



IEC 60601-1-11 MEDICAL ELECTRICAL EQUIPMENT -

Part 1-11: General requirements for basic safety and essential performance – Collateral Standard: Requirements for medical electrical equipment and medical electrical systems used in the home healthcare environment

Report Number.....: 160900306SHA-002

Date of issue....: 2016-10-27

Modification 1: 2018-03-13 Modification 2: 2021-07-23

Total number of pages: 30

Name of Testing Laboratory Interte

preparing the Report:

Intertek Testing Services Shanghai

Applicant's name: GlobTek, Inc.

Address 186 Veterans Dr. Northvale, NJ 07647 USA

Test specification:

Standard: IEC 60601-1-11:2015 for use in conjunction with IEC 60601-

1:2005, AMD1:2012

Test procedure: CB Scheme

Non-standard test method: N/A

Test Report Form No.: IEC60601_1_11D

Test Report Form(s) Originator: UL(US)

Master TRF: 2020-07-10

Copyright © 2020 IEC System of Conformity Assessment Schemes for Electrotechnical Equipment and Components (IECEE System). All rights reserved.

This publication may be reproduced in whole or in part for non-commercial purposes as long as the IECEE is acknowledged as copyright owner and source of the material. IECEE takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested.

This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.





| Test | item description:: | Medica | al Power Supply | |
|----------------------------------------|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------|
| Trade Mark(s): | | bTek, Inc. | | |
| Man | ufacturer: el/Type reference: ngs: | GlobTek, Inc. 186 Veterans Dr. Northvale, NJ 07647 USA GT*91099-***-**, GT*96600-***-**, GT*96600-*56*** GT*91099-***-**: Input: 1.5A, 100-240V~, 50-60Hz; Output: 5-48VDC, Max. 60W GT*96600-***-**: Input: 1.5A, 100-240V~, 50-60Hz; Output: 5-54VDC, Max. 65W GT*96600-*56***: Input: 2.0A, 100-240V~, 50-60Hz; Output: 56VDC, Max. 70W | | |
| Resp | oonsible Testing Laboratory (as a | pplicab | ole), testing procedure | and testing location(s): |
| \boxtimes | CB Testing Laboratory: | | Intertek Testing Services | s Shanghai |
| Test | ing location/ address | : | Building No.86, 1198 Qi Shanghai, China | nzhou Road (North), 200233 |
| Test | ed by (name, function, signature) | : | Yann Yan (Engineer) | Jann yen Takehoog- |
| Appr | roved by (name, function, signatu | ıre): | Jack Cheng (Mandated Reviewer) | Jakehong |
| | Testing procedure: CTF Stage 1: | | | |
| Test | ing location/ address | : | | |
| Test | ed by (name, function, signature) | : | | |
| Appı | oved by (name, function, signatu | ıre): | | |
| П | Testing procedure: CTF Stage 2: | • | | |
| Test | ing location/ address | | | |
| Test | ed by (name + signature) | : | | |
| Witn | essed by (name, function, signat | ure) .: | | |
| Appı | oved by (name, function, signatu | ıre): | | |
| | Testing procedure: CTF Stage 3: | | | |
| | Testing procedure: CTF Stage 4: | | | |
| Testing location/ address: | | | | |
| Tested by (name, function, signature): | | | | |



Page 3 of 30

| Witnessed by (name, function, signature) .: | |
|---------------------------------------------|--|
| Approved by (name, function, signature): | |
| Supervised by (name, function, signature) : | |
| | |





| List of Attachments (including a total number of | pages in each attachment): | | |
|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|--|--|
| None | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| Summary of testing: | | | |
| Tests performed (name of test and test | Testing location: | | |
| clause): | N/A | | |
| N/A | | | |
| | | | |
| | | | |
| | | | |
| Common of compliance with National Difference | and the of accompanies addressed. | | |
| Summary of compliance with National Difference The requirements of USA and Canada have been a | · | | |
| differences or deviations from the IEC 60601-1-11:2 | | | |
| | | | |
| ☐ The product fulfils the requirements of IEC 60601-1-11: 2015 | | | |
| | | | |
| | | | |
| Statement concerning the uncertainty of the me | asurement systems used for the tests | | |
| (may be required by the product standard or client) | | | |
| ✓ Internal procedure used for type testing three | igh which traceability of the measuring | | |
| | | | |
| Procedure number, issue date and title: | | | |
| GMS-QC-12 Estimation of Measurement Uncertainty, 1-July-2012 Initial Release. | | | |
| Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing. | | | |
| | | | |
| ☐ Statement not required by the standard used for type testing | | | |





| Copy of marking plate: The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| See IEC 60601-1 Test Report 160900306SHA-001, 160900306SHA-001 M1, 160900306SHA-001 M2. |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |





| Test item particulars: | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|--|--|
| Classification of installation and use: | portable for power adapter model. Final determination in end product evaluation for open frame model. | | |
| Supply Connection: | appliance coupler/ non-detachable cord for power adapter model. | | |
| : | Final determination in end product evaluation for open frame model. | | |
| Possible test case verdicts: | | | |
| - test case does not apply to the test object: | N/A | | |
| - test object does meet the requirement: | P (Pass) | | |
| - test object does not meet the requirement: | F (Fail) | | |
| Testing: | | | |
| Date of receipt of test item: | No test required | | |
| Date (s) of performance of tests: | No test required | | |
| | | | |
| General remarks: | | | |
| "(See Enclosure #)" refers to additional information ap "(See appended table)" refers to a table appended to t | | | |
| Throughout this report a comma / point is used as the decimal separator. This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program. | | | |
| Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02: | | | |
| The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided | ☑ Yes☐ Not applicable | | |
| When differences exist; they shall be identified in the General product information section. | | | |



Page 7 of 30

Report No. 160900306SHA-002 Modification 2: 2021-07-23

Name and address of factory (ies).....: Factory 1

GlobTek, Inc.

186 Veterans Dr. Northvale, NJ 07647 USA

Factory 2

GlobTek (Suzhou) Co., Ltd

Building 4, No. 76, Jin Ling East Rd., Suzhou Industrial Park, Suzhou, JiangSu 215021,

China

General product information and other remarks:

See IEC 60601-1 Test Report 160900306SHA-001, 160900306SHA-001 M1, 160900306SHA-001 M2.

Modification 1:

The original test report ref. No. 160900306SHA-002 dated 2016-10-27, was modified on 2018-03-13 to include the following changes and/or additions:

- 1. Add new model series: GT*96600-*56***.
- 2. Add new model "3271, 3266, 1569" of Earthing wire.
- 3. Changed the maximum output power of model series GT*96600-***-** from "Max. 60W" to "Max. 65W" in rating.
- 4. Updated the output voltage range and max. output power in the model list of general product information for model series GT*96600-***-**.
- 5. Update Varistor part No. from "Varistor MOV1 (Optional)" to "Varistor MOV1 or MOV (Optional) (MOV/MOV1 for GT*91099 series, MOV1 for GT*96600 series and GT*96600-*56*** series)"
- 6. Add a photo of PCB, which remove component DZ3, R2, RS30, CS2 and DZ4. The PCB use for model GT*91099 series only.
- 7. Update Circuit Diagram.
- 8. Update National Differences version for Japan.

