Test Report issued under the responsibility of:

TEST REPORT
IEC 60601-1
Medical Electrical Equipment
Part 1: General requirements for basic safety and essential performance

Report Number .....:	E116994-D6015-CB-1
Date of issue .....:	2025-04-16
Total number of pages.....:	179
Name of Testing Laboratory preparing the Report.....:	UL Solutions RTP 12 Laboratory Drive, Durham 27713, NC, USA
Applicant's name.....:	**SL POWER ELECTRONICS CORP**
Address .....:	**1595 WYNKOOP STREET SUITE 800 DENVER CO 80202 UNITED STATES**
Test specification:	
Standard .....:	IEC 60601-1:2005, IEC 60601-1:2005/AMD1:2012, IEC 60601-1:2005/AMD2:2020
Test procedure.....:	CB Scheme
Non-standard test method.....:	N/A
TRF template used .....:	IECEE OD-2020-F1:2020, Ed.1.3
Test Report Form No.....:	IEC60601_1U
Test Report Form(s) Originator....:	UL(US)
Master TRF .....:	2023-08-24

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 IECEE 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 NCB. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description..... :	Component - Power Supply	
Trade Mark(s) ..... :	SL / SL POWER	
Manufacturer ..... :	SL POWER ELECTRONICS CORP 1595 WYNKOOP STREET SUITE 800 DENVER CO 80202 UNITED STATES	
Model/Type reference..... :	MINT1065AX75CZ, where X = any number 12 through 48, and Z is any number 01 through 99, designates additional configurations indicating non-safety related options. MINT1065DX75YZ where X = any number 12 through 48, Y = C or K, and Z = any number 01 through 99, designates additional configurations indicating non-safety related options	
Ratings..... :	Input: 100-240Vac, 50-60Hz, 1.3A Output: See Enclosure - Miscellaneous for examples of models / ratings	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
☒ **CB Testing Laboratory:**		
Testing location/ address ..... :	UL Solutions RTP 12 Laboratory Drive, Durham 27713, NC, USA	
Tested by (name, function, signature)..... :	Longjie Zhang / Project Handler	Longjie Zhang
Approved by (name, function, signature) .. :	Grzegorz Kowalski / Reviewer	Kowalski Grzegorz
☐ **Testing procedure: CTF Stage 1:**		
Testing location/ address ..... :		
Tested by (name, function, signature)..... :		
Approved by (name, function, signature) .. :		
☐ **Testing procedure: CTF Stage 2:**		
Testing location/ address ..... :		
Tested by (name, function, signature)..... :		
Witnessed by (name, function, signature) . :		
Approved by (name, function, signature) .. :		

☐	**Testing procedure: CTF Stage 3:**		
☐	**Testing procedure: CTF Stage 4:**		
Testing location/ address ..... :			
Tested by (name, function, signature)..... :			
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):

National Differences (30 pages)
Enclosures (22 pages)
Collateral Standard (0 pages)
Particular Standard (0 pages)

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:** **CBTL: UL Solutions RTP** **12 Laboratory Drive, Durham 27713, NC, USA**
4.11 - Power Input	Tests originally covered via E116994-A72-UL, (which is based on original CB Scheme Test Certificate DE 3-4551 and IEC 60601-1:2005 Test Report Ref. No. 095-1101815101-100, dated 2011-11-14, prepared by TÜV SUD Product Service GmbH, Ridlerstrasse 65, D-80339 München, Germany), results of which are considered acceptable under this investigation and, additionally, on this project, conducted on models MINT1065A1275C01, MINT1065D4875K01 and MINT1065D2475K01 as representative
5.7 - Humidity Conditioning	Conducted on models MINT1065A1275C01, MINT1065D4875K01 and MINT1065D2475K01 as representativeTests originally covered via E116994-A72-UL, (which is based on original CB Scheme Test Certificate DE 3-4551 and IEC 60601-1:2005 Test Report Ref. No. 095-1101815101-100, dated 2011-11-14, prepared by TÜV SUD Product Service GmbH, Ridlerstrasse 65, D-80339 München, Germany), results of which are considered acceptable under this investigation and, additionally, on this project, conducted on models MINT1065A1275C01, MINT1065D4875K01 and MINT1065D2475K01 as representative
7.1.3 - Durability of Markings	Tests originally covered via E116994-A72-UL, (which is based on original CB Scheme Test Certificate DE 3-4551 and IEC 60601-1:2005 Test Report Ref. No. 095-1101815101-100, dated 2011-11-14, prepared by TÜV SUD Product Service GmbH, Ridlerstrasse 65, D-80339 München, Germany), results of which are considered acceptable under this investigation
8.4.2 - Limitation of Voltage, Current or Power	Tests originally covered via E116994-A72-UL, (which is based on original CB Scheme Test Certificate DE 3-4551 and IEC 60601-1:2005 Test Report Ref. No. 095-1101815101-100, dated 2011-11-14, prepared by TÜV SUD Product Service GmbH, Ridlerstrasse 65, D-80339 München, Germany), results of which are considered acceptable under this investigation
8.4.3 - Voltage or Charge Limitation	Tests originally covered via E116994-A72-UL, (which is based on original CB Scheme Test Certificate DE 3-4551 and IEC 60601-1:2005 Test Report Ref. No. 095-1101815101-100, dated 2011-11-14, prepared by TÜV SUD Product Service GmbH, Ridlerstrasse 65, D-80339 München, Germany), results of which are considered acceptable under this investigation
8.5.4 - Working Voltage Measurements	Conducted on models MINT1065D4875K01 as representativeTests originally covered via E116994-A72-UL, (which is based on original CB Scheme Test Certificate DE 3-4551 and IEC 60601-1:2005 Test Report Ref. No. 095-1101815101-100, dated 2011-11-14, prepared by TÜV SUD Product Service GmbH, Ridlerstrasse 65, D-80339 München, Germany), results of which are considered acceptable under this investigation and,

	additionally, on this project, conducted on models MINT1065D4875K01 as representative
8.7 - Leakage Current Tests	Tests originally covered via E116994-A72-UL, (which is based on original CB Scheme Test Certificate DE 3-4551 and IEC 60601-1:2005 Test Report Ref. No. 095-1101815101-100, dated 2011-11-14, prepared by TÜV SUD Product Service GmbH, Ridlerstrasse 65, D-80339 München, Germany), results of which are considered acceptable under this investigation and, additionally, on this project, conducted on models MINT1065A1275C01 and MINT1065D2475K01 as representative
8.7.4.5 - Earth Leakage Current	Tests originally covered via E116994-A72-UL, (which is based on original CB Scheme Test Certificate DE 3-4551 and IEC 60601-1:2005 Test Report Ref. No. 095-1101815101-100, dated 2011-11-14, prepared by TÜV SUD Product Service GmbH, Ridlerstrasse 65, D-80339 München, Germany), results of which are considered acceptable under this investigation and, additionally, on this project, conducted on models MINT1065A1275C01 and MINT1065D2475K01 as representative
8.7.4.6 - Touch Leakage Current	Tests originally covered via E116994-A72-UL, (which is based on original CB Scheme Test Certificate DE 3-4551 and IEC 60601-1:2005 Test Report Ref. No. 095-1101815101-100, dated 2011-11-14, prepared by TÜV SUD Product Service GmbH, Ridlerstrasse 65, D-80339 München, Germany), results of which are considered acceptable under this investigation and, additionally, on this project, conducted on models MINT1065A1275C01 and MINT1065D2475K01 as representative
8.7.3 e) - Non-Frequency-Weighted Leakage Current	Tests originally covered via E116994-A72-UL, (which is based on original CB Scheme Test Certificate DE 3-4551 and IEC 60601-1:2005 Test Report Ref. No. 095-1101815101-100, dated 2011-11-14, prepared by TÜV SUD Product Service GmbH, Ridlerstrasse 65, D-80339 München, Germany), results of which are considered acceptable under this investigation, and, additionally, on this project,
8.8.3 - Dielectric Voltage Withstand	Tests originally covered via E116994-A72-UL, (which is based on original CB Scheme Test Certificate DE 3-4551 and IEC 60601-1:2005 Test Report Ref. No. 095-1101815101-100, dated 2011-11-14, prepared by TÜV SUD Product Service GmbH, Ridlerstrasse 65, D-80339 München, Germany), results of which are considered acceptable under this investigation and, additionally, on this project, conducted on models MINT1065A1275C01, MINT1065D4875K01 and MINT1065D2475K01 as representative
8.8.4.1 - Ball Pressure	Previously covered via E116994-A72-UL, (which is based on original CB Scheme Test Certificate DE 3-4551 and IEC 60601-1:2005 Test Report Ref. No. 095-1101815101-100, dated 2011-11-14, prepared by TÜV SUD Product Service GmbH, Ridlerstrasse 65, D-80339 München, Germany), results of which are considered acceptable under this investigation, with consideration to the use of thermoset Plastic (Phenolic) materials are used, with RTI min 150C - Test is waived
8.9.2 - Short Circuiting in Lieu of Spacings	Tests originally covered via E116994-A72-UL, (which is based on original CB Scheme Test Certificate DE 3-4551 and IEC 60601-1:2005 Test Report Ref. No. 095-1101815101-100, dated 2011-11-14, prepared by TÜV SUD Product Service GmbH, Ridlerstrasse 65, D-80339 München, Germany), results of which are considered acceptable under this investigation
11 - Temperature	Tests originally covered via E116994-A72-UL, (which is based on original CB Scheme Test Certificate DE 3-4551 and IEC 60601-

