Copyright

Product Name: Automatic External Defibrillator

Product Model: G3/G3A/G5/G5A/G3 Fully Automatic/G3A Fully Automatic/G5 Fully Automatic/G5A Fully Automatic

Company name: Shenzhen Comen Medical Instruments Co., Ltd.

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Introduction

This document summarizes the product's safety and performance information.

Chapter 1Safety information

1.1 Safety Information

⚠ DANGER

- Indicates an imminent danger that, if not avoided, may result in death, serious personal injury, or property damage.

⚠ WARNING

- Alerts you to situations that may result in serious consequences or adverse events or endanger personal safety. Failure to observe the warning information may cause severe injury or even death of the user or patient.

⚠ CAUTION

- Alerts you to potential dangers or unsafe operations, which, if not avoided, may result in minor injury, product failure or damage, or property damage, or cause more serious injury in the future.

⚠ NOTE

- Emphasizes important considerations and provides instructions or explanations for better use of the product.

⚠ DANGER

- The defibrillator generates high voltage during defibrillation, which may cause serious injury or death. It is intended to be used by personnel trained in its operation and in basic life support, advanced cardiac life support or other emergency medical response. Any unauthorized personnel or personnel without training shall not perform any operations.
- Do not open the housing of the defibrillator to avoid potential hazards of electric shock. Any repairs and upgrades to the defibrillator must be performed by service personnel trained and authorized by Comen.
- Do not use the device in an oxygen-rich environment or in an environment where flammable and explosive materials such as anesthetics are stored, to avoid explosion or fire.
- During defibrillation, the operator shall not come into contact with the patient, the supporting table or the device. Before reusing the cables, confirm that their functions are normal.

⚠ WARNING

- Before using, the user must check the device and its accessories to ensure that they can work properly and safely.
- Do not conduct therapy on patients lying on wet ground.
- When conducting therapy on patients with a pacemaker, the defibrillation electrodes shall be placed away from the pacemaker.
- Observe the local laws and regulations or the waste disposal rules of the hospital when disposing of packaging materials. Keep the packaging materials out of the reach of children.
- Do not use the device in the presence of flammable anesthetics or other flammable substance in combination with air, oxygen-enriched environments, or nitrous oxide.
- To ensure safety, avoid stacking multiple equipment or placing anything on the defibrillator during operation.
- Carefully place accessories cables to avoid entanglement, potential strangulation, and electrical interference to the patient.
- To avoid the risk of electric shock, please remove the sensor and completely disconnect the defibrillator before cleaning the device.
- When using this device to conduct therapy, keep the patient under close surveillance. If the shock is delayed, the shockable rhythm may change to non-shockable rhythm, leading to delivering an incorrect shock.
- During defibrillation, any equipment without defibrillation protection shall be disconnected from the patient.
- During defibrillation, the operator shall not come into contact with the patient, the supporting table or the device.
- The defibrillator shall not be used in combination with high-frequency electrotome.
- Electromagnetic fields can affect the performance of this device. Therefore, other equipment used in the vicinity of this device must meet the corresponding EMC requirements. For example, mobile phones and X-rays are potential sources of interference since they transmit high-intensity electromagnetic radiation.
- This defibrillator is not intended for use in an MRI room.
- After defibrillation, the ECG will recover within 2s.
- Do not make any modifications to the device.
- The operating as well as the transportation and storage environment of this device must comply with the environmental specifications in this user manual, otherwise the device's precision may be affected.
- Do not repair or maintain the defibrillator when it is in normal use.
- Only approved analog or digital equipment in accordance with the specified IEC standards (like IEC 60950 safety standards for Information Technology Equipment, IEC 60601-1 safety standards for medical electrical equipment, etc.) are allowed to be connected to the device. All configurations should comply with the valid version of the standard IEC 60601-1. Personnel who connect external equipment to the signal I/O ports of the device should verify that medical system complies with IEC 60601-1 requirements, before configuring the medical system and connecting the external equipment. If there is any doubt, please contact our company.
- In normal use, please do not touch the signal I/O port, other live equipment, and the patient simultaneously, otherwise the patient may be injured.
- When using the wireless network, keep a distance of at least 20 cm away from the device.
- Defibrillation may cause myocardial injury. Select an appropriate energy for the patient, especially for

pediatric patients.

- Any serious incident that has occurred in relation to the device should be reported to Comen and the competent authority of the Member State in which the user and/or patient is established.