After review, supplementary tests on Input current test, Voltage under Normal Conditions Test, Voltage under Fault Conditions Test, Clearances and Creepage Distances Measurement, Temperature test, Leakage current test, Electric strength test and Abnormal operating and fault conditions test were performed.

Clause concerned..................4.11, 8.5.4, 8.7.4, 8.8.3, 8.9.4, 11.1, 13.2, 15





Modification 2:

The original report ref. No. 160900306SHA-002, dated 2016-10-27, was modified on 2021-07-23 to include the following changes and/or additions:

- Updated the trademark from "GlobTek" to "GlobTek," Inc.
 Added now model and a control of the control o
- 2. Added new model series: GT*96600-**-*-CF. (CY1 and CY2 of this model is up to 1000pF, and an inductor LF3 is added to the secondary circuit and some secondary components have little differences depending on output current and voltage.)
- 3. Added fixed power cord model series: GT*96600-**- TP/TP3/TW/TW3*.
- 4. Updated the labels for model series GT*91099-***-**.
- 5. Updated the description of model similarity and the model list.
- 6. Added new grounding methods in insulation diagrams.
- 7. Added alternative PCB, X capacitor, Varistor, Appliance inlet CON1 Class II units (C18 type) and enclosure in critical component list.
- 8. Updated the national differences for US, Canada and Japan.

Concerning above changes, power input test, leakage current test, creepage distance and air clearance test, excessive temperature test, Cord anchorage test and Cord guards test were performed.





| IEC 60601-1-11 | | | |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| 4 | GENERAL REQUIREMENTS | | Р |
| 4.1 | Characteristics of SUPPLY MAINS specified in 4.10.2 of Part 1 applied, except ME EQUIPMENT or ME SYSTEMS intended for HOME HEALTHCARE ENVIRONMENT complied with the following: | | Р |
| | - SUPPLY MAINS in the HOME HEALTHCARE ENVIRONMENT did not exceed 110 % or was not below 85 % of NOMINAL voltage between any of the conductors of the system or between any of these conductors and earth (% V) | See appended Table 4.11 in See IEC 60601-1 Test Report 160900306SHA-001, 160900306SHA-001 M1, 160900306SHA-001 M2 | _ |
| | - For ME EQUIPMENT OR ME SYSTEMS intended to actively keep alive or resuscitate a PATIENT, SUPPLY MAINS in the HOME HEALTHCARE ENVIRONMENT did not exceed 110 % or was not below 80 % of NOMINAL voltage between any of the conductors of the system or between any of these conductors and earth (% V | Not for LIFE-SUPPORTING ME EQUIPMENT | _ |
| | - RATED range of NOMINAL voltage did include at least 12.4 V to 15.1 V for operation from a 12 V dc supply mains | No such condition | N/A |
| | - RATED range of NOMINAL voltage did include at least 24.8 V to 30.3 V for operation from a 12 V dc supply mains | No such condition | N/A |
| | The equipment maintained BASIC SAFETY and ESSENTIAL PERFORMANCE during and following a 30 s dip to 10 V from a 12 V dc SUPPLY MAINS | No such condition | N/A |
| | The equipment maintained BASIC SAFETY and ESSENTIAL PERFORMANCE during and following a 30 s dip to 20 V from a 24 V dc SUPPLY MAINS | No such condition | N/A |
| 4.2.2 | Environmental conditions of transport and storaginstructions for use | e between uses, indicated in | Р |
| | ME EQUIPMENT, except STATIONARY EQUIPMENT, after being removed from its protective packaging, and subsequently between uses, operated within its specified NORMAL USE after transport or storage in the specified environmental conditions | | Р |
| | temperature range:-25 °C to + 5 °C | -40°C to 80°C 0 RH % to 93 RH % 700 hPa to 1060 hPa | Р |
| | temperature range:+5 °C to +35 °C at a non- condensing relative humidity up to 90 % | | Р |
| | temperature range: >35 °C to 70 °C at a water vapour pressure up to 50 hPa | | Р |



| IEC 60601-1-11 | | | |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| | For more restricted range of environmental transport and storage conditions between uses, the environmental conditions are specified | | N/A |
| | - Justified in the RISK MANAGEMENT FILE | | N/A |
| | - Marked on the ME EQUIPMENT | | N/A |
| | When not practicable, the more restricted range is disclosed in the instructions for use | | N/A |
| | Marked on the carrying case when the instructions for use indicate the ME EQUIPMENT is intended to be transported or stored in a carrying case between uses | | N/A |
| | Symbol 5.3.5 (ISO 7000-0534), 5.3.6 (ISO 7000-0533), or 5.3.7 (ISO 7000-0632) of ISO 15223-1:2012 used to mark temperature range | | N/A |
| | Symbol 5.3.8 (ISO 7000-2620) of ISO 15223-1:2012 used to mark humidity range | | N/A |
| | Symbol 5.3.9 (ISO 7000-2621) of ISO 15223-1:2012 used to mark atmospheric pressure range | | N/A |
| | Where ME EQUIPMENT used different marking for conditions of transport and storage between uses, continuous operating conditions and transient operating conditions, markings accompanied by supplementary markings except where the respective applicability was obvious | | N/A |
| | Environmental transport and storage test | | Р |
| | a) ME EQUIPMENT prepared for transportation or storage according to instructions for use | | Р |
| | b) ME EQUIPMENT exposed to its lowest specified environmental transport and storage conditions (temperature -4 °C) (°C) | -40 °C | Р |
| | For at least 16 h or, ensure ME EQUIPMENT reached THERMAL STABILITY for at least 2 h | | Р |
| | c) Then ME EQUIPMENT exposed to 34 °C ± 4 °C and 90 % - 0% + 6% relative humidity until the test chamber reached equilibrium and held for at least 2 hours. The transition from low to high temperature was made slowly enough to provide a noncondensing environment. | 34°C and 90% relative humidity | Р |
| | d) ME EQUIPMENT exposed to its highest specified environmental transport and storage conditions, not requiring a water vapour pressure greater than 50 | 80 °C,50hpa | Р |
| | hPa (temperature °C); (°C, ±%) | | |





| | IEC 60601-1-11 | Modification 2: | . 2021-07- |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|------------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| | - For at least 16 h or, ensured ME EQUIPMENT reached THERMAL STABILITY for at least 2 h | | Р |
| | e) At the end of this conditioning period, ME EQUIPMENT allowed to return and stabilize at the operating conditions of NORMAL USE | | Р |
| | f) ME EQUIPMENT evaluated to its specifications and ensured it provides BASIC SAFETY and ESSENTIAL PERFORMANCE | | Р |
| 4.2.3.1 | Environmental operating conditions - Continuous | operating conditions | Р |
| | Instructions for use indicated permissible environmental operating conditions of the ME EQUIPMENT | | Р |
| | ME EQUIPMENT complied with its specifications and all requirements of the standard when operated in NORMAL USE within temperature + 5 °C to +40 °C, | | N/A |
| | Relative humidity range of 15 % to 90%, non- condensing, but not requiring a water vapour partial pressure greater than 50 hPa; and | | N/A |
| | An atmospheric pressure range of 700 hPa to 1060 hPa | | N/A |
| | For more restricted range of environmental operating conditions | 0 °C to +35 °C | Р |
| | - justified in the risk management file; | See RISK MANAGEMENT Table 4.2.3.1 | Р |
| | -marked on the equipment; or were nor practical in the instructions for use | be disclosed in the instructions for use | Р |
| | Marked on the carrying case when the instructions for use indicate the ME EQUIPMENT is intended to be operated in a carrying case | No carrying case | N/A |
| | Symbol 5.3.5 (ISO 7000-0534), 5.3.6 (ISO 7000-0533), or 5.3.7 (ISO 7000-0632) of ISO 15223-1:2012 used to mark temperature range | No such symbol | N/A |
| | Symbol 5.3.8 (ISO 7000-2620) of ISO 15223-1:2012 used to mark humidity range | No such symbol | N/A |
| | Symbol 5.3.9 (ISO 7000-2621) of ISO 15223-1:2012 used to mark atmospheric pressure range | No such symbol | N/A |
| | Where ME EQUIPMENT used different marking for conditions of continuous operating conditions and transient operating conditions, markings accompanied by supplementary markings | | N/A |
| | Environmental operating conditions test | | Р |