	1:2005 Test Report Ref. No. 095-1101815101-100, dated 2011-11-14, prepared by TÜV SUD Product Service GmbH, Ridlerstrasse 65, D-80339 München, Germany), results of which are considered acceptable under this investigation and, additionally, on this project, conducted on models MINT1065A1275C01 and MINT1065D4875K01 as representative
13 - Abnormal Operation Testing	Tests originally covered via E116994-A72-UL, (which is based on original CB Scheme Test Certificate DE 3-4551 and IEC 60601-1:2005 Test Report Ref. No. 095-1101815101-100, dated 2011-11-14, prepared by TÜV SUD Product Service GmbH, Ridlerstrasse 65, D-80339 München, Germany), results of which are considered acceptable under this investigation and, additionally, on this project, conducted on model MINT1065D2475K01 as representative
13.1.2 - Power Availability	Tests originally covered via E116994-A72-UL, (which is based on original CB Scheme Test Certificate DE 3-4551 and IEC 60601-1:2005 Test Report Ref. No. 095-1101815101-100, dated 2011-11-14, prepared by TÜV SUD Product Service GmbH, Ridlerstrasse 65, D-80339 München, Germany), results of which are considered acceptable under this investigation
15.5.1.2 - Transformer Short Circuit	Tests originally covered via E116994-A72-UL, (which is based on original CB Scheme Test Certificate DE 3-4551 and IEC 60601-1:2005 Test Report Ref. No. 095-1101815101-100, dated 2011-11-14, prepared by TÜV SUD Product Service GmbH, Ridlerstrasse 65, D-80339 München, Germany), results of which are considered acceptable under this investigation and, additionally, on this project, conducted on model MINT1065D2475K01 as representative
15.5.1.3 - Transformer Overload	Tests originally covered via E116994-A72-UL, (which is based on original CB Scheme Test Certificate DE 3-4551 and IEC 60601-1:2005 Test Report Ref. No. 095-1101815101-100, dated 2011-11-14, prepared by TÜV SUD Product Service GmbH, Ridlerstrasse 65, D-80339 München, Germany), results of which are considered acceptable under this investigation and, additionally, on this project, conducted on model MINT1065D2475K01 as representative

Summary of compliance with National Differences (List of countries addressed):

Canada - CA, Japan - JP, United States of America - US

EU Group - No National and Country Differences are declared

☒ **The product fulfils the requirements of** National standard JIS T 0601-1:2023

EN 60601-1:2006+A1:2013+A12:2014+A2:2021 ,

National standard AAMI ES60601-1:2005,AAMI ES60601-1:2005/AMD1:2012, AAMI ES60601-1:2005/AMD2:2021,

Canadian National standard: CAN/CSA-C22.2 No. 60601-1:08, CAN/CSA-C22.2 No. 60601-1:14 (including amendment 1) and Amendment 2:2022 (MOD) to CAN/CSA-C22.2 No. 60601-1:14

Statement concerning the uncertainty of the measurement systems used for the tests

(may be required by the product standard or client)

☐ **Internal procedure used for type testing through which traceability of the measuring uncertainty has been established:**

Procedure number, issue date and title:

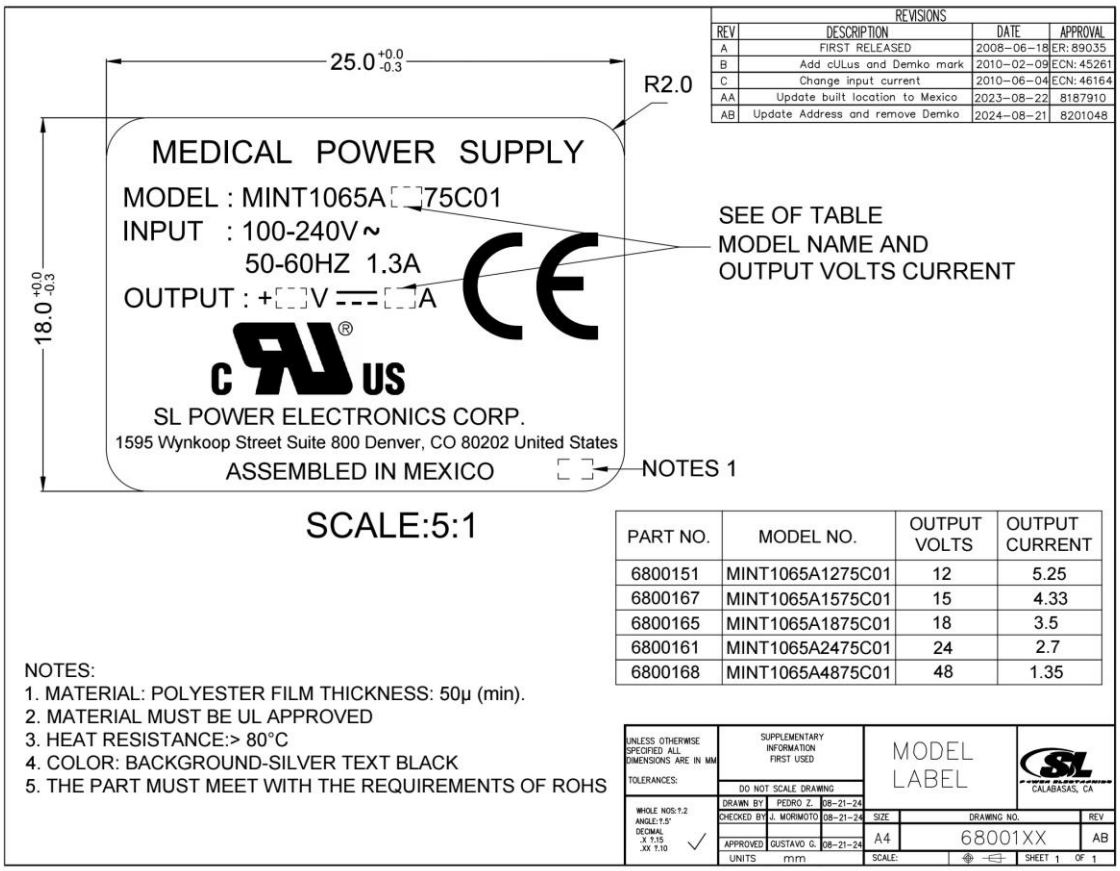
Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.