⚠ CAUTION

- To avoid device damage and ensure the patient's safety, only use the accessories specified in this user manual.
- Handle the device carefully to avoid damage caused by dropping, collision, strong oscillation or other external mechanical forces.
- At the end of the service life of the device and the accessories, they must be disposed of in accordance with relevant local laws and regulations or the hospital's rules and regulations. When disposing of the device, please remove the battery to avoid the risk of electric shock.
- Dry the defibrillator immediately if it is exposed to rain.

⚠ NOTE

- Place the device at a position where observation, operation and maintenance are convenient and not obstructed.
- This manual is based on the maximum configuration; therefore, some contents may not be applicable to your device.
- Keep this user manual available for ease of use and convenient reference.
- The device can only be used for one patient at a time.
- In normal use, the operator should be within one meter of the device.

1.2 Installation

⚠ WARNING

- This device must only be installed by personnel specified by the company.
- With copyright reserved, any person shall not falsify, photocopy or exchange the software in any manner whatsoever without the prior written permission of the company.
- When this device is connected with other electrical equipment for a specific function, if users cannot confirm the combination is without risk (for example, the electric shock hazard caused by the accumulated leakage current) from the specifications of each equipment, please contact a specialist from the company or the hospital to ensure that the combination is safe.

⚠ WARNING

- The device may suffer from microbial contamination during storage, transportation, or use. Please make sure that the packaging is intact before use, especially for disposable accessories. If there is any damage on the packaging, please do not use the accessory.
- The disposal of packaging materials shall comply with the local laws and regulations or the waste disposal rules and regulations of the hospital. Keep the packaging material out of the reach of children.

⚠ NOTE

- Condensation means gas or liquid condenses when it cools. For example, water vapor is changed to water when it cools, and the water is changed to ice when it cools. The lower the temperature, the faster the condensation goes.

⚠ WARNING

- Keep the cables of the defibrillation electrodes connected to the device or keep defibrillation electrodes available at all times to prepare for the use in emergency.
- The unit package shall not be opened until immediately prior to use.
- Do not bend the defibrillation electrodes.
- Do not damage the packaging of defibrillation electrodes. If the package is damaged, please replace the defibrillation electrodes immediately.

⚠ WARNING

- Prior to use, please ensure that the connector of defibrillation electrodes and the pad socket are connected
- If there are signs of functional impairment or if there is an error message, contact the designated maintenance personnel of our company.

⚠ WARNING

- After opening the lid of the device, if the device is not connected to a patient and no operation is performed on the device within 30 minutes, the device will automatically shut down.

⚠ NOTE

- The time required for the device to warm from the minimum storage temperature or cool from the maximum storage temperature between uses until the device is ready for its intended use when the ambient temperature is 20°C is 10min.

1.3 Using the Device

⚠ DANGER

- During defibrillation, do not allow the defibrillation electrodes to touch each other or touch the ECG electrodes, lead wires, clothing, etc. Connecting the defibrillation electrodes to metal objects may generate an electric arc and burn the patient's skin.
- During defibrillation, make sure that no one is in contact with the patient and any equipment (including the bed or stretcher) connected with the patient to avoid potential injury and death.
- During defibrillation, do not touch conductive liquids such as saline solution, blood, conductive gel, and metal objects such as beds to avoid forming a current path.

⚠ WARNING

- Do not use the device if the patient is responsive or normally breathing. Call for medical help immediately.
- During defibrillation, any bubbles in the conductive gel between the defibrillation electrodes and the patient's skin will cause patient skin burns. Make sure that the pads are tightly placed against the patient's skin to avoid bubbles.
- Do not use the defibrillation electrodes if they are dry. Use the electrodes immediately after unpacking them.
- During heart rhythm analysis, to avoid misdiagnosis or delayed diagnosis, do not move the patient or perform CPR or other operations on the patient.
- For safety reasons, some low-amplitude or low-frequency rhythms and some ventricular fibrillation rhythms may not be recognized as shockable rhythms.
- When using pediatric defibrillation electrodes for children under 8 years of age, be sure to toggle the patient type switch to the Pediatric mode. Otherwise, the defibrillation electrodes may be damaged and delayed therapy could occur.
- The device will automatically disarm energy if the following situations occur:
  - The device detects that the defibrillation electrodes are connected improperly.
  - The device detects that the patient's heart rhythm has changed, and delivering a shock is no longer appropriate.
  - After the charging is complete, the Shock button is not pressed within the set time (only applicable to G3/G3A/G5/G5A).
- If the operation of the device is delayed or interrupted during first aid, perform CPR on the patient first.
- Continuous prolonged use of defibrillation electrodes may increase the risk of undesirable dermatological manifestations, including hypersensitivity, erythema, blistering, or pressure necrosis – particularly in patients with impaired perfusion, or those exhibiting altered/immature skin morphology.

