory capacity	More than 3000 files	

Report specifications:

Report type	Manual report, Simple report, MVB report(Median beat	
	report)	
Record format	3*4, 3*4+1R; 1*12, 1*12+1R; 3/2	

External peripheral use:

Patient cable socket	Connect to the patient cable	
Two USB port	Support USB flash disk and barcode scanner	
LAN port	Communication with ECG-1000 workstation software	
	on PC	

Power supply

Power supply	AC / DC	
AC power supply	$100 \text{ V} \sim 240 \text{ V}, 50 \text{ Hz} / 60 \text{ Hz}, 80 \text{ VA}$	
Battery power supply	Rechargeable lithium battery, 11.1V, 2600mAh	
Battery capacity	Supports about 3 hours for continuous operation, no less than 350 pcs 3 channels ECG exams and reports recording	
Battery charge time	Approximately 4 hours for total charge	

Dimensions and weight

Length × width × height	281 mm×191 mm×59 mm
Weight:	About 1.3 kg

Standard accessories

ECG Cable	10 lead wires, TPU, banana plug, defi, IEC	
Chest Electrode	Adult chest electrode, Φ4mm, 6pcs/set	
Limb Electrode	Adult limb electrode, Φ4mm, 4pcs/set, no	

	LOGO, light blue color	
Thermal Recording Paper Roll paper,80mmx20m,no LOGO		
Paper roller	ABS fire-proof UL94V-0	
Power Cord	L=1900±100mm H05VV-F/3G*0.75	
	AP24/AC24, black, European standard	
Grounding Cable	L=4mm UL1015 14AWG	
Battery	HYLB-1994,11.1V 2600mAh	

Environment requirements

1	Transportation		
	Environment temperature	-20°C~+55 °C	
	Relative humidity	≤95% (No condensation)	
	Air pressure	70 kPa~106 kPa	
	In accordance with the requirement	nts stipulated in the contract order, the	
	transport process to prevent rain and sun.		
2	Storage		
	Environment temperature	-20°C~+55°C	
	Relative humidity:	≤95%(No condensation)	
	Air pressure	70 kPa~106 kPa	
	The packaging of ECG stored in the non-corrosive gases and		
	well-ventilated room.		
3	Using		
	Environment temperature	+5 °C~+40	
	Relative humidity:	≤95%(No condensation)	
	Air pressure	86 kPa~106 kPa	

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- Based on the need of product technical improvement or the file updates, we reserve the right to modify the contents contained in this manual; if the change does not involve safety issues,

the contents are subject to amend without notification



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Company: Shenzhen Biocare Bio-Medical Equipment Co., Ltd.

File Name: Declaration of Conformity Document No.: BJ-ECG-15-08 Version: 1.3

DECLARATION OF CONFORMITY TO COUNCIL DIRECTIVE 93/42/EEC CONCERNING MEDICAL DEVICES

SHENZHEN BIOCARE BIO-MEDICAL EQUIPMENT CO., LTD.

#16-1, Jinhui Road, Jinsha Community, Kengzi Sub-District, Pingshan New District, 518122 SHENZHEN, PEOPLE'S REPUBLIC OF CHINA

MEDICAL DEVICE: DIGITAL ELECTROCARDIOGRAPH

> *TYPE: iE 101. iE 300* **GMDN** CODE: 16231

CLASSIFICATION - ANNEX IX: CLASS IIA, RULE 10

CONFORMITY ASSESSMENT ROUTE: ANNEX II EXCLUDING(4)

We, THE MANUFACTURER, HEREWITH DECLARE THAT THE STATED MEDICAL DEVICES MEET THE TRANSPOSITION INTO NATIONAL LAW, THE PROVISIONS OF COUNCIL DIRECTIVE 93/42/EEC CONCERNING MEDICAL DEVICES:

INCLUDING, AT 21 MARCH 2010, THE AMENDMENTS BY COUNCIL DIRECTIVE 2007/47/EEC. ALL SUPPORTING DOCUMENTATION IS RETAINED AT THE PREMISES OF THE MANUFACTURER. THE MANUFACTURER IS EXCLUSIVELY RESPONSIBLE FOR THE DOC.