☒ **Statement not required by the standard used for type testing**

(Note: When IEC or ISO standard requires a statement concerning the uncertainty of the measurement systems used for tests, this should be reported above. The informative text in parenthesis should be delete in both cases after selecting the applicable option)

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.



Note: The above markings are the minimum requirements required by the safety lab. For the final production samples, the additional markings which do not give rise to misunderstanding may be added.

Test item particulars..... :	
Classification of installation and use ..... :	For building-in
Supply Connection..... :	Header or Terminal Block or other options
Device type (component/sub-assembly/ equipment/ system)..... :	Component
Intended use (Including type of patient, application location) ..... :	Supply Power for Medical Equipment
Mode of operation ..... :	Continuous
Accessories and detachable parts included ..... :	None
Other options include ..... :	None
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 was not evaluated for the requirement……:	N/E (collateral standards only)
- test object does not meet the requirement ..... :	F (Fail)
Abbreviations used in the report	
- normal condition……: N.C.	- single fault condition..... : S.F.C.
- means of Operator protection ……: MOOP	- means of Patient protection .....: MOPP
Testing..... :	
Date of receipt of test item ..... :	2010-02-10, 2010-11-17, 2025-01-17
Date (s) of performance of tests ..... :	2010-02-16 to 2010-03-01, 2010-11-22 to 2010-12-06, 2011-03-22 to 2011-05-19, 2025-03-04 to 2025-03-19

General remarks:

"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.

Throughout this report a ☐ comma / ☒ point is used as the decimal separator.

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.

Name and address of factory (ies) ..... :	INDUSTRIAS S L S A DE C V CIRCUITO SIGLO XXI 2055 COL PARQUE INDUSTRIAL EX-XXI 21254 MEXICALI Baja California MEXICO

General product information and other remarks:

Product Description

MINT1065AX75CZ are class I type, open-frame AC/DC power supplies, designed for building-in to an end-product.

MINT1065DX75YZ, with Y = K, are class I type, open-frame AC/DC power supplies, designed for building-in to an end-product.

MINT1065DX75YZ, with Y = C, are class II type, open-frame AC/DC power supplies, designed for building-in to an end-product.

Model Differences

All power supplies are similar to each other and differ only in minor component changes in the secondary circuit and the number for windings in T1 to accommodate the different output voltage and current ratings. The MINT1065AX75CZ series and MINT1065DX75KZ series models are Class I type and the MINT1065DX75CZ series models are Class II type. All models are available with different types of input and output connectors.

MINT1065DX75CZ Class II series models are identical to the Class I series models except that the following components have been removed: CYP1, CYP2, CYP3, CYS1, the ground terminal (quick connect tab on PWB adjacent to input connector "CON1"), and jumper wire W1. Class II Models are not intended to be connected to ground. ALL MODELS ARE NOT PROVIDED WITH CHASSIS.

All models have one dc output and may provide up to 65W output power w/convection cooling.

Additional Information

Project 4791569932:

This report is an original report, created in order to upgrade report E116994-A72-UL, (which is based on original CB Scheme Test Certificate DE 3-4551 and IEC 60601-1:2005 Test Report Ref. No. 095-1101815101-100, dated 2011-11-14, prepared by TÜV SUD Product Service GmbH, Ridlerstrasse 65, D-80339 München, Germany), from CAN/CSA-C22.2 No. 60601-1 (2008) and ANSI/AAMI ES60601-1 (2005 + C1:09 + A2:10) to the following standards:

• ANSI/AAMI ES60601-1, (IEC 60601-1:2005, MOD), 3rd Edition, AMD 2, Revision Date 2021

• CAN/CSA-C22.2 No 60601-1, Edition 3, AMD 2, Revision Date 03/2022

• IEC 60601-1, Edition 3, AMD 2, Revision Date 08/2020

• EN 60601-1:2006+A1:2013+A12:2014+A2:2021

Based on testing conducted under prior edition of standard and upon review of testing, methodologies, and test equipment used, it has been determined that the product meets the requirements of the upgraded standard. All tests are still valid and ONLY THE FOLLOWING TESTS WERE CONSIDERED NECESSARY:

4.11 – POWER INPUT

5.7 – HUMIDITY CONDITIONING

8.5.4 - WORKING VOLTAGE MEASUREMENTS

8.7 - LEAKAGE CURRENT TESTS

8.7.4.5 - EARTH LEAKAGE CURRENT

8.7.4.6 TOUCH LEAKAGE CURRENT

8.7.3 – NON-FREQUENCY-WEIGHTED LEAKAGE CURRENT (Earth)

8.8.3 - DIELECTRIC VOLTAGE WITHSTAND

11 - TEMPERATURE

13 - ABNORMAL OPERATION TESTING

15.5.1.2 - TRANSFORMER SHORT CIRCUIT

15.5.1.3 - TRANSFORMER OVERLOAD

Indicative marking plate artwork is representative of all samples.
The clearance distances have additionally been assessed for suitability up to 4000 m elevation
The need for the additional testing and evaluation shall be determined in the end product investigation.
The schematics are kept on file at the CBTL and can be provided by the manufacturer upon request by NCB's/CBTL's.
When submitting this Test Report to other Certification Body, the manufacturer is responsible for providing any additional information that the Body may need in order to issue its Mark, including testing for compliance with the applicable collateral standards.

Report Summary

All applicable tests according to the referenced standard(s) have been carried out.

Technical Considerations

- The product was investigated to the following additional standards : ANSI/AAMI ES60601-1, (IEC 60601-1:2005, MOD), 3rd Edition, AMD 2, Revision Date 2021, CAN/CSA-C22.2 No 60601-1, Edition 3, AMD 2, Revision Date 03/2022, EN 60601-1:2006+A1:2013+A12:2014+A2:2021
- The product was NOT investigated to the following standards or clauses : Electromagnetic Compatibility (IEC 60601-1-2), Clause 14, Programmable Electronic Systems (PEMS), Biocompatibility (ISO 10993-1)
- The degree of protection against harmful ingress of water is: Ordinary
- The mode of operation is: Continuous
- The product is suitable for use in the presence of a flammable anesthetics mixture with air or oxygen or with nitrous oxide: No
-
- 1. Scope of Power Supply evaluation defers the following clauses to be determined as part of the end product investigation:
  • Clause 7.5 (Safety Signs),
  • Clause 7.9 (Accompanying Documents),
  • Clause 9 (ME Hazard), except 9.1 and 9.3 are evaluated,
  • Clause 10 (Radiation),
  • Clause 14 (PEMS),
  • Clause 16 (ME Systems)
  • Risk Management was excluded from this investigation.

  2. Risk Controls/ Engineering Considerations for component power supply:
  For use only in or with complete equipment where the acceptability of the combination is determined by the CB Testing Laboratory, when installed in an end-product, consideration must be given to the following:
  - End product Risk Management Process to include consideration of requirements specific to the Power Supply.
  - End product Risk Management Process to consider the need for simultaneous fault condition testing. End product Risk Management Process to consider the need for different orientations of installation during testing.
  - End product to determine the acceptability of risk in conjunction to insulation to resistance to heat, moisture, and dielectric strength.
  - End product to determine the acceptability of risk in conjunction to the movement of components as part of the power supply.
  - End product to determine the acceptability of risk in conjunction to the movement of conductors as part of the power supply.
  - End product to determine the acceptability of risk in conjunction to the routing of wires away from moving parts and sharp edges as part of the power supply.
  - Temperature Test was conducted without Test Corner. End product to determine the acceptability of risk in conjunction to temperature testing without test corner as part of the power supply.
  - End product to determine the acceptability of risk in conjunction to the Cleaning and Disinfection Methods as part of the power supply.
  - End product to determine the acceptability of risk in conjunction to the Leakage of Liquids as part of the power supply.
  End product to determine the acceptability of risk in conjunction to the selection of components as it pertains to the intended use, essential performance, transport, storage conditions as part of the power supply.