Special attention must be paid to skin condition and ensure correct attachment of defibrillation electrodes. Conduct regular inspections of electrode placement sites and immediately relocate electrodes upon detecting epidermal degradation. Intensified monitoring may be required for some patients.

⚠ CAUTION

- For the patients with pacemakers, the sensitivity and specificity of AED analysis may be lower.
- Improper handling of the defibrillation electrodes during storage or before use will damage the pads. Do not use damaged electrodes.
- Before placing the defibrillation electrodes on the patient's skin, keep the defibrillation electrodes free from dust or water, otherwise the therapy will be affected.

⚠ NOTE

- For the ease of placement and training, the anterior-lateral position is a reasonable default placement position. Available positions include anterior-lateral, anterior-posterior, anterior-left subscapular and anterior-right subscapular.
- Use pediatric defibrillation electrodes on children under 8 years of age. If no pediatric defibrillation electrodes are available, use adult defibrillation electrodes, but make sure that the Pediatric mode is selected.
- Successful resuscitation is dependent on the patient's physiological conditions and the circumstances on site. Failure to revive a patient does not necessarily indicate a problem in device performance. The muscular response of the patient during defibrillation is not a reliable indicator of energy delivery.
- The device automatically recognizes the patient type after powered on if connected to the company's defibrillation electrodes. If the patient type indicated by the patient type switch is not consistent with the patient type recognized by the device, check whether correct defibrillation electrodes are connected, and toggle the patient type switch to select the correct patient type.
- In emergency, if there are no spare defibrillation electrodes available, please do not delay the treatment of the patient because of expired or incorrect defibrillation electrodes.
- The G3/G3A/G5/G5A defibrillators do not automatically deliver a shock; the Shock button must be pressed to deliver a shock.
- High levels of impedance could have a great impact on the patient's therapy. If a prompt "Impedance Too High. Shock Cancelled." appears, please check whether the patient's skin is prepared correctly. If the prompt is still present, please replace the defibrillation electrodes.

⚠ WARNING

- If the ambient temperature exceeds 41°C, the temperature of the defibrillation electrodes may also rise above 41°C. When providing emergency care, extra caution must be exercised for patients with sensitive skin, such as the elderly and burn patients, to prevent the risk of thermal injury from prolonged application.

⚠ WARNING

- The CPR metronome does not indicate the patient's current condition. Since the patient's condition may change in a very short period of time, the operator shall assess the patient's condition constantly. Do not perform CPR on patients who are responsive and normally breathing.

1.4 Data Management

⚠ NOTE

- This device has an internal memory capacity of no less than 1G.

⚠ NOTE

- If the maximum storage is reached, the latest stored data will overwrite the earliest ones.

⚠ NOTE

- The rescue data will be automatically uploaded to the AED management system.

⚠ CAUTION

- The configurations are protected with password and can only be modified by trained equipment management personnel.

1.5 Battery

⚠ WARNING

- Do not charge the disposable battery.
- The battery electrolyte is harmful. In the event that the battery electrolyte comes into contact with your

skin or enters your eyes, wash it with clean water immediately and seek medical help.

- Keep the battery out of reach of children.
- To ensure adequate battery power during an emergency, always keep a full battery available.

⚠ NOTE

- As the battery is used and becomes aged, the remaining battery power displayed by the battery icon may deviate from the actual power. Please refer to the system alarm information.
- Poor quality of the network connecting AED management system may greatly reduce the service life of the battery.
- The operating life of the battery depends on the device configuration and operation.

⚠ WARNING

- Check the expiry date of the disposable battery. Do not use expired batteries.
- Only use the battery specified by the manufacturer.
- The installation of the battery must be carried out by the operator designated by the company.
- Make sure the battery cover is properly installed.
- Do not remove the battery while the device is working.
- Do not remove the battery from the device unless the device indicates so.
- The service life of the battery is 8 years.

⚠ WARNING

- Do not disassemble or short-circuit the battery or place it in fire, otherwise the battery may cause fire, explosion, leakage of hazardous gas or other hazards.

1.6 Cleaning and Disinfection

⚠ WARNING

- Only use the detergents and disinfectants recommended in this manual. The use of other detergents and disinfectants can cause device damage or lead to safety hazards.
- Do not leave any disinfectant residue on the surface and accessories of the defibrillator. Please wipe it off immediately with a damp cloth.
- Detergents cannot be mixed, otherwise dangerous gases may be generated.
- Disposable accessories cannot be reused after cleaning and disinfection to avoid cross-infection.
- To protect the environment, disposable accessories must be recycled or properly disposed of.
- Do not use any cleaning and disinfecting solutions other than those recommended in this manual. Failure to do so may cause permanent damage to the device, sensor, and cables.
- Do not soak the sensor or connector in any solution for cleaning or disinfection.