TÜV SÜD PRODUCT SERVICE GMBH NOTIFIED BODY:

Ridlerstraße 65 · 80339 Munich · Germany

(EC) CERTIFICATE(S): G1 065758 0004 REV.01

IDENTIFICATION NUMBER

EUROPEAN REPRESENTATIVE: SHANGHAI INTERNATIONAL HOLDING CORP. GMBH

(EUROPE)

Eiffestraße 80, 20537 Hamburg, GERMANY

START OF CE-MARKING: 2017-05-20

SHENZHEN P.R.C., 2019-09-19 PLACE, DATE OF DECLARATION:

SIGNATURE:

POSITION: GENERAL MANAGER

Ref: EN ISO/IEC 17050-1 revision date: June 2009





EC Certificate

Full Quality Assurance System Directive 93/42/EEC on Medical Devices (MDD), Annex II excluding (4) (Devices in Class IIa, IIb or III)

No. G1 065758 0004 Rev. 01

Manufacturer:

Shenzhen Biocare Bio-Medical

Equipment Co., Ltd.

#16-1 Jinhui Road, Jinsha Community, Kengzi Sub-District

Pingshan New District 518122 Shenzhen

PEOPLE'S REPUBLIC OF CHINA

Facility(ies):

Shenzhen Biocare Bio-Medical Equipment Co., Ltd. #16-1 Jinhui Road, Jinsha Community, Kengzi Sub-District,

Pingshan New District, 518122 Shenzhen, PEOPLE'S REPUBLIC

OF CHINA

Product Category(ies): Digital Electrocardiograph, Patient Monitor,

B-Ultrasonic Diagnostic Equipment,

Doppler Fetal Heart Rate Detector, Infusion

Pump, Syringe Pump, Fingertip Pulse Oximeter, Handheld Pulse Oximeter,

Fetal/Maternal Monitor, Fetal Monitor, Color

Doppler Ultrasound System, Central

Monitoring System, Ambulatory

Electrocardiographs, Ambulatory blood pressure recorders, and associated

software.

The Certification Body of TÜV SÜD Product Service GmbH declares that the aforementioned manufacturer has implemented a quality assurance system for design, manufacture and final inspection of the respective devices / device categories in accordance with MDD Annex II. This quality assurance system conforms to the requirements of this Directive and is subject to periodical surveillance. For marketing of class III devices an additional Annex II (4) certificate is mandatory. See also notes overleaf.

Report No.:

BJ1989607

Valid from:

2019-09-11

Valid until:

2024-05-26

Date,

2019-09-11

Stefan Preiß

1. Punil

Head of Certification/Notified Body

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TÜV SÜD Product Service GmbH is Notified Body with identification no. 0123

TÜV SÜD Product Service GmbH · Certification Body · Ridlerstraße 65 · 80339 Munich · Germany





Product Service

Certificate

No. Q5 065758 0005 Rev. 01

Holder of Certificate: Shenzhen Biocare Bio-Medical

Equipment Co.. Ltd.

#16-1 Jinhui Road, Jinsha Community, Kengzi Sub-District

Pingshan New District 518122 Shenzhen

PEOPLE'S REPUBLIC OF CHINA

Shenzhen Biocare Bio-Medical Equipment Co., Ltd. Facility(ies):

#16-1 Jinhui Road, Jinsha Community, Kengzi Sub-District,

Pingshan New District, 518122 Shenzhen, PEOPLE'S REPUBLIC

OF CHINA

Certification Mark:



Design and Development, Production and Distribution **Scope of Certificate:**

of Digital Electrocardiograph, B-Ultrasonic Diagnostic **Equipment, Patient Monitor, Fetal Monitor, Doppler Fetal** Heart Rate Detector, Infusion Pump, Syringe Pump, Fingertip Pulse Oximeter, Handheld Pulse Oximeter, Ambulatory electrocardiographs, Ambulatory blood

pressure recorder and associated software, Fetal/Maternal Monitor, Color Doppler Ultrasound

System, Central Monitoring System.

EN ISO 13485:2016 Applied Standard(s):

Medical devices - Quality management systems -

Requirements for regulatory purposes

(ISO 13485:2016) **DIN EN ISO 13485:2016**

The Certification Body of TÜV SÜD Product Service GmbH certifies that the company mentioned above has established and is maintaining a quality management system, which meets the requirements of the listed standard(s). See also notes overleaf.

Report No.:

BJ20089601

Valid from:

2020-04-01

Valid until:

2023-03-31

Date.

2020-03-17

Christoph Dicks

Head of Certification/Notified Body

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