- Functional insulation is provided between secondary and Earth (Class I models)

Engineering Conditions of Acceptability

When installed in an end-product, consideration must be given to the following:

- This component has been judged on the basis of the creepage and clearances required in the indicated Standards, which would cover the component itself if submitted for Listing : ANSI/AAMI ES60601-1, (IEC 60601-1:2005, MOD), 3rd Edition, AMD 2, Revision Date 2021, CAN/CSA-C22.2 No 60601-1, Edition 3, AMD 2, Revision Date 03/2022, EN 60601-1:2006+A1:2013+A12:2014+A2:2021
- This component has been judged on the basis of the required spacings in the following:

  CAN/CSA-C22.2 No. 60601-1 (2008) (Medical Electrical Equipment - Part 1: General Requirements for Basic Safety and Essential Performance) (includes National Differences for Canada) ANSI/AAMI ES60601-1 (2005 + C1:09 + A2:10) (Medical Electrical Equipment - Part 1: General Requirements for Basic Safety and Essential Performance) (includes Deviations for United States), which covers the end use product for which the component is designed.

  AAMI ES60601-1:2005, AAMI ES60601-1:2005/AMD1:2012, AAMI ES60601-1:2005/AMD2:2021
  CAN/CSA-C22.2 No. 60601-1:08, CAN/CSA-C22.2 No. 60601-1:14 (including amendment 1) and Amendment 2:2022 (MOD) to CAN/CSA-C22.2 No. 60601-1:14
  EN 60601-1:2006+A1:2013+A12:2014+A2:2021

  The component shall be installed in compliance with the enclosure, mounting, spacing, casualty markings and segregation requirements of the end-use application.

  Consideration should be given to measuring the temperature on power electronic components and transformer windings when the power supply is installed in the end-use equipment.

  The input/output connectors are not acceptable for field connection, they are only intended for connection to mating connectors of internal wiring inside the end-use machine. the output circuits have not been evaluated for direct patient connection (Type B, BF or CF).

  Models MINT1065DX75KZ, and MINT1065AX75CZ Series are Class I and are to be properly bonded to Earth in the end-use equipment.

  Component rated for up to 40C ambient. The temperature test was performed at room ambient of 25 °C and calculated for an ambient of 40 °C.

  Leakage Current testing should be repeated in the end-product application.

  The Power Transformer (T1) complies with Class B (130°C) limits.

  The power supplies were evaluated with two MOOP between primary and secondary (both Class I and Class II models); One MOOP between primary and Earth (Class I models).

  The need for Marking Durability and Marking Legibility Testing is to be considered as part of the end product installation.

  End product Risk Management Process to include consideration of requirements specific to the Power Supply.

  Single fault testing was conducted without dielectric breakdown, however, end product Risk Management Process shall consider the need for simultaneous fault condition testing.

  End product Risk Management Process shall consider the need for different orientations of installation during testing.

End product to determine the acceptability of risk in conjunction to insulation's resistance to heat, moisture, and dielectric strength.

Humidity testing was conducted, however, the end product Risk Management Process shall determine risk acceptability criteria.

Components were secured to prevent movement, however, end product to determine the acceptability of risk in conjunction with the movement of components as part of the power supply.

Wiring was secured to prevent movement of wire where conductor could be damaged or contact unwanted voltages, however, end product to determine the acceptability of risk in conjunction with the movement of conductors as part of the power supply.

Power Supply was considered for Pollution Degree 2.

Power Supply was considered Overvoltage Category II (OVCII).

Power Supply rated for operation at a maximum altitude of 4000 m. The applicable multiplication factor from Table 8 for MOOP was applied for Clearances.

Power Supply complies with the limits of 8.4.2.c) and 8.7.3.c).

HS1 is considered primary and HS2 is considered secondary - Separation to these heatsinks within the end product shall be subject of end product investigation.

End product to determine the acceptability of risk in conjunction to the movement of components as part of the power supply.

End product to determine the acceptability of risk in conjunction to the results of Mechanical Testing conducted as part of the power supply

Temperature Test was conducted without Test Corner. End product to determine the acceptability of risk in conjunction to temperature testing without test corner as part of the power supply.

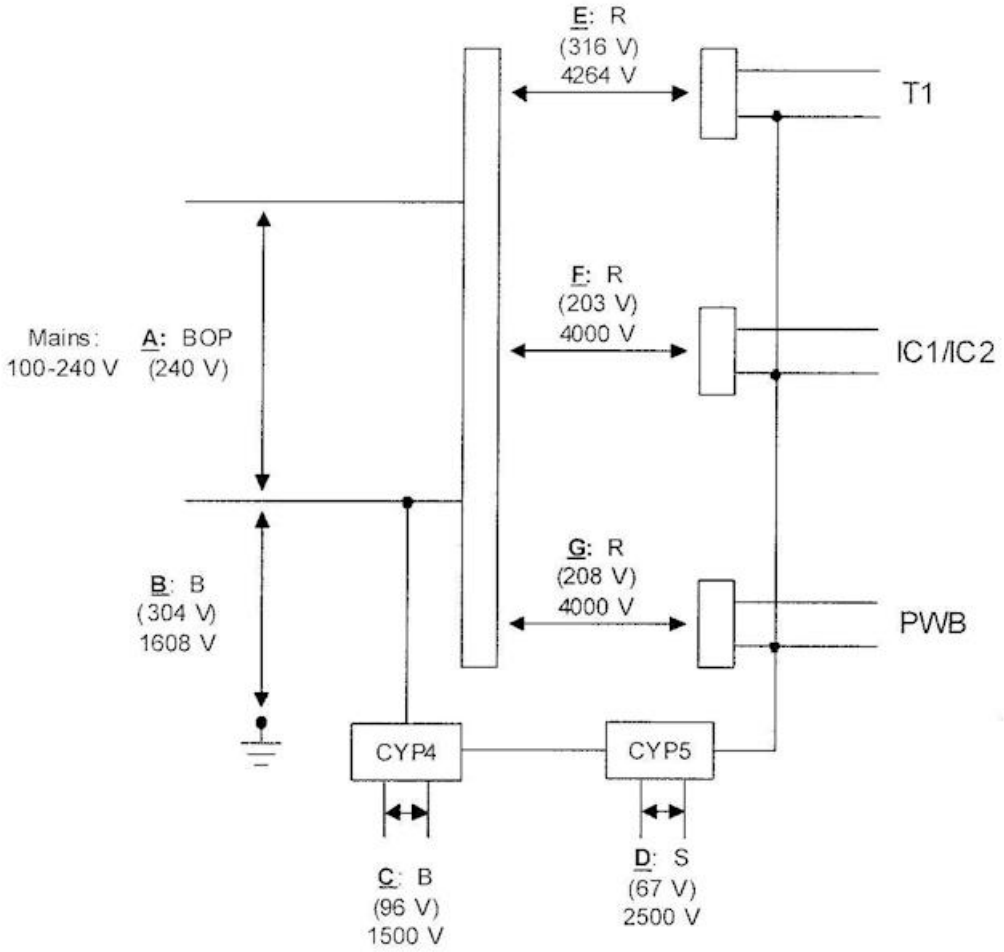
End product to determine the acceptability of risk in conjunction to the Cleaning and Disinfection Methods as part of the power supply.

End product to determine the acceptability of risk in conjunction to the selection of components as it pertains to the intended use, essential performance, transport, storage conditions as part of the power supply

- Non-frequency-weighted touch current 8.7.3(e) to other than EARTH has not been conducted and shall be the subject of end product investigation.