| | Modification 2: 2021-0 IEC 60601-1-11 | | | |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------|--|
| Clause | Requirement + Test | Result - Remark | Verdict | |
| | a) ME EQUIPMENT was set up for operation according to INTENDED USE | | Р | |
| | b) ME EQUIPMENT exposed to 20 °C ± 4 °C for at least 6 h or, ensured ME EQUIPMENT reached THERMAL STABILITY for at least 2 h, (h) | 6h | Р | |
| | c) ME EQUIPMENT evaluated to its specifications and ensured it continued to provide BASIC SAFETY and ESSENTIAL PERFORMANCE | | Р | |
| | d) ME EQUIPMENT evaluated to its specifications and ensured it continued to provide BASIC SAFETY and ESSENTIAL PERFORMANCE while at the lowest specified atmospheric pressure. | | Р | |
| | e) ME EQUIPMENT evaluated to its specifications and ensured it continued to provide BASIC SAFETY and ESSENTIAL PERFORMANCE while at the highest specified atmospheric pressure. | | Р | |
| | f) Pressure in chamber relieved | | Р | |
| | g) ME EQUIPMENT cooled to its lowest specified environmental operating conditions | | Р | |
| | h) ME EQUIPMENT held at lowest specified environmental operating conditions for at least 6 h or, ensured the ME EQUIPMENT reached THERMAL STABILITY for at least 2 h | 6h | Р | |
| | i) ME EQUIPMENT met its specifications and BASIC SAFETY and ESSENTIAL PERFORMANCE | | Р | |
| | j) ME EQUIPMENT warmed to its highest specified continuous environmental operating conditions | | Р | |
| | k) ME EQUIPMENT held the conditions of j) for at least 6 h or, ensured the ME EQUIPMENT reached THERMAL STABILITY for at least 2 h | 6h | Р | |
| | I) ME EQUIPMENT met its specifications and BASIC SAFETY and ESSENTIAL PERFORMANCE | | Р | |
| 4.2.3.2 | Environmental shock to TRANSIT-OPERABLE EQUIPM | ENT | N/A | |
| | TRANSIT-OPERABLE EQUIPMENT with a stated wider range of continuous environmental operation conditions maintained BASIC SAFETY and ESSENTIAL PERFORMANCE in the presence of condensation and thermal shock from rapid changes in environmental temperature and humidity during INTENDED USE when test in accordance with 4.2.3.2 a)-j). | Not TRANSIT-OPERABLE EQUIPMENT | N/A | |





Modification 2: 2021-07-23 IEC 60601-1-11 Clause Requirement + Test Result - Remark Verdict

Report No. 160900306SHA-002

| 5 | GENERAL REQUIREMENTS FOR TESTING ME EQ | UIPMENT | Р |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----|
| | In addition to the requirements of 5.9.2.1 of with IEC 60601-1 standard, accessibility determined as indicated below: | | Р |
| | ACCESSIBLE parts of ME EQUIPMENT identified by inspection and, when necessary, by testing | | Р |
| | When in doubt, an ACCESSIBLE PART of ME EQUIPMENT determined by a test with the small finger probe of Fig 1, applied in a bent or straight position as follows: | | Р |
| | for all positions of the ME EQUIPMENT operating in NORMAL USE | No opening | N/A |
| | after opening ACCESS COVERS and removal of parts, including lamps, fuses, and fuse holders when: | | N/A |
| | i) the ACCESS COVERS could be opened without the use of a TOOL, or | | N/A |
| | ii) the instructions for use instructed a LAY OPERATOR to open the relevant ACCESS COVER | | N/A |

| 6 | CLASSIFICATION OF ME EQUIPMENT AND ME SY | STEMS | Р |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-----|
| | ME EQUIPMENT intended for HOME HEALTHCARE ENVIRONMENT classified as follows, except for PERMANENTLY INSTALLED EQUIPMENT and as required by Part 1, Sub-clause 6.2: | | Р |
| | - CLASS II Or INTERNALLY POWERED | CLASS II | Р |
| | - Not provided with a FUNCTIONAL EARTH TERMINAL | | Р |
| | - When equipped with APPLIED PARTS, they are TYPE BF or CF | No APPLIED PARTS | N/A |

| 7 | ME EQUIPMENT IDENTIFICATION, MARKING ANI | D DOCUMENTS | Р |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|-----|
| 7.1 | USABILITY of identification, marking, and ACCOMPANYING DOCUMENTS intended for LAY OPERATOR or LAY RESPONSIBLE ORGANIZATION evaluated by an OPERATOR whose PROFILE included minimum eight years of education | USABILITY ENGINEERING should be considered in end product | N/A |
| | ME EQUIPMENT and ME SYSTEMS intended for HOME HEALTHCARE ENVIRONMENT are simple to use and do not require referencing complex ACCOMPANYING DOCUMENTS | | N/A |
| 7.2 | In addition to requirements of 7.2.9 of the general standard, the carrying case provided some or all of the ingress protection against water or particulate matter, The ENCLOSURE is marked with the safety sign ISO 7010-W001 and "keep dry" or: | IP20 | N/A |





| IEC 60601-1-11 | | | |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| | Symbol ISO 15223-1:2012, 5.3.4 (ISO 7000-0626) | | N/A |
| | A carrying case marked with degree of protection | No carrying case | N/A |
| | Carrying case inspected, and tests and criteria of 7.1.2 and 7.1.3 of Part 1 applied: | No carrying case | N/A |
| 7.3 | ACCOMPANYING DOCUMENTS | | Р |
| 7.3.1 | ACCOMPANYING DOCUMENTS indicate the LAY OPERATOR OR LAY RESPONSIBLE ORGANIZATION contact the MANUFACTURER OR MANUFACTURER'S representative on the following issues: | Accompany documents are provided for some critical issue like technical data, safety warnings, necessary information to set up, but further evaluation is needed on end product level. | Р |
| | Assistance in setting up, using, or maintaining the ME EQUIPMENT or ME SYSTEM when needed, or | | Р |
| | - To report unexpected operation or events | | Р |
| | ACCOMPANYING DOCUMENTS include a postal address and either a phone number or web address for the LAY OPERATOR OR LAY RESPONSIBLE ORGANIZATION to contact the MANUFACTURER OR MANUFACTURER'S representative | | Р |
| 7.3.2 | ACCOMPANYING DOCUMENTS include necessary details for healthcare professional to brief the LAY OPERATOR OF LAY RESPONSIBLE ORGANIZATION on any known contraindication(s) to the use of ME EQUIPMENT OF ME SYSTEM and any precautions to be taken, including the following: | Accompany documents are provided for some critical issue like technical data, safety warnings, necessary information to set up, but further evaluation is needed on end product level. | N/A |
| | Precautions to be taken in the event of changes in the performance of ME EQUIPMENT or ME SYSTEM | | N/A |
| | Precautions to be taken regarding the exposure of the ME EQUIPMENT or ME SYSTEM to reasonably foreseeable environmental conditions | | N/A |
| | Adequate information regarding medicinal substances that ME EQUIPMENT is designed to administer, including any limitations in the choice of substances to be delivered as indicated below: | | N/A |
| | Information on any medicinal substances or human blood derivatives incorporated into the ME EQUIPMENT or ACCESSORIES as an integral part; and | | N/A |
| | The degree of accuracy claimed for ME EQUIPMENT with a measuring FUNCTION | | N/A |
| 7.4 | Instructions for use | | N/A |