- If you accidentally pour any liquid on the device or any accessory, please contact the maintenance personnel immediately.

1.7 Maintenance

⚠ WARNING

- The hospital or institution using this defibrillator should establish a comprehensive maintenance plan, otherwise the defibrillator may become damaged and personal safety may be endangered.
- If the device gets damp accidentally, please place the device in a well-ventilated environment immediately and contact the maintenance personnel or our company.
- When the device is connected to a patient, do not conduct any functional inspection and maintenance, to protect the patient from being shocked.
- The calibration of the energy accuracy shall be performed once a year (or as required by your hospital) by personnel authorized by Comen. Contact the company if the accuracy is out of tolerance.

⚠ NOTE

- The defibrillator conducts the auto test at a set time even when powered off.

⚠ WARNING

- Make sure that the defibrillator is not connected to a patient during the user test.

1.8 EMC

⚠ WARNING

- The G3/G3A/G5/G5A/G3 Fully Automatic/G3A Fully Automatic/G5 Fully Automatic/G5A Fully Automatic defibrillator must not be used close to or stacked with other equipment. If it must be used close to or stacked with other equipment, observe and verify that it can operate normally for the configuration used.
- Except for the cables sold by the manufacturer of the G3/G3A/G5/G5A/G3 Fully Automatic/G3A Fully Automatic/G5 Fully Automatic/G5A Fully Automatic defibrillator as spare parts of internal components, the use of accessories and cables other than those specified may result in an increase in the emission or a decrease in electromagnetic immunity of the G3/G3A/G5/G5A/G3 Fully Automatic/G3A Fully Automatic/G5 Fully Automatic/G5A Fully Automatic defibrillator.
- Even if other equipment meet the emission requirements of the corresponding national standards, the G3/G3A/G5/G5A/G3 Fully Automatic/G3A Fully Automatic/G5 Fully Automatic/G5A Fully Automatic defibrillator may still get interference from other equipment.

⚠ NOTE

- The G3/G3A/G5/G5A/G3 Fully Automatic/G3A Fully Automatic/G5 Fully Automatic/G5A Fully Automatic defibrillator complies with the relevant requirements for electromagnetic compatibility of IEC60601 and IEC 60601-2-4 standards.
- Please follow the EMC instructions in the User's Manual to install and use the G3/G3A/G5/G5A/G3 Fully Automatic/G3A Fully Automatic/G5 Fully Automatic/G5A Fully Automatic defibrillator.
- Portable and mobile RF communication equipment may affect the performance of the G3/G3A/G5/G5A/G3 Fully Automatic/G3A Fully Automatic/G5 Fully Automatic/G5A Fully Automatic defibrillator. To protect the defibrillator against strong electromagnetic interference, please keep it away from mobile phones, microwave ovens, etc.
- Refer to the attached guide and manufacturer's statement.

1.9 Cybersecurity

Warning

- Improper use of the automatic external defibrillator could cause hazards to patients and device performance.
- For embedded device, the security update is integrated with the software application program update. The update is only allowed locally by authorized users.
- When the automatic external defibrillator reaches the end of service, do erase patient data and configuration data before enforcing disposal policy.
- Before connecting the automatic external defibrillator to other instruments, ensure that any connected device is free of malware.

Note

- The defibrillator is intended to be used in public places and facilities by personnel trained in its operation and in basic life support, advanced cardiac life support or other emergency medical response.
- No software installation required for the embedded device.
- We will make available on request of software bill of materials.

Note

Steps that can be taken to safeguard this information and the general security of the automatic external defibrillator:

- Physical Access: Limit use of the defibrillator to authorized users. Keep the device under physical control.
- Active Use: Users of the defibrillator should take measures to limit patient data storage. Patient data should be removed from the defibrillator after a patient is discharged and patient monitoring has ended.
- Network Security: The facility must take measures to ensure the security of any shared network to which the defibrillator may be connected to.
- Device Security: Only connect the device to the manufacturer indicate compatible and ensure that any connected device is free of malware.
- Keep the device updated.
- Use good password.
- Act on or follow-up on alerts, inconsistencies, strange behavior of a device and let the responsible organization (Health Delivery Organizations, HDOs) knows.