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

INSULATION DIAGRAM



IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

TABLE: INSULATION DIAGRAM		Pass
Pollution degree.....:	2	—
Overvoltage category.....:	II	—
Altitude.....:	Product for up to 4000m (m)	—
Additional details on parts considered as applied parts.....:	☒ **None** ☐ **Areas** _____ **(See Clause 4.6 for details)**	—

Area	**Number and type of Means of Protection: MOOP, MOPP**	**CTI**	**Working voltage**		**Required creepage (mm)**	**Required clearance (mm)**	**Measured creepage (mm)**	**Measured clearance (mm)**	**Remarks**
			V_{rms}	**V_{pk}**					
A	1 MOOP	Material Group IIIb	240	340 Vpk	2.6	2.6	4.7	4.7	Insufficient Spacings were shorted before the fuse
B	1 MOOP	Material Group IIIb	304	496 Vpk	3.3	2.9	8.0	8.0	Mains to Ground Connection Point (excluding Class II models)
C	1 MOOP	Material Group IIIb	96 --> 240	340 Vpk	2.6	2.6	6.0	2.7	Across CYP4 (excluding Class II models)
D	1 MOOP	Material Group IIIb	67 --> 240	340 Vpk	2.6	2.6	10.0	6.0	Across CYP5 (excluding Class II models)
E	2 MOOP	Material Group IIIb	316	636 Vpk	9.1	9.1	17.0	17.0	Primary to Secondary (T1) – Transfor

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

									mer using triple insulated wire
F	2 MOOP	Material Group IIIb	203 -- >240	356 Vpk	5.2	5.2	8.2	8.2	IC1 and IC2
G	2 MOOP	Material Group IIIb	208 -- >240	456 Vpk	5.5	5.5	12.0	10.0	Pri-Sec Board Spacing
H (not shown)	1 MOOP	Material Group IIIb		48dc Vdc	1.3	1.3	2.9	2.9	H – Across CYS1 Consideration of Connection of Secondary to Ground for Functional Insulation Purposes (4000m)

Supplementary Information:

Supplementary Information:

PRODUCT EVALUATED FOR 4000m altitude,1.29 correction factor is used.

Where the working voltage is less than the mains supply voltage, the supply voltage is used for spacings determination.

Creepage cannot be less than clearance.

***T1 secondary winding is using triple insulated wire (Core is considered as Primary)

INSULATION DIAGRAM CONVENTIONS and GUIDANCE:

A measured value must be provided in the value columns for the device under evaluation. The symbol > (greater than sign) must not be used. Switch-mode power supplies must be re-evaluated in the device under evaluation therefore N/A must not be used with a generic statement that the component is certified.

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

Insulation diagram is a graphical representation of equipment insulation barriers, protective impedance and protective earthing. If feasible, use the following conventions to generate the diagram:

- All isolation barriers are identified by letters between separate parts of diagram, for example separate transformer windings, optocouplers, wire insulation, creepage and clearance distances.

- Parts connected to earth with large dots are protectively earthed. Other connections to earth are functional

- Applied parts are extended beyond the equipment enclosure and terminated with an arrow.

- Parts accessible to the operator only are extended outside of the enclosure but are not terminated with an arrow.

INSULATION DIAGRAM CONVENTIONS and GUIDANCE:

A measured value must be provided in the value columns for the device under evaluation. The symbol > (greater than sign) must not be used. Switch-mode power supplies must be re-evaluated in the device under evaluation therefore N/A must not be used with a generic statement that the component is certified.

Insulation diagram is a graphical representation of equipment insulation barriers, protective impedance and protective earthing. If feasible, use the following conventions to generate the diagram:

- All isolation barriers are identified by letters between separate parts of diagram, for example separate transformer windings, optocouplers, wire insulation, creepage and clearance distances.
- Parts connected to earth with large dots are protectively earthed. Other connections to earth are functional
- Applied parts are extended beyond the equipment enclosure and terminated with an arrow.
- Parts accessible to the operator only are extended outside of the enclosure but are not terminated with an arrow.

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

4	**GENERAL REQUIREMENTS**		Pass
4.1	**Requirements of this standard applied in NORMAL USE and reasonably foreseeable misuse**		Pass
4.2	**RISK MANAGEMENT PROCESS FOR ME EQUIPMENT OR ME SYSTEMS**		N/A
4.2.2	General requirement for RISK MANAGEMENT - PROCESS complies with ISO14971 (2019)…….:	Risk Management (RM) is not included for power supply, the acceptability of risk of the power supply is determined as part of the end product.	N/A
4.2.3	Evaluating RISK		N/A
4.2.3.1	a) Compliance with the standard reduces residual risk to an acceptable level		N/A
	b) Manufacturer has defined risk acceptability criteria in the RISK MANAGEMENT PLAN…… :		N/A
	c) When no specific technical requirements provided manufacturer has determined HAZARDS or HAZARDOUS SITUATIONS exists.		N/A
	- HAZARDS or HAZARDOUS SITUATIONS have been evaluated using the RISK MANAGEMENT PROCESS.		N/A
4.2.3.2	MANUFACTURER has addressed HAZARDS or HAZARDOUS SITUATIONS not specifically addressed in the IEC 60601-1 series.		N/A
4.3	Performance of clinical functions necessary to achieve INTENDED USE or that could affect the safety of the ME EQUIPMENT or ME SYSTEM were identified during RISK ANALYSIS.	RM is not included for power supply, the acceptability of risk of the power supply is determined as part of the end product.	N/A
	- Performance limits were identified in both NORMAL CONDITION and SINGLE FAULT CONDITION.		N/A
	- Loss or degradation of performance beyond the limits specified by the MANUFACTURER were evaluated		N/A
	- Functions with unacceptable risks are identified as ESSENTIAL PERFORMANCE……:		N/A
	- RISK CONTROL measures implemented		N/A
	- Methods used to verify the effectiveness of RISK CONTROL measures implemented		N/A
4.4	EXPECTED SERVICE LIFE stated in RISK MANAGEMENT FILE……:	RM is not included for power supply, the acceptability of risk of the power supply is determined as part of the end product.	N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.5	Alternative RISK CONTROL methods utilized:	RM is not included, no alternative means of addressing particular risks were considered	N/A
	RESIDUAL RISK resulting from the alternative RISK CONTROL measures or tests is acceptable and comparable to RESIDUAL RISK resulting from application of this standard……..: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)		N/A
	Alternative means based scientific data or clinical opinion or comparative studies ……..:		N/A
4.6	RISK MANAGEMENT PROCESS identifies parts that can come into contact with PATIENT but not defined as APPLIED PARTS, subjected to the requirements for APPLIED PARTS, except for Clause 7.2.10 ……..:	RM is not included in the investigation of power supply	N/A
	MANUFACTURER assesses the risk of accessible parts coming into contact with the patient: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)		N/A
	Assessment identified the APPLIED PART TYPE requirements ……..:		N/A
4.7	ME EQUIPMENT remained SINGLE FAULT SAFE, or the RISK remained acceptable as determined by Clause 4.2……:	The equipment remained single-fault safe, refer to the appended table 13.2	Pass
	MANUFACTURER RISK ANALYSIS was used to determine failures to be tested……: (ISO 14971 Cl. 5.2-5.5)	RM is not included; power supply remained Single Fault Safe, acceptability of risk to be determined as part of the end product.	N/A
	Failure of any one component at a time that could result in a HAZARDOUS SITUATION, including those in 13.1, simulated physically or theoretically……..:	See appended Table 13.2	Pass
4.8	All components and wiring whose failure could result in a HAZARDOUS SITUATION used according to their applicable ratings, unless specified ……..:	All components used within their ratings	Pass
	Components and wiring exception in the standard or by RISK MANAGEMENT PROCESS	RM is not included for power supply, components including wiring used in accordance with their specified ratings.	Pass
	RISK MANAGEMENT PROCESS assesses components to identify components where the failure results in a HAZARDOUS SITUATION for components used outside their ratings ……..: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)	RM is not included in the investigation of component power supply	N/A