| Modification 2: 202 IEC 60601-1-11 | | | |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| Clause | Requirement + Test | Result - Remark | verdict |
| 7.4.1 | Nature of the HAZARD, likely consequences that could occur if the advice is not followed, and precautions for reducing the RISK described in instructions for use corresponding to each warning and safety sign | Acceptability of residual risk of power supply must be determined as part of the end product. | N/A |
| | The instructions for use address the following issues, | , as applicable: | N/A |
| | Strangulation due to cables and hoses, particularly due to excessive length | | N/A |
| | - Inhalation or swallowing of small parts | | N/A |
| | Potential allergic reactions to accessible materials used in the ME EQUIPMENT | | N/A |
| | - Contact injuries | | N/A |
| | The instructions for use include warnings to the effect that the following actions could be unsafe as applicable: | | N/A |
| | Use of ACCESSORIES, detachable parts, and materials not described in the instructions for use (see 7.9.2.14 of Part 1) | | N/A |
| | Interconnection of this equipment to other equipment not described in the instructions for use (see 16.2 c) indent 9) of Part 1) | | N/A |
| | - Modification of the equipment | | N/A |
| | Use of the ME EQUIPMENT outside its carrying case when some part of the protection required by this standard is provided by that carrying case (see 8.3.1 and 10.1) | | N/A |
| 7.4.2 | When BASIC SAFETY OR ESSENTIAL PERFORMANCE dependents on the INTERNAL ELECTRICAL POWER SOURCE, the instructions for use describes the following: | No INTERNAL ELECTRICAL POWER SOURCE | N/A |
| | - Typical operation time or number of procedures : | | N/A |
| | Typical service life of the INTERNAL ELECTRICAL POWER SOURCE; and: | | N/A |
| | Behaviour of ME EQUIPMENT while the rechargeable INTERNAL ELECTRICAL POWER SOURCE is charging: | | N/A |
| 7.4.3 | Instructions for use for ME EQUIPMENT intended for use by a LAY OPERATOR include easily understood diagrams, illustrations, or photographs of the fully assembled and ready-to-operate ME EQUIPMENT including all controls, visual INFORMATION SIGNALS, and indicators provided (see 7.1) | Necessary information to set up was provided in the instruction. USABILITY ENGINEERING should be considered in end product | Р |
| 7.4.4 | Additional requirements for ME EQUIPMENT start-up | PROCEDURE: | N/A |
| | <u> </u> | | l . |





| | Modification 2: 2021- | | |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|---------|
| IEC 60601-1-11 | | | |
| Clause | Requirement + Test | Result - Remark | Verdict |
| | Easily understood diagrams, illustrations, or photographs showing proper connection of the PATIENT to the ME EQUIPMENT, ACCESSORIES and other equipment (see 7.1) | No connection to PATIENT | N/A |
| | - the time from switching "ON" until the ME EQUIPMENT is ready for NORMAL USE, when it exceeds 15 s (see 15.4.4 of Part 1) (s): | No such feature. | N/A |
| | -the time required for ME EQUIPMENT to warm from the minimum storage temperature between uses until it is ready for intended use; and: | No such conditions | N/A |
| | -the time required for ME EQUIPMENT to cool from the maximum storage temperature between uses until it is ready for intended use; and: | No such conditions | N/A |
| 7.4.5 | Instructions for use for ME EQUIPMENT intended for use by a LAY OPERATOR include a description of generally known conditions in the HOME HEALTHCARE ENVIRONMENT that can unacceptably affect the BASIC SAFETY and ESSENTIAL PERFORMANCE of the ME EQUIPMENT | Acceptability of residual risk of power supply must be determined as part of the end product. | N/A |
| | The steps that can be taken by the LAY OPERATOR to identify and resolve the above conditions | | N/A |
| | At least the following issues are also included as app | licable | N/A |
| | - The effects of lint, dust, light (including sunlight), etc. | | N/A |
| | - A list of known devices or other sources that can potentially cause interference problems | | N/A |
| | - The effects of degraded sensors and electrodes, or loosened electrodes, that can degrade performance or cause other problems | | N/A |
| | - The effects caused by pets, pests or children | | N/A |
| | The instructions for use explain the meaning of the IP classification marked on the ME EQUIPMENT, and on any carrying case provided with the ME EQUIPMENT as applicable | | N/A |
| 7.4.6 | Instructions for use include a troubleshooting guide for use when there are indications of a ME EQUIPMENT malfunction during start-up or operation | No need of such guide for power supply. But final determination in the end product. | N/A |
| | Troubleshooting guide discloses the necessary steps in the event of an TECHNICAL ALARM CONDITION | | N/A |