Chapter 2 Performance Information

1). Product Classification

Name	Type
Type of protection against electric shock	Device using internal power supply
Degree of protection against electric shock	Defibrillation-proof Type CF applied part: external defibrillation
Degree of protection against liquid ingress	IPX5
Degree of protection against solid particle	IP5X
Operating mode	Continuous operation
Mobility	Portable

2). Environmental Specifications

Item	Specification	
Operating conditions	Ambient temperature	-5℃~50℃(The device shall work for at least 60 minutes after transferred from 20℃ room temperature to an ambient temperature of -20℃.)
	Relative humidity	0%~95%, non-condensing
	Atmospheric pressure	570hPa~1062hPa
Long-time transport and storage conditions	Transport and storage temperature	15℃~35℃
	Relative humidity	0%~95%, non-condensing
	Atmospheric pressure	570hPa~1062hPa
	During the transport, the device must be protected from violent shock, vibration, rain and snow. Note: Unless otherwise indicated, the environmental conditions of transport and storage shall be the same as mentioned above after the ME EQUIPMENT has been removed from its protective packaging and subsequently between uses.	
Short-time transport and storage conditions	Transport and storage temperature	-30℃~70℃
	Relative humidity	0%~95%, non-condensing
	Atmospheric pressure	570hPa~1062hPa

3). Physical Specifications

Model	Size (length × width × height)	Weight
G3/G3A	Main unit: 306mm×218mm×96mm (±5mm)	2.0 ± 0.4kg (without the network module, including a CMLM3×4I002B battery)

G5/G5A	Standard battery (CMLM3 × 4I002B): 163mm×62mm×21mm (±5mm) Optional battery (CMLM1X5I002B/CMLM2X4I001B/ CMLM1X5I003B/CMLM1X4I001B): 163mm×62mm×30mm (±5mm)	2.2 ± 0.4kg (without network module, including a CMLM3×4I002B battery)
G3 Fully Automatic/ G3A Fully Automatic		2.0 ± 0.4kg (without network module, including a CMLM3×4I002B battery)
G5 Fully Automatic/ G5A Fully Automatic		2.2 ± 0.4kg (without network module, including a CMLM3×4I002B battery)

4). Battery Specifications

<table>
<tr><th>Item</th><th colspan="3">Specification</th></tr>
<tr><td>Battery type</td><td colspan="3">Disposable non-rechargeable battery</td></tr>
<tr><td>Battery specification</td><td colspan="3">CMLM3×4I002B: 12 V ⎓ 4200 mAh
CMLM1×5I002B: 15 V ⎓ 5600 mAh
CMLM2×4I001B: 12 V ⎓ 6000 mAh
CMLM1X5I003B: 15V ⎓ 6600mAh
CMLM1X4I001B: 12V ⎓ 12500mAh</td></tr>
<tr><td rowspan="11">Battery operating time</td><td colspan="2">G3/G3A/ G3 Fully Automatic/ G3A Fully Automatic</td><td>Test conditions</td></tr>
<tr><td colspan="2">No less than 15 h.</td><td>Wireless function off, no defibrillation charge and discharge, and voice prompt off</td></tr>
<tr><td colspan="2">No less than 520 times of 150 J charge and discharge</td><td rowspan="3">Wireless function off, voice prompt off, and 3 charges and discharges every minute</td></tr>
<tr><td colspan="2">No less than 410 times of 200 J charge and discharge</td></tr>
<tr><td colspan="2">No less than 210 times of 360 J charge and discharge</td></tr>
<tr><td colspan="2">G5/G5A/ G5 Fully Automatic/ G5A Fully Automatic</td><td>Test conditions</td></tr>
<tr><td colspan="2">No less than 12 h</td><td>Wireless function off, no defibrillation charge and discharge, and voice prompt off</td></tr>
<tr><td colspan="2">No less than 460 times of 150 J charge and discharge</td><td rowspan="3">Wireless function off, voice prompt off, and 3 charges and discharges every minute</td></tr>
<tr><td colspan="2">No less than 360 times of 200 J charge and discharge</td></tr>
<tr><td colspan="2">No less than 210 times of 360 J charge and discharge</td></tr>
<tr><td>Battery standby life</td><td>CMLM3×4I002B</td><td>CMLM1×5I002B
CMLM2×4I001B
CMLM1×5I003B
CMLM1×4I001B</td><td>Test conditions</td></tr>
</table>