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

	MANUFACTURER identified components where the failure results in a HAZARDOUS SITUATION ……..:	See Table 8.10 b.	Pass
	Components determined to be acceptable where used as a MEANS OF PROTECTION ……:	See Table 8.10 b.	Pass
	Reliability of components used as MEANS OF PROTECTION assessed for conditions of use in ME EQUIPMENT, and they complied with one of the following		Pass
	a) Applicable safety requirements of a relevant IEC or ISO standard		Pass
	b) Requirements of this standard applied in the absence of a relevant IEC or ISO standard		Pass
4.9	A COMPONENT WITH HIGH-INTEGRITY CHARACTERISTICS provided and selected appropriately……..:	RM not included; No such parts - components were identified where single fault could cause a hazard. End product investigation shall determine the suitability of the component to prevent unacceptable Risk.	N/A
	RISK MANAGEMENT FILE includes an assessment to determine if the failure of components results in unacceptable RISK……..: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)	RM not included. End product investigation to determine the suitability of the component to prevent unacceptable Risk.	N/A
	Components identified and required to be COMPONENTS WITH HIGH INTEGRITY CHARACTERISTIC:	See Table 8.10 b	N/A
4.10	**Power supply**		Pass
4.10.1	ME EQUIPMENT is suitable for connection to indicated power source (select applicable) ……:	Component, to be determined as part of the end product evaluation. Power supply is rated 100- 240Vac	N/A
4.10.2	Maximum rated voltage for ME EQUIPMENT intended to be connected to SUPPLY MAINS:	Component, to be determined as part of the end product evaluation.	Pass
	- 250 V for HAND-HELD ME EQUIPMENT (V).....:		N/A
	– 250 V d.c. or single-phase a.c., or 500 V poly-phase a.c. for ME EQUIPMENT and ME SYSTEMS with a RATED input ≤ 4 kVA (V) .....:	Input: 100-240Vac	Pass
	– 500 V for all other ME EQUIPMENT and ME SYSTEMS		N/A
4.11	**Power input**		Pass

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Steady-state measured input of ME EQUIPMENT or ME SYSTEM at RATED voltage or voltage range and at operating settings indicated in instructions for use didn't exceed marked rating by more than 10%.....:	See Appended Table 4.11	Pass
5	**GENERAL REQUIREMENTS FOR TESTING ME EQUIPMENT**		Pass
5.1	Test not performed when analysis indicated condition being tested was adequately evaluated by other tests or methods ……..:	RM not provided: All test were conducted	N/A
	RISK MANAGEMENT FILE identifies combinations of simultaneous independent faults that could result in a HAZARDOUS SITUATION. (ISO 14971 Cl. 5.2-5.5)	RM not included: End product Risk Management must determine the need for simultaneous fault tests.	N/A
5.3	Tests conducted within the environmental conditions specified in technical description		Pass
	Temperature (ºC), Relative Humidity (%) …….:	93%RH+/-3%, 40C	—
	Atmospheric Pressure (kPa) ……:	70 to 106KPa	—
5.5	a) Supply voltage during tests was the least favourable of the voltages specified in 4.10.2 or voltages marked on ME EQUIPMENT (V)……..:	Rated 100-240vac, Tested 90-264Vac	Pass
	b) ME EQUIPMENT marked with a RATED frequency range tested at the least favourable frequency within the range (Hz).....:	Rated 50-60Hz, Tested 50Hz and 60Hz	Pass
	c) ME EQUIPMENT with more than one RATED voltage, both a.c./ d.c. or both external power and INTERNAL ELECTRICAL POWER SOURCE tested in conditions (see 5.4) related to the least favourable voltage, nature of supply, and type of current.....:	Tested at 90Vac and 264Vac	Pass
	d) ME EQUIPMENT intended for only d.c. supply connection tested with d.c. and influence of polarity considered.....:		N/A
	e)ME EQUIPMENT tested with alternative ACCESSORIES and components specified in ACCOMPANYING DOCUMENTS to result in the least favourable conditions.....:		N/A
	f) ME EQUIPMENT connected to a separate power supply as specified in instructions for use		N/A
5.7	ME EQUIPMENT or parts thereof affected by climatic conditions were set up completely, or partially, with covers detached and subjected to a humidity preconditioning prior to tests of Clauses 8.7.4 and 8.8.3……..:	See appended Table - Additional or Special Tests Conducted	Pass