| 7.4.7 Instructions for use for ME EQUIPMENT, ME SYSTEMS, parts, and ACCESSORIES for other than single use that can be contaminated by contact with PATIENT, body fluids, or expired gases, during INTENDED USE, indicate the following: - Frequency of cleaning, cleaning and disinfection, or cleaning and sterilization, as appropriate, for ME EQUIPMENT, ME SYSTEMS, parts, and ACCESSORIES used on the same PATIENT including rinsing methods, drying, handling, and storage between uses (see 8.1 and 8.2); and - It is necessary to clean and disinfect, clean and sterilize the ME EQUIPMENT, ME SYSTEMS, parts, and ACCESSORIES for multiple PATIENT use between uses on different PATIENTS, including rinsing methods, drying, handling, and storage until re-use (see 8.1 and 8.2), or - ME EQUIPMENT, ME SYSTEMS and ACCESSORIES | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| parts, and ACCESSORIES for other than single use that can be contaminated by contact with PATIENT, body fluids, or expired gases, during INTENDED USE, indicate the following: - Frequency of cleaning, cleaning and disinfection, or cleaning and sterilization, as appropriate, for ME EQUIPMENT, ME SYSTEMS, parts, and ACCESSORIES used on the same PATIENT including rinsing methods, drying, handling, and storage between uses (see 8.1 and 8.2); and - It is necessary to clean and disinfect, clean and sterilize the ME EQUIPMENT, ME SYSTEMS, parts, and ACCESSORIES for multiple PATIENT use between uses on different PATIENTS, including rinsing methods, drying, handling, and storage until re-use (see 8.1 and 8.2), or | |
| or cleaning and sterilization, as appropriate, for ME EQUIPMENT, ME SYSTEMS, parts, and ACCESSORIES used on the same PATIENT including rinsing methods, drying, handling, and storage between uses (see 8.1 and 8.2); and — It is necessary to clean and disinfect, clean and sterilize the ME EQUIPMENT, ME SYSTEMS, parts, and ACCESSORIES for multiple PATIENT use between uses on different PATIENTS, including rinsing methods, drying, handling, and storage until re-use (see 8.1 and 8.2), or | N/A |
| sterilize the ME EQUIPMENT, ME SYSTEMS, parts, and ACCESSORIES for multiple PATIENT use between uses on different PATIENTS, including rinsing methods, drying, handling, and storage until re-use (see 8.1 and 8.2), or | |
| - ME FOUIPMENT, ME SYSTEMS and ACCESSORIES | N/A |
| require professional hygienic maintenance prior to re-use and provide contact details for the source of these services (see 7.5.2) | N/A |
| 7.4.8 Instructions for use include: | Р |
| - EXPECTED SERVICE LIFE of the ME EQUIPMENT: 5 years | Р |
| - EXPECTED SERVICE LIFE of parts and ACCESSORIES shipped with the ME EQUIPMENT | Р |
| SHELF LIFE of parts and ACCESSORIES shipped with ME EQUIPMENT when SHELF LIFE is less than the EXPECTED SERVICE LIFE: | N/A |
| 7.4.9 Instructions for use include: | N/A |
| A statement indicating the LAY RESPONSIBLE ORGANIZATION must contact its local authorities to determine the proper method of disposal of potentially bio hazardous parts and ACCESSORIES, as applicable Not applicable for power supp | ly N/A |
| 7.4.10 Instructions for use includes the recommended placement of the remote parts of the DISTRIBUTED ALARM SYSTEM, when applicable, to ensure the OPERATOR can be notified at all times by an appropriate element of DISTRIBUTED ALARM SYSTEM within its specified range | ly N/A |
| 7.5 Technical description | N/A |
| 7.5.1 The technical description for PERMANENTLY INSTALLED CLASS I ME EQUIPMENT includes: Not PERMANENTLY INSTALLED CLASS I ME EQUIPMENT | N/A |





| | IEC 60601-1-11 | | |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| | A warning indicating the ME EQUIPMENT installation, including a correct PROTECTIVE EARTH CONNECTION, must only be carried out by qualified SERVICE PERSONNEL | | N/A |
| | Specifications of the PERMANENTLY INSTALLED PROTECTIVE EARTH CONDUCTOR | | N/A |
| | A warning to verify the integrity of the external protective earthing system | | N/A |
| | A warning to connect and verify that the PROTECTIVE EARTH TERMINAL of the PERMANENTLY INSTALLED ME EQUIPMENT is connected to the external protective earthing system | | N/A |
| 7.5.2 | Technical description includes methods for cleaning and disinfection or cleaning and sterilization for ME EQUIPMENT and ACCESSORIES requiring professional hygienic maintenance prior to reuse (see 7.4.7): | No cleaning, disinfection and sterilization required for power supply. But final determination in the end product. | N/A |
| | Before and after any type of service PROCEDURE | | N/A |
| | When the ME EQUIPMENT is transferred to another PATIENT | | N/A |

| 8 | PROTECTION AGAINST EXCESSIVE TEMPERAT HAZARDS | URES AND OTHER | N/A |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----|
| 8.1 | A LAY OPERATOR in the HOME HEALTHCARE ENVIRONMENT can perform the cleaning or cleaning and disinfection PROCESSES when intended (see 7.4.7) | No cleaning, disinfection and sterilization required for power supply. But final determination in the end product. | N/A |
| | USABILITY of each such PROCESS pertaining to a LAY OPERATOR was investigated by the USABILITY ENGINEERING PROCESS: | | N/A |
| 8.2 | A LAY OPERATOR in the HOME HEALTHCARE ENVIRONMENT can perform the cleaning and sterilization PROCESSES when intended (see 7.4.7) | No sterilization required for power supply. But final determination in the end product. | N/A |
| | USABILITY of each such PROCESS pertaining to a LAY OPERATOR was investigated by the USABILITY ENGINEERING PROCESS | | N/A |
| 8.3 | Additional requirements for ingress of water or p EQUIPMENT and ME SYSTEMS | particulate matter into ME | N/A |
| 8.3.1 | TRANSIT-OPERABLE, HANDHELD, and BODY-WORN ME EQUIPMENT maintained BASIC SAFETY and ESSENTIAL PERFORMANCE after undergoing the test of IEC 60529 for at least IP 22 | | N/A |





| | IEC 60601-1-11 | | |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------|
| Clause | Requirement + Test | Result - Remark | Verdic |
| | All other ME EQUIPMENT maintained BASIC SAFETY and ESSENTIAL PERFORMANCE after undergoing the test of IEC 60529 for at least IP21 | | N/A |
| | For PORTABLE ME EQUIPMENT intended to be used only while in a carrying case, IP21 met with the ME EQUIPMENT in its the carrying case | | N/A |
| | Maintenance of BASIC SAFETY and ESSENTIAL PERFORMANCE VERIFIED | | N/A |
| 8.3.2 | ENCLOSURES of the non-ME EQUIPMENT parts of the ME SYSTEMS provide the degree of protection against harmful ingress of water or particulate matter equivalent to equipment complying with their respective IEC or ISO safety standards | | N/A |
| | Tests of IEC 60529:1989 conducted with the equipment placed in the least favourable position of NORMAL USE and the ENCLOSURES inspected | | N/A |
| 8.4 | Additional requirements for interruption of the po | ower supply/SUPPLY MAINS to | N/A |
| | ME EQUIPMENT or ME SYSTEM with ESSENTIAL PERFORMANCE intended to actively keep alive or resuscitate a PATIENT maintained its ESSENTIAL PERFORMANCE for a sufficient time or for a sufficient number of PROCEDURES when loss or failure of SUPPLY MAINS or near depletion INTERNAL ELECTRICAL POWER SOURCE occurred | | N/A |
| | The time or number of PROCEDURES remaining allowed alternative life-supporting methods to be employed | | N/A |
| | Optionally, an INTERNAL ELECTRICAL POWER SOURCE was used to maintain ESSENTIAL PERFORMANCE: | | N/A |
| | Optionally, independent means were used to provide ESSENTIAL PERFORMANCE | | N/A |
| | Instructions for use disclose the time or number of procedures available following a loss or failure of the SUPPLY MAINS or near depletion of the INTERNAL ELECTRICAL POWER SOURCE | | N/A |
| | Instructions for use describes the alternative life- supporting methods to be employed | | N/A |
| | The technical description describes methods that can be employed for longer periods | | N/A |