	/	8 years	20℃±5℃ ambient temperature, a new battery installed in the device without turning on the device, self-test performed every day, not sending self-test results via Wi-Fi or cellular mobile network
	> 6 years		20℃±5℃ ambient temperature, a new battery installed in the device without turning on the device, self-test performed every week, not sending self-test results via Wi-Fi or cellular mobile network
	> 5 years		20℃±5℃ ambient temperature, a new battery installed in the device without turning on the device, self-test performed every day, not sending self-test results
	> 3 years		20℃±5℃ ambient temperature, a new battery installed in the device without turning on the device, self-test performed every day, sending self-test results once a week via Wi-Fi or cellular mobile network
	> 2 years		20℃±5℃ ambient temperature, a new battery installed in the device without turning on the device, self-test performed every day, sending self-test results once a day via Wi-Fi or cellular mobile network
Low battery alarm	After the prompt occurs, the device can operate for 30 min (working condition: indoor mode screen brightness, without WIFI/4G/5G, no defibrillation charge and discharge, low audio volume) and it can perform at least 10 times of 200J discharge or at least 6 times of 360J discharge.		

5). Display Specifications (Only Applicable to G5/G5A/G5 Fully Automatic/G5A Fully Automatic)

Item	Specification
Screen type	TFT display screen
Operating mode	Automatic, Indoor, and Outdoor. In the automatic mode, the device automatically adjusts the screen brightness according to the ambient light.
Size	7 inch

Resolution	800 × 480 pixels
Waveform	1
Waveform display time	No less than 6s

6). Voice Prompt

Indication signal	
Speaker	Sounds audio prompt (45 – 85 dB)
	Supports multi-level audio volume
	Supports manual/auto adjustment of audio volume

7). Data Management

Item	Specification
Waveform	Up to 10hours of ECG waveform
Event record	5000 log events
Recording time	Up to 2hour
Self-test reports	5000 files

8). Network Specifications

Item	Type
Interfaces	1, USB port, USB protocol 1, micro USB port, USB protocol 1, multi-function port, Comen private protocol
WI-FI	
Modulation type	IEEE802.11 a/b/g/n
Transmission frequency	IEEE 802.11b/g/n (2.4G): 2.412GHz ~ 2.472GHz IEEE 802.11a (5G): 5.18GHz ~ 5.24GHz, 5.745GHz ~ 5.825GHz
Frequency characteristic	IEEE 802.11b/g/n (2.4G) :2400 MHz~2500 MHz IEEE 802.11a (5G): 4900 MHz~5845 MHz
Cellular mobile network (2G/3G/4G)	
Modulation type	3GPP E-UTRA Release 11: LTE-FDD/LTE-TDD/WCDMA/TD-SCDMA/CDMA/GSM
Transmission frequency	LTE-FDD B1: 1920MHz ~ 1980MHz, 2110MHz ~ 2170MHz LTE-FDD B3: 1710MHz ~ 1785MHz, 1805MHz ~ 1880MHz LTE-FDD B5: 824MHz ~ 849MHz, 869MHz ~ 894MHz LTE-FDD B8: 880MHz ~ 915MHz, 925MHz ~ 960MHz LTE-TDD B38: 2570MHz ~ 2620MHz LTE-TDD B39: 1880MHz ~ 1920MHz LTE-TDD B40: 2300MHz ~ 2400MHz LTE-TDD B41: 2555MHz ~ 2655MHz

	CDMA BC0: 824MHz ~ 849MHz, 869MHz ~ 894MHz WCDMA B1: 1920MHz ~ 1980MHz, 2110MHz ~ 2170MHz WCDMA B8: 880MHz ~ 915MHz, 925MHz ~ 960MHz TD-SCDMA B34: 2010MHz ~ 2025MHz TD-SCDMA B39: 1880MHz ~ 1920MHz EGSM900: 880MHz ~ 915MHz, 925MHz ~ 960MHz DSC1800: 1710MHz ~ 1785MHz, 1805MHz ~ 1880MHz
Frequency characteristic	Bandwidth: 1.4/3/5/10/15/20 MHz
Radiated power	Class 3 (23dBm±2dB) for LTE FDD Class 3 (23dBm±2dB) for LTE TDD Class 2 (24dBm+1/-3dB) for TD-SCDMA Class 3 (24dBm+1/-3dB) for WCDMA Class 3 (24dBm+2/-1dB) for CDMA BC0 Class E2 (27dBm±3dB) for EDGE 900MHz Class E2 (26dBm±3dB) for EDGE 1800MHz Class 4 (33dBm±2dB) for EGSM900 Class 1 (30dBm±2dB) for DCS1800
Cellular mobile network (5G)	
Modulation type	3GPP Release 13, 3GPP Release 14: LTE-Cat NB1
Transmission frequency	B1: 1920MHz ~ 1980MHz, 2110MHz ~ 2170MHz B3: 1710MHz ~ 1785MHz, 1805MHz ~ 1880MHz B5: 824MHz ~ 849MHz, 869MHz ~ 894MHz B8: 880MHz ~ 915MHz, 925MHz ~ 960MHz B20: 791MHz ~ 821MHz, 832MHz ~ 862MHz
Radiated power	23 dBm ±2 dB
Bluetooth	
Protocol	Bluetooth 5.2
Working frequency	2402~2480MHz
Data security	Supports AES128
NFC	
Protocol	ISO/IEC 14443 A; ISO/IEC 14443 B
Working frequency	13.56MHz