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

	ME EQUIPMENT heated to a temperature between T and T + 4°C for at least 4 h and placed in a humidity chamber and ambient within 2 °C of T in range of +20°C to +30°C for indicated time	See appended Table - Additional or Special Test Conducted	—
5.9	**Determination of APPLIED PARTS and ACCESSIBLE PARTS**		N/A
5.9.1	APPLIED PARTS identified by inspection and reference to ACCOMPANYING DOCUMENTS .....:		N/A
5.9.2	**ACCESSIBLE PARTS**		N/A
5.9.2.1	Accessibility determined using standard test finger of Fig. 6		N/A
5.9.2.2	Test hook of Fig. 7 inserted in all openings of ME EQUIPMENT and pulled with a force of 20 N for 10 s		N/A
5.9.2.3	Conductive parts of actuating mechanisms of electrical controls accessible after removal of handles, knobs, levers and the like regarded as ACCESSIBLE PARTS.....:		N/A
	Conductive parts of actuating mechanisms not considered ACCESSIBLE PARTS when removal of handles, knobs, required use of a TOOL.....:		N/A
6	**CLASSIFICATION OF ME EQUIPMENT AND ME SYSTEMS**		Pass
6.2	CLASS I ME EQUIPMENT, externally powered	Component, also to be determined as part of the end product installation	Pass
	CLASS II ME EQUIPMENT, externally powered	Component, also to be determined as part of the end product installation	Pass
	INTERNALLY POWERED ME EQUIPMENT	Component, also to be determined as part of the end product installation	Pass
	EQUIPMENT with means of connection to a SUPPLY MAINS complied with CLASS I or CLASS II ME EQUIPMENT requirements when so connected, and when not connected to SUPPLY MAINS with INTERNALLY POWERED ME EQUIPMENT requirements		N/A
	TYPE B APPLIED PART	No applied parts	N/A
	TYPE BF APPLIED PART	No applied parts	N/A
	TYPE CF APPLIED PART	No applied parts	N/A
	DEFIBRILLATION-PROOF APPLIED PARTS	No applied parts	N/A
6.3	ENCLOSURES classified according to degree of protection against ingress of water and particulate matter as per IEC 60529.....:	Component, to be determined in the end product investigation	N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
6.4	ME EQUIPMENT or its parts intended to be sterilized classified according to method(s) of sterilization in instructions for use ..... :	Component, to be determined in the end product investigation	N/A
6.5	ME EQUIPMENT and ME SYSTEMS intended for use in an OXYGEN RICH ENVIRONMENT classified for such use and complied with 11.2.2	Component, to be determined in the end product investigation	N/A
6.6	CONTINUOUS or Non-CONTINUOUS OPERATION ..... :	For Continuous Operation	Pass
7	**ME EQUIPMENT IDENTIFICATION, MARKING, AND DOCUMENTS**		Pass
7.1.2	Legibility of Markings Test for Markings specified in Clause 7.2-7.6……:		N/A
7.1.3	Required markings can be removed only with a TOOL or by appreciable force, are durable and remain CLEARLY LEGIBLE during EXPECTED SERVICE LIFE of ME EQUIPMENT in NORMAL USE		N/A
7.2	**Marking on the outside of ME EQUIPMENT or ME EQUIPMENT parts**		Pass
7.2.1	At least markings in 7.2.2, 7.2.5, 7.2.6, 7.2.10, and 7.2.13 were applied when size of EQUIPMENT, its part, an ACCESSORY, or ENCLOSURE did not permit application of all required markings ……..:	See attached copy of marking plate	Pass
	Remaining markings fully recorded in ACCOMPANYING DOCUMENTS ……:	Component, accompanying documents to be provided as part of the end product	N/A
	Markings applied to individual packaging when impractical to apply to ME EQUIPMENT		N/A
	Single use item marked……..:		N/A
7.2.2	ME EQUIPMENT marked with:		Pass
	– the name or trademark and contact information of the MANUFACTURER	See attached copy of marking plate	Pass
	– a MODEL OR TYPE REFERENCE		Pass
	– a serial number or lot or batch identifier; and		Pass
	– the date of manufacture or use by date	See Enclosures - Date Code Label Artwork	Pass
	Detachable components of the ME EQUIPMENT not marked; misidentification does not present an unacceptable risk, or	No such parts	N/A
	RISK MANAGEMENT FILE includes an assessment of the RISKS relating to misidentification of all detachable parts……..: (ISO 14971 Cl. 5.2-5.5, 6, 7.3)		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Detachable components of the ME EQUIPMENT are marked with the name or trademark of the MANUFACTURER, and		N/A
	– a MODEL OR TYPE REFERENCE		N/A
	Software forming part of a PEMS identified with a unique identifier……..:		N/A
7.2.3	Symbol 11 on Table D.1 used, optionally, advice to OPERATOR to consult ACCOMPANYING DOCUMENTS		N/A
	SAFETY SIGN 10 on Table D.2) used, advising OPERATOR that ACCOMPANYING DOCUMENTS must be consulted		N/A
7.2.4	ACCESSORIES marked with name or trademark and contact information of their MANUFACTURER, and ……..:	No such parts	N/A
	- with a MODEL or TYPE REFERENCE		N/A
	– a serial number or lot or batch identifier		N/A
	– the date of manufacture or use by date		N/A
	Markings applied to individual packaging when not practical to apply to ACCESSORIES		N/A
7.2.5	ME EQUIPMENT and ME SYSTEM intended to receive power from other equipment, provided with one of the following	Component, to be determined in the end product investigation	N/A
	- the name or trademark of the manufacturer of the other electrical equipment and type reference marked adjacent to the relevant connection point; or		N/A
	– Table D.2, SAFETY SIGN No. 10 adjacent to the relevant connection point and listing of the required details in the instructions for use; or		N/A
	– Special connector style used that is not commonly available on the market and listing of the required details in the instructions for use.		N/A
7.2.6	**Connection to the Supply Mains**		Pass
	Marking appearing on the outside of part containing SUPPLY MAINS connection and, adjacent to connection point	Unit is for building-in, to be determined in the end product	Pass
	For PERMANENTLY INSTALLED ME EQUIPMENT, NOMINAL supply voltage or range marked inside or outside of ME EQUIPMENT	Not permanently connected, to be determined in the end product investigation	N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	– RATED supply voltage(s) or RATED voltage range(s) with a hyphen (-) between minimum and maximum voltages (V, V-V)……..:	100-240Vac	Pass
	Multiple RATED supply voltages or multiple RATED supply voltage ranges are separated by (V/V)…..:		N/A
	– Nature of supply and type of current……..:	Single Phase, AC input	Pass
	Symbols 1-5, Table D.1 (used for same parameters……..:	Symbol 1 used	Pass
	– RATED supply frequency or RATED frequency range in hertz……..:	50-60Hz	Pass
	– Symbol 9 of Table D.1 used for CLASS II ME EQUIPMENT……..:	For Class II models	Pass
7.2.7	RATED input in amps or volt-amps, (A, VA)……:	1.3A	Pass
	RATED input in amps or volt-amps, or in watts when power factor exceeds 0.9 (A, VA, W)……..:	1.3A	Pass
	RATED input for one or more RATED voltage ranges provided for upper and lower limits of the range or ranges when the range(s) is/are greater than ± 10 % of the mean value of specified range (A, VA,W)……..:	A single input current rating is provided over the entire 100-240Vac voltage range. The end product evaluation is to determine the acceptability	Pass
	Input at mean value of range marked when range limits do not differ by more than 10 % from mean value (A, VA, W)……:		N/A
	Marking includes long-time and most relevant momentary volt-ampere ratings when provided, each plainly identified and indicated in ACCOMPANYING DOCUMENTS (VA)……..:		N/A
	Marked input of ME EQUIPMENT provided with means for connection of supply conductors of other electrical equipment includes RATED and marked output of such means (A, VA, W)…….:		N/A
7.2.8	**Output connectors**		Pass
7.2.8.2	Output connectors are marked, except for MULTIPLE SOCKET-OUTLETS or connectors intended for specified ACCESSORIES or equipment	Output rating provided as part of Name Plate Marking. Component for building-in, also to be determined as part of the end product	Pass
	Rated Voltage (V), Rated Current (A)……:	See models differences	—
	Rated Power (W), Output Frequency (Hz)…….:	See model differences	—