| Modification 2: 2021-0 IEC 60601-1-11 | | | |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| | ME EQUIPMENT OR ME SYSTEM with ESSENTIAL PERFORMANCE intended to actively keep alive or resuscitate a PATIENT with no INTERNAL ELECTRICAL POWER SOURCE is equipped with an ALARM SYSTEM that includes at least a MEDIUM PRIORITY ALARM CONDITION indicating power failure | | N/A |
| | ME EQUIPMENT or ME SYSTEM with ESSENTIAL PERFORMANCE intended to actively keep alive or resuscitate a PATIENT with an INTERNAL ELECTRICAL POWER SOURCE is equipped with an automatic switchover to INTERNAL ELECTRICAL POWER SOURCE | | N/A |
| | ME EQUIPMENT or ME SYSTEM with ESSENTIAL PERFORMANCE intended to actively keep alive or resuscitate a PATIENT with an INTERNAL ELECTRICAL POWER SOURCE is equipped with an ALARM SYSTEM that includes at least a MEDIUM PRIORITY TECHNICAL ALARM CONDITION indicating the INTERNAL ELECTRICAL POWER SOURCE is nearing insufficient remaining power for operation | | N/A |
| | TECHNICAL ALARM CONDITION provides sufficient time or sufficient number of procedures for a LAY OPERATOR to act | | N/A |
| | A TECHNICAL ALARM CONDITION of at least LOW PRIORITY remained active until the INTERNAL ELECTRICAL POWER SOURCE returned to a level above the ALARM LIMIT or until depleted | | N/A |
| | It was not possible to inactivate the visual ALARM SIGNAL of this TECHNICAL ALARM CONDITION | | N/A |
| | Functional tests conducted, and the RISK MANAGEMENT FILE inspected: | | N/A |
| 8.5 | Additional requirements for an INTERNAL ELECTRIC | AL POWER SOURCE | N/A |
| 8.5.1 | ME EQUIPMENT provided with a means for the OPERATOR to determine state of the INTERNAL ELECTRICAL POWER SOURCE when the is essential for BASIC SAFETY OR ESSENTIAL PERFORMANCE OR to control risks associated with loss of ESSENTIAL PERFORMANCE | No INTERNAL ELECTRICAL POWER SOURCE | N/A |
| | State of INTERNAL ELECTRICAL POWER SOURCE indicated by: | | N/A |
| | - number of PROCEDURES remaining; | | N/A |
| | -remaining operating time; | | N/A |
| | -percentage of the remaining operating time or energy; or | | N/A |
| | -"fuel" gauge | | N/A |





| | IEC 60601-1-11 | | |
|--------|---------------------------------------------------------------------------------------|-----------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| | Instructions described method to determine state of INTERNAL ELECTRICAL POWER SOURCE | | N/A |
| 8.5.2 | Means, other than labelling, provided to prevent RISK of swallowing coin/button cells | | N/A |
| | Replacement of button cell require use of TOOL | | N/A |

| 9 | ACCURACY OF CONTROLS AND INSTRUMENTS AND PROTECTION AGAINST HAZARDOUS OUTPUTS | N/A |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| | The RISKS associated with USABILITY in the HOME HEALTHCARE ENVIRONMENT for OPERATOR PROFILES including a LAY OPERATOR when performing the USABILITY ENGINEERING PROCESS include at least the following considerations: | N/A |
| | - changes of controls | N/A |
| | - unexpected movement | N/A |
| | - potential for misconnection | N/A |
| | potential for improper operation, or unsafe use | N/A |
| | potential for confusion as to current operational mode | N/A |
| | - change in the transfer of energy or substance | N/A |
| | - exposure to environmental conditions specified in this standard | N/A |
| | - exposure to biological materials, and | N/A |
| | - small parts being inhaled or swallowed | N/A |
| | Particular emphasis placed on the limited training of a LAY OPERATOR with respect to the ability to intervene and maintain BASIC SAFETY and ESSENTIAL PERFORMANCE. | N/A |
| | The MANUFACTURER'S USABILITY ENGINEERING PROCESS included the least capable intended LAY OPERATOR OF LAY RESPONSIBLE ORGANIZATION | N/A |
| | USABILITY ENGINEERING FILE inspected for compliance | N/A |

| 10 | CONSTRUCTION OF ME EQUIPMENT | Р |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 10.1 | Additional requirements for mechanical strength | Р |
| 10.1.1 | Additions to Table 28 Mechanical strength test of the base standard, conducted as indicated in Table 1, Mechanical strength test applicability, non-TRANSIT-OPERABLE, and Table 2, Mechanical strength test applicability, TRANSIT-OPERABLE | Р |



| IEC 60601-1-11 | | | |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| 10.1.2 | ME EQUIPMENT, its parts, and mounting ACCESSORIES, intended for non-TRANSIT-OPERABLE use displayed adequate mechanical strength when subjected to mechanical stress caused by NORMAL USE, including pushing, impact, dropping and rough handling (not applicable to FIXED and STATIONARY ME EQUIPMENT) | | Р |
| | ME EQUIPMENT maintained BASIC SAFETY and ESSENTIA mechanical tests | AL PERFORMANCE after | Р |
| | OPERATOR-re-settable protective devices that can be reset without the use of a TOOL were, optionally, reset prior to the evaluation of BASIC SAFETY and ESSENTIAL PERFORMANCE | | P |
| | a) Shock tests conducted in accordance with IEC 60068-2-27:2008 | See Appended Table 10.1.2a | Р |
| | b) Broad-band random vibration tests conducted in accordance with IEC 60068-2-64:2008, using the following conditions: | See Appended Table 10.1.2b | Р |
| 10.1.3 | ME EQUIPMENT, parts, and mounting ACCESSORIES for TRANSIT-OPERABLE use displayed adequate mechanical strength when subjected to pushing, impact, dropping, rough handling, and rigorous conditions of PATIENT movement in NORMAL USE as well as transportation by trolleys, carts, road vehicles, trains, ships, and aircraft | Not transit-operable ME EQUIPMENT | N/A |
| | ME EQUIPMENT maintained BASIC SAFETY and ESSENTIAL PERFORMANCE after the following tests: | | N/A |
| | a) Shock tests conducted on other than HAND-HELD ME EQUIPMENT, parts, and mounting ACCESSORIES in accordance with IEC 60068-2-27:2008 | | N/A |
| | 1) Test type: Type 1 | | N/A |
| | 2) Test type: Type 2 | | N/A |
| | b) Shock tests conducted on HAND-HELD ME EQUIPMENT, parts, and mounting ACCESSORIES in accordance with IEC 60068-2-27:2008 | | N/A |
| | 1) Test type: Type 1 | | N/A |
| | 2) Test type: Type 2 | | N/A |
| | c) Broad-band random vibration test conducted on ME EQUIPMENT, parts, and mounting ACCESSORIES in accordance with IEC 60068-2-64:2008: | | N/A |
| | d) Free fall tests conducted on PORTABLE and MOBILE ME EQUIPMENT, parts, and mounting ACCESSORIES per IEC 60068-2-31:2008, using PROCEDURE 1: | | N/A |
| | BASIC SAFETY and ESSENTIAL PERFORMANCE were maintained | | N/A |





| | | modino | <u> </u> | | |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|--|--|
| | IEC 60601-1-11 | | | | |
| Clause | Requirement + Test | Result - Remark | Verdict | | |
| 10.2 | Controls of ME EQUIPMENT intended for use by a LAY OPERATORY that can affect BASIC SAFETY or ESSENTIAL PERFORMANCE protected from accidental or unauthorized changes or adjustments | | N/A | | |
| | OPERATOR-adjustable controls used for calibration include a means to prevent unintentional changes from the intended position | | N/A | | |