9). Defibrillation Specifications

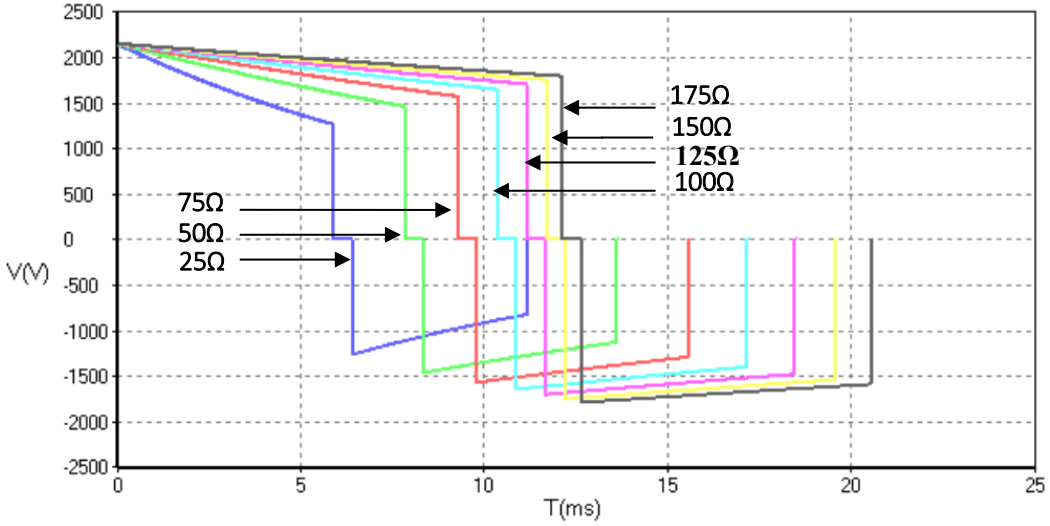
Item	Type
Applicable standards	IEC 60601-2-4
Defibrillation mode	AED defibrillation
Defibrillation waveform	BTE waveform. Waveform parameters can be automatically compensated according to the patient impedance.
Defibrillation electrodes type	Adult/pediatric defibrillation electrodes. The type of electrodes can be automatically identified.
Shock delivery	Deliver a shock through the defibrillation electrodes

Energy selection range	Adult: 100 J, 150 J, 170 J, 200 J, 300 J, 360 J Pediatric: 10 J, 15 J, 20 J, 30 J, 50 J, 70 J, 100 J
Energy output accuracy	Under 20Ω, 25Ω, 75Ω, 100Ω, 125Ω, 150Ω and 175Ω loads, the deviation between the release energy and the rated release energy value of the defibrillator does not exceed ±2 J or ±10% (whichever is greater). Under a 50Ω load, the deviation between the release energy and the rated release energy value of the defibrillator does not exceed ±1.5 J or ±10% (whichever is greater). Under a 200Ω, 225Ω, 250Ω, 275Ω and 300Ω load, the deviation between the release energy and the rated release energy value of the defibrillator does not exceed ±2 J or ±15% (whichever is greater)
Impedance range	20~300Ω
Electric shock series	Electric shock energy:10~360J configurable Number of electric shocks:1, 2, 3 configurable The default configuration complies with AHA: 2020 First Aid Guide (200-300-360)
Shockable heart rhythm	VF, VT

AED algorithm performance complies with the requirements of IEC 60601-2-4 and AAMI DF80 and suggestions of AHA

Heart rhythm classification	Specification requirement	Remark
Shockable heart rhythm VF	Sensitivity >90%	Complies with the requirements of IEC 60601-2-4 and AAMI DF80 and suggestions of AHA (sensitivity > 90%)
Shockable heart rhythm VT	Sensitivity >75%	Complies with the requirements of IEC 60601-2-4 and AAMI DF80 and suggestions of AHA (sensitivity > 75%)
Non-shockable heart rhythm Normal sinus rhythm	Specificity >99%	Complies with the requirements of IEC 60601-2-4 and AAMI DF80 and suggestions of AHA (specificity > 99%)
Non-shockable heart rhythm Cardiac arrest	Specificity >95%	Complies with the requirements of IEC 60601-2-4 and AAMI DF80 and suggestions of AHA (specificity > 95%)
Non-shockable heart rhythm All other non-shockable heart rhythms	Specificity >95%	Complies with the requirements of IEC 60601-2-4 and AAMI DF80 and suggestions of AHA (specificity > 95%)

360 J defibrillation waveform (load impedance is 25Ω, 50Ω, 75Ω, 100Ω, 125Ω, 150Ω, and 175Ω)



Energy accuracy								
Impedance / Energy	25Ω	50Ω	75Ω	100Ω	125Ω	150Ω	175Ω	Accuracy
10J	9.6	10	9.9	9.6	9.3	9.0	8.4	±2J(±1.5J(50Ω))
15J	15	15	15	14	14	13	13	±10%
20J	19	20	20	19	18	17	17	±10%
30J	29	30	30	29	27	26	25	±10%
50J	49	50	49	48	45	44	42	±10%
70J	68	70	69	66	63	60	58	±10%
100J	98	101	98	95	90	86	83	±10%
150J	148	152	148	142	136	130	124	±10%
170J	167	172	168	160	151	147	140	±10%
200J	197	203	198	189	180	173	165	±10%
300J	297	305	296	284	270	258	247	±10%
360J	356	363	354	339	324	310	296	±10%

Energy accuracy						
Impedance / Energy	200Ω	225Ω	250Ω	275Ω	300Ω	Accuracy
10J	7.9	7.4	7	6.6	6.2	±2J
15J	12	11	11	10	9	±15%
20J	16	15	14	13	13	±15%
30J	24	22	21	20	19	±15%
50J	39	37	35	33	31	±15%
70J	55	52	49	46	44	±15%
100J	79	74	70	66	63	±15%
150J	118	111	105	99	94	±15%
170J	134	126	119	112	106	±15%

200J	158	148	140	132	125	±15%
300J	237	223	210	198	188	±15%
360J	284	267	252	238	225	±15%

Charging time (at 20±5°C of ambient temperature)					
Battery status	From opening the lid to getting ready for discharge		From AED analysis to getting ready for discharge		From startup to getting ready for discharge
	200J	360J	200J	360J	200J
New fully charged battery	<8s	<15s	<5 s	<12s	<7 s
New battery after 15 times of discharging maximum energy	<8s	<15s	<5s	<12s	<7 s

10). ECG Specifications (Only Applicable to G5/G5A/G5 Fully Automatic/G5A Fully Automatic)

Item	Specification
ECG input	Adult/pediatric defibrillation electrodes as the ECG input source
ECG gain	Supports adaptive gain function.
Screen display	G5, G5A, G5 Fully Automatic, and G5A Fully Automatic support one ECG waveform display; the ECG waveform can display for no less than 6s.
Common mode rejection	>106 dB
Power frequency notch	Supports power frequency interference suppression function.
Pacing pulse suppression	Supports pacing pulse suppression function.
Recovery time after defibrillation	≤2 s

11). Defibrillation Electrodes Specifications

Item	Specification					
Specification	The defibrillation electrodes are disposable and are divided into adult type and pediatric type.					
Cable length	1.2m					
Model	CM3922	CM3922A	CM3921	CM3925	CM3927A	CM3926
Total area	148±5 cm^2	148±5 cm^2	75±5 cm^2	88±5 cm^2	110±5 cm^2	145±5 cm^2
Effective area	87±5 cm^2	87±5 cm^2	43±5 cm^2	63±5 cm^2	100±5 cm^2	110±5 cm^2
Validity period	3 years	5 years	3 years	3 years	5.5 years	3 years
Operating and storage environments	0℃~50℃					

12). CPR Specifications

Item	Specification
CPR function	Supports CPR indications; 30:2, 15:2 or press only modes can be configured
Compression rate display	Provides the function of displaying compression rate; displayed rate range: 30cpm~200cpm, accuracy: ±2cpm
Compression depth display	Provides the function of displaying compression depth; displayed depth range: 0cm~8.5cm, accuracy: ±0.5cm or 10% (whichever is greater)
Compression rate detection	The CPR sensor/defibrillation electrodes provided with the device can detect the compression rate and depth. Different colors will be provided to indicate different rate and depth. Yellow: compression depth < 5cm, compression rate < 100 cpm Green: compression depth: 5cm – 6cm, compression rate: 100 – 120 cpm Red: compression depth > 6cm, compression rate > 120 cpm
Voice Prompt	Provides CPR voice prompt to indicate the CPR compression rate