| 11 | PROTECTION AGAINST STRANGULATION OR ASPHYXIATION | | N/A |
|----|--------------------------------------------------|-----------------------------------------------------------------------------------------|-----|
| | | The acceptability of risk of the power supply is determined as part of the end product. | N/A |
| | EQUIPMENT and RISK MANAGEMENT FILE inspected : | | N/A |

| 12 | ADDITIONAL REQUIREMENTS FOR ELECTROMAGNETIC EMISSIONS OF ME EQUIPMENT AND ME SYSTEMS | | |
|----|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----|
| | HEALTHCARE ENVIRONMENT are Class B according to | Not applicable to component power supply system; to be determined in the end product | N/A |

| 13 | ADDITIONAL REQUIREMENTS FOR ALARM SYSTEMS OF ME EQUIPMENT AND ME SYSTEMS | | N/A |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----|
| 13.1 | Each HIGH PRIORITY and MEDIUM PRIORITY ALARM CONDITION causes generation of auditory ALARM SIGNALS per IEC 60601-1-8:2006 and IEC 60601-1-8:2006/AMD1:2012, except when equipment is connected to a DISTRIBUTED ALARM SYSTEM intended for confirmed deliver of ALARM CONDITIONS including the generation of auditory ALARM SIGNALS per IEC 60601-1-8:2006 and IEC 60601-1-8:2006/AMD1:2012 | The acceptability of risk of the power supply is determined as part of the end product. | N/A |
| 13.2 | For ME EQUIPMENT and ME SYSTEMS intended to actively keep alive or resuscitate a PATIENT, reducing the auditory ALARM SIGNAL volume T below audible levels resulted in the following was not possible, except when the ALARM SYSTEM was connected to a DISTRIBUTED ALARM SYSTEM that included generation of auditory ALARM SIGNALS per IEC 60601-1-8:2006 and IEC 60601-1-8:2006/AMD1:2012 | | N/A |





| | IEC 60601-1-11 | | |
|--------|--------------------|-----------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |

| 4.2.2 | RM RESULTS TABLE: Permissible environmental conditions of transport and storage, between uses, indicated in instructions for use | | N/A |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------|------------------|---------|
| Clause of ISO 14971 | Document Ref. in RMF (Document No. & paragraph) | Result - Remarks | Verdict |
| 4.2 | | | |
| 4.3 | | | |
| 4.4 | | | |

| 4.2.3.1 | RM RESULTS TABLE: Environmental operating conditions - Continuous operating conditions | | Р |
|---------------------------|----------------------------------------------------------------------------------------|----------------------------------------|---------|
| Clause of ISO 14971 | Document Ref. in RMF (Document No. & paragraph) Result - Remarks | | Verdict |
| 4.2 | <gt-rm2013-010> H1</gt-rm2013-010> | Intended use is identified | Р |
| 4.3 | <gt-rm2013-010> H1</gt-rm2013-010> | Hazardous situation is identified | Р |
| 4.4 | <gt-rm2013-010> H1</gt-rm2013-010> | Severity and probability is identified | Р |

| 7.4.1 | RM RESULTS TABLE: Additional requirements for warning and safety notices | | N/A |
|---------------------------|--------------------------------------------------------------------------|------------------|---------|
| Clause of ISO 14971 | Document Ref. in RMF (Document No. & paragraph) | Result - Remarks | Verdict |
| 4.2 | | | |
| 4.3 | | | |
| 4.4 | | | |
| 5 | | | |
| 6.2 | | | |

| 7.4.5 | RM RESULTS TABLE: : Additional requirements for operating instructions | | N/A |
|---------------------------|------------------------------------------------------------------------|------------------|---------|
| Clause of ISO 14971 | Document Ref. in RMF (Document No. & paragraph) | Result - Remarks | Verdict |
| 4.3 | | | |
| 4.4 | | | |
| 5 | | | |
| 6.2 | | | |





| | | IEC 60601-1-11 | | |
|--------|--------------------|----------------|-----------------|---------|
| Clause | Requirement + Test | | Result - Remark | Verdict |

| 8.4 | RM RESULTS TABLE: Additional requirements for interruption of power supply / supply mains to ME Equipment and ME Systems | | N/A |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------|------------------|---------|
| Clause of ISO 14971 | Document Ref. in RMF (Document No. & paragraph) | Result - Remarks | Verdict |
| 4.2 | | | |
| 4.3 | | | |
| 5 | | | |
| 6.2 | | | |
| 6.3 | | | |
| 6.4 | | | |
| 6.5 | | | |
| 6.6 | | | |
| 6.7 | | | |

| 10.1.2a | TABLE: Shock test (IEC 60068-2-27:2008), using the following conditions*: | | |
|---------|---------------------------------------------------------------------------|--------------------------------------------|--|
| | Peak acceleration: | 150 m/s2 (15 g) | |
| | Duration: | 11 ms | |
| | Pulse shape: | half-sine | |
| | Number of shocks: | 3 shocks per direction per axis (18 total) | |

| Direction Shock Applied | Axis Shock Applied | BASIC SAFETY and ESSENTIAL PERFORMANCE maintained? Yes/No | Remarks |
|----------------------------|---------------------|-----------------------------------------------------------|-------------------------------------------------------|
| Positive | X axis ² | Yes | The enclosure shows no |
| Negative | X axis ² | Yes | cracks and there is no damaged or loosing part inside |
| Positive | Y axis ² | Yes | the product after test. |
| Negative | Y axis ² | Yes | The EUT worked as normal and passed the dielectric |
| Positive | Z axis ² | Yes | strength test. |
| Negative | Z axis ² | Yes | |

Supplementary information:

*(NOTE 1 This represents Class 7M1 as described in IEC TR 60721-4-7:2001 [6])



Page 26 of 30

Report No. 160900306SHA-002 Modification 2: 2021-07-23

| | IEC 60601-1-11 | | |
|--------|--------------------|-----------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |

| 10.1.2b | TABLE: Broad-band random vibration test (IEC following conditions*: | 60068-2-64:2008) using the | Р |
|---------|---------------------------------------------------------------------|--------------------------------------------------------------|------|
| 1 | Acceleration amplitude: | 10 Hz to 100 Hz: 1,0 (m/s ²) ² /Hz | |
| 2 | Acceleration amplitude: | 100 Hz to 200 Hz: – 3 db per octave | |
| 3 | Acceleration amplitude: | 200 Hz to 2 000 Hz: 0,5 (m/s ²) ² /Hz | |
| | Duration: | 30 min per perpendicular axis (3 to | tal) |

| Perpendicular axis subjected to broad-band random vibration test | Acceleration amplitude | BASIC SAFETY and ESSENTIAL PERFORMANCE maintained? Yes/No | Remarks |
|------------------------------------------------------------------|------------------------|-----------------------------------------------------------|----------------------------------------------------|
| 1 | 1 | Yes | The enclosure shows no |
| 2 | 1 | Yes | cracks and there is no damaged or loosing part |
| 3 | 1 | Yes | inside the product after test. |
| 1 | 2 | Yes | The EUT worked as normal and passed the dielectric |
| 2 | 2 | Yes | strength test. |
| 3 | 2 | Yes | |
| 1 | 3 | Yes | |
| 2 | 3 | Yes | |
| 3 | 3 | Yes | |

Supplementary information:

^{* (}NOTE 2 This represents Class 7M1 and 7M2 as described in IEC TR 60721-4-7:2001)



Page 27 of 30

Report No. 160900306SHA-002 Modification 2: 2021-07-23

| | IEC 60601-1-11 | | |
|--------|--------------------|-----------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |

| 10.1.3a1 | TABLE: Shock test (IEC 60068-2-27:2008) for other than HAND-HELD EQUIPMENT, parts, and mounting ACCESSORIES under the following conditions (Test Type 1): | | | | | | |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|------------------------------------------------------------------|--------------------------------------------|---------|--|--|
| | Peak acc | eleration | : | 150 m/s ² (15 g) | 1 | | |
| | Duration | | | 11 ms | | | |
| | Pulse sha | pe | · · · · · · · · · · · · · · · · · · · | half-sine | | | |
| | Number of shocks: | | | 3 shocks per direction per axis (18 total) | | | |
| Direction Appl | | Axis Shock Applied | BASIC SAFETY and ESSENTIAL PERFORMANCE maintained? Yes/No Remark | | Remarks | | |
| Supplement * (NOTE 3 T | • | ation: ents Class 7M2 as de | escribed in IEC/TR | 60721-4-7:2001 | [6]) | | |

10.1.3a2 TABLE: Shock test (IEC 60068-2-27:2008) on other than HAND-HELD ME N/A EQUIPMENT, parts, and mounting ACCESSORIES under the following conditions (Test Type 2): 300 m/s² (15 g) Peak acceleration 6 ms half-sine Pulse shape: 3 shocks per direction per axis (18 total) Number of shocks....: **Direction Shock Axis Shock BASIC SAFETY and ESSENTIAL Applied** Applied **PERFORMANCE maintained?** Remarks Yes/No Supplementary information:



Page 28 of 30

| | | | Modification 2: | |
|--------|--------------------|----------------|-----------------|---------|
| | | IEC 60601-1-11 | | |
| Clause | Requirement + Test | | Result - Remark | Verdict |

| 10.1.3b1 | | Shock test (IEC 6000 g ACCESSORIES using | | | | N/A |
|------------------|---------------|---------------------------------------------|---------------------------------------|--------------------------------------------|---------------|-------|
| | Peak acc | eleration | : | 300 m/s ² (30 g) | | |
| | Duration. | | : | 11 ms | | |
| | Pulse shape | | | half-sine | | |
| | Number o | of shocks | : | 3 shocks per direction per axis (18 total) | | otal) |
| Direction App | | Axis Shock Applied | Basic safety a PERFORMANCE Yes/ | maintained? | Remarks | |
| Supplemen | ntary informa | ation: | | | | |
| *(NOTE 4 | This represe | ents Class 7M3 as de | scribed in IEC/TR 6 | 60721-4-7:2001. | (Test Type 1) | |

| | J | TABLE: Shock test (IEC 60068-2-27:2008) on HAND-HELD ME EQUIPMENT parts, and mounting ACCESSORIES using the following conditions (Test Type 2): | | | | | |
|------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------------------------------------------|---------|--|--|
| | Peak acceleration: | | | 1000 m/s² (100 g) | | | |
| | Duration: Pulse shape: | | | 6 ms | | | |
| | | | | half-sine | | | |
| | Number of shocks: | | | 3 shocks per direction per axis (18 total) | | | |
| Direction Applie | | Axis Shock Applied | Basic safety a PERFORMANCE Yes/l | maintained? | Remarks | | |



Page 29 of 30

Report No. 160900306SHA-002 Modification 2: 2021-07-23

| | | IEC 60601-1-11 | | |
|--------|--------------------|----------------|-----------------|---------|
| Clause | Requirement + Test | | Result - Remark | Verdict |

| 10.1.3c | TABLE: Broad-band random vibration test (IEC 60068-2-64:2008) on ME EQUIPMENT, parts, and mounting ACCESSORIES using the following conditions*: | | | | N/A | | |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------------------------------------------|-------------------------------------|-----------------------------------------|--|--|
| 1 | Acceleration a | amplitude | 10 Hz to | 100 Hz: 1,0 (m/s²)²/Hz | | | |
| 2 | Acceleration amplitude: | | | 100 Hz to 200 Hz: - 3 db per octave | | | |
| 3 | Acceleration amplitude | | | 200 Hz to 2 000 Hz: 0,5 (m/s²)²/Hz | | | |
| | Duration | Ouration: | | | 30 min per perpendicular axis (3 total) | | |
| subjected to | icular axis broad-band bration test | Acceleration amplitude | BASIC SAFETY ESSENTIAL PERFO maintained? Y | RMANCE | Remarks | | |
| Supplementa | ary information | 1: | | | | | |
| *(NOTE 5 Th | nis represents | Class 7M1 and 7M2 | 2 as described in IE | C/TR 607 | 721-4-7:2001) | | |

*(NOTE 5 This represents Class 7M1 and 7M2 as described in IEC/TR 60721-4-7:2001)

10.1.3d TABLE: Free fall test (IEC 60068-2-31:2008), using PROCEDURE 1, on PORTABLE and MOBILE ME FOLIPMENT, parts, and mounting ACCESSORIES (with carrying case if

| 10.1.3d | and MOBILE ME EC | UIPMÈNT, p | 60068-2-31:2008), usin parts, and mounting Ac ving conditions*: | | EDURE 1, on PORTABLE HES (with carrying case if | N/A |
|------------------------|-------------------------------------------|------------|-----------------------------------------------------------------------|--------|----------------------------------------------------|-----|
| 1 | Fall height for mass ≤ 1 kg 0,25 m | | | | | |
| 2 | Fall height for mass > 1 kg and ≤ 10 Kg: | | | 0,1 m | | |
| 3 | Fall height for mass > 10 kg and ≤ 50 Kg: | | | 0,05 m | | |
| 4 | Fall height for mass > 50 kg | | | 0,01 m | | |
| Specified altitude (m) | Mass (Kg) | Fall No. | BASIC SAFETY and ESS PERFORMANCE mainta Yes/No | | Remarks | |
| Supplement | ary information: | • | | | | |

Supplementary information:

(*NOTE 6 This represents Class 7M2 as described in IEC/TR 60721-4-7:2001)

| 11.0 | RM RESULTS TABLE: PROTECTION AGAINST STRANGULATION AND ASPHYXIATION | | |
|---------------------------|---------------------------------------------------------------------|------------------|---------|
| Clause of ISO 14971 | Document Ref. in RMF (Document No. & paragraph) | Result - Remarks | Verdict |
| 4.3 | | | |
| 4.4 | | | |
| 5 | | | |
| 6.2 | | | |
| 6.3 | | | |
| 6.4 | | | |
| 6.5 | | | |



Page 30 of 30

| | | | Modification 2. | 2021-07- | | | |
|---------------------------|---------------------------------------------------------------------|------------------|-----------------|----------|--|--|--|
| IEC 60601-1-11 | | | | | | | |
| Clause | Requirement + Test | | Result - Remark | Verdict | | | |
| 11.0 | RM RESULTS TABLE: PROTECTION AGAINST STRANGULATION AND ASPHYXIATION | | | | | | |
| Clause of ISO 14971 | Document Ref. in RMF (Document No. & paragraph) | Result - Remarks | | Verdict | | | |
| 6.6 | | | | | | | |
| Suppleme | ntary information: | | | | | | |