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
7.2.9	ME EQUIPMENT or its parts marked with the IP environmental Code per IEC 60529 according to classification in 6.3 (Table D.3, Code 2), marking optional for ME EQUIPMENT or parts rated IPX0….:		N/A
7.2.10	Degrees of protection against electric shock as classified in 6.2 for all APPLIED PARTS marked with relevant symbols ……..:	No applied parts.	N/A
	TYPE B APPLIED PARTS with symbol 19 of Table D.1……..:		N/A
	TYPE BF APPLIED PARTS with symbol 20 of Table D.1:		N/A
	TYPE CF APPLIED PARTS with symbol 21 of Table D.1……..:		N/A
	DEFIBRILLATION-PROOF APPLIED PARTS marked with symbols 25-27 of Table D.1……:		N/A
	Proper symbol marked adjacent to or on connector for APPLIED PART……..:		N/A
	SAFETY SIGN 2 of Table D.2 placed near relevant outlet……..:		N/A
	An explanation indicating protection of ME EQUIPMENT against effects of discharge of a cardiac defibrillator depends on use of proper cables included in instructions for use……:		N/A
7.2.11	ME EQUIPMENT suitable for CONTINUOUS OPERATION	Intended for Continuous Operation	N/A
	DUTY CYCLE for ME EQUIPMENT intended for non-CONTINUOUS OPERATION appropriately marked to provide maximum “on” and “off” time……..:		N/A
7.2.12	Type and full rating of a fuse marked adjacent to ACCESSIBLE fuse-holder	No accessible fuses	N/A
	Fuse type……:	-	—
	Voltage (V) and Current (A) rating……:	-	—
	Operating speed (s) and Breaking capacity……:	-	—
7.2.13	Physiological effects – SAFETY SIGN and warning statements ……..:	Component, to be determined in the end product investigation	N/A
	Nature of HAZARD and precautions for avoiding or minimizing the associated RISK described in instructions for use……: (ISO 14971 Cl. 5.2-5.5, 6, 7.2)	Component, to be determined in the end product investigation	N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
7.2.14	HIGH VOLTAGE TERMINAL DEVICES on the outside of ME EQUIPMENT accessible without the use of a TOOL marked with symbol 24 of Table D.1		N/A
7.2.15	Requirements for cooling provisions marked……:	Component, to be determined in the end product investigation	N/A
7.2.17	Packaging marked with special handling instructions for transport and/or storage……:	Component, to be determined in the end product investigation	N/A
	Permissible environmental conditions marked on outside of packaging……..:		N/A
	Packaging marked with a suitable SAFETY SIGN indicating premature unpacking of ME EQUIPMENT could result in an unacceptable RISK……..:		N/A
	RISK MANAGEMENT FILE includes the assessment to determine premature unpacking of ME EQUIPMENT or its parts could result in an unacceptable RISK……: (ISO 14971 Cl. 5.2-5.5, 6, 7.2)		N/A
	Packaging of sterile ME EQUIPMENT or ACCESSORIES marked sterile and indicates the methods of sterilization		N/A
7.2.18	RATED maximum supply pressure from an external source marked on ME EQUIPMENT adjacent to each input connector, and ……..:		N/A
	- the RATED flow rate also marked		N/A
7.2.19	Symbol 7 of Table D.1 marked on FUNCTIONAL EARTH TERMINAL……..:		N/A
7.2.20	Removable protective means marked to indicate the necessity for replacement when the function is no longer needed……..:		N/A
7.2.21	MOBILE ME EQUIPMENT marked with its mass including its SAFE WORKING LOAD in kilograms .....:		N/A
7.3	**Marking on the inside of ME EQUIPMENT or ME EQUIPMENT parts**		Pass
7.3.1	Maximum power loading of heating elements or lamp-holders designed for use with heating lamps marked near or in the heater (W)……:	No such parts	N/A
	A marking referring to ACCOMPANYING DOCUMENTS provided for heating elements or lamp-holders designed for heating lamps that can be changed only by SERVICE PERSONNEL using a TOOL		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
7.3.2	Symbol 24 of Table D.1, or SAFETY SIGN No.3 of Table D.2 used to mark presence of HIGH VOLTAGE parts……:		N/A
7.3.3	Type of battery and mode of insertion marked..:		N/A
	An identifying marking provided referring to instructions in ACCOMPANYING DOCUMENTS for batteries intended to be changed only by SERVICE PERSONNEL using a TOOL……..:	No such parts	N/A
	A warning provided indicating replacement of lithium batteries or fuel cells when incorrect replacement would result in an unacceptable RISK:		N/A
	RISK MANAGEMENT FILE includes an assessment to determine the replacement of lithium batteries or fuel cells leads to an HAZARDOUS SITUATION if replaced incorrectly……: (ISO 14971 Cl. 5.2-5.5, 6, 7.2)		N/A
	ACCOMPANYING DOCUMENTS contain a warning indicating the replacement of lithium batteries or fuel cells by inadequately trained personnel could result in a HAZARDOUS SITUATION……:		N/A
7.3.4	Fuses, replaceable THERMAL CUT-OUTS and OVER-CURRENT RELEASES, accessible by use of a TOOL Identified ……..……:	Component only. The need for reference to fuse ratings in the accompanying document is to be determined in the end product investigation	N/A
	Voltage (V) and Current (A) rating……	-	—
	Operating speed(s), size & breaking capacity….:	-	—
7.3.5	PROTECTIVE EARTH TERMINAL marked with symbol 6 of Table D.1	Component, to be determined as part of the end product investigation	N/A
	Markings on or adjacent to PROTECTIVE EARTH TERMINALS not applied to parts requiring removal to make the connection, and remained visible after connection made	Component, to be determined as part of the end product investigation	N/A
7.3.6	Symbol 7 of Table D.1 marked on FUNCTIONAL EARTH TERMINALS		N/A
7.3.7	Terminals for supply conductors marked adjacent to terminals……:	Supply Terminals marked L and N	Pass
	Terminal markings included in ACCOMPANYING DOCUMENTS when ME EQUIPMENT too small to accommodate markings	Component, to be determined in the end product investigation	N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Terminals exclusively for neutral supply conductor in PERMANENTLY INSTALLED ME EQUIPMENT marked with Code 1 of Table D.3	not permanently installed	N/A
	Marking for connection to a 3-phase supply, complies with IEC 60445	not 3-phase equipment	N/A
	Markings on or adjacent to electrical connection points not applied to parts requiring removal to make connection, and remained visible after connection made		N/A
7.3.8	"For supply connections, use wiring materials suitable for at least X °C" or equivalent, marked at the point of supply connections	Component, to be determined in the end product installation	N/A
	Statement not applied to parts requiring removal to make the connection, and CLEARLY LEGIBLE after connections made		N/A
7.4	**Marking of controls and instruments**		N/A
7.4.1	The "on" & "off" positions of switch to control power to ME EQUIPMENT, including mains switch, marked with symbols 12 and 13 of Table D.1 or		N/A
	– indicated by an adjacent indicator light, or		N/A
	– indicated by other unambiguous means		N/A
	The "on" & "off" positions of switch to control power to parts of ME EQUIPMENT, marked with symbols 12 and 13 of Table D.1 or		N/A
	- marked with symbols 16 and 17 of Table D.1 or		N/A
	– indicated by an adjacent indicator light, or		N/A
	– indicated by other unambiguous means		N/A
	Switches that brings ME EQUIPMENT into "stand-by" may be indicated by symbol 29 of Table D.1		N/A
	The "on/off" positions of push button switch with bi-stable positions marked with symbol 14 of Table D.1, and		N/A
	– status indicated by adjacent indicator light		N/A
	– status indicated by other unambiguous means		N/A
	The "on/off" positions of push button switch with momentary on position marked with symbol 15 of Table D.1 or		N/A
	– status indicated by adjacent indicator light		N/A
	– status indicated by other unambiguous means		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
7.4.2	Different positions of control devices/switches indicated by figures, letters, or other visual means	No such parts	N/A
	RISK MANAGEMENT FILE identifies controls where a change in setting during NORMAL USE results in an unacceptable RISK…….: (ISO 14971 Cl. 5.2-5.5, 6, 7.1, 7.2)		N/A
	Controls provided with an associated indicating device when change of setting of a control could result in an unacceptable RISK to PATIENT in NORMAL USE……..:		N/A
	– or an indication of direction in which magnitude of the function changes		N/A
7.4.3	Numeric indications of parameters on ME EQUIPMENT expressed in SI units according to ISO 80000-1 except the base quantities listed in Table 1 expressed in the indicated units	No such markings	N/A
	ISO 80000-1 applied for application of SI units, their multiples, and certain other units		N/A
	All Markings in Sub-clause 7.4 complied with tests and criteria of 7.1.2 and 7.1.3…….:		N/A
7.5	**SAFETY SIGNS**		N/A
	SAFETY SIGN with established meaning used	Component, to be determined in the end use application	N/A
	RISK MANAGEMENT PROCESS identifies markings used to convey a warning, prohibition or mandatory action that mitigate a RISK not obvious to the OPERATOR……: (ISO 14971 Cl. 5.2-5.5, 6, 7.2)		N/A
	Affirmative statement together with SAFETY SIGN placed in instructions for use if insufficient space on ME EQUIPMENT		N/A
	Specified colours in ISO 3864-1 used for SAFETY SIGNS……..:		N/A
	Safety notices include appropriate precautions or instructions on how to reduce RISK(S)		N/A
	SAFETY SIGNS including any supplementary text or symbols described in instructions for use		N/A
	- and in a language acceptable to the intended OPERATOR		N/A
7.6	**Symbols**		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
7.6.1	Meanings of symbols used for marking described in instructions for use……:		N/A
7.6.3	Symbols used for controls and performance conform to the IEC or ISO publication where symbols are defined, as applicable		N/A
7.7	Colours of the insulation of conductors		N/A
7.7.1	PROTECTIVE EARTH CONDUCTOR identified by green and yellow insulation		N/A
7.7.2	Insulation on conductors inside ME EQUIPMENT forming PROTECTIVE EARTH CONNECTIONS identified by green and yellow at least at terminations		N/A
7.7.3	Green and yellow insulation identify only following conductors:		N/A
	– PROTECTIVE EARTH CONDUCTORS		N/A
	– conductors specified in 7.7.2		N/A
	– POTENTIAL EQUALIZATION CONDUCTORS		N/A
	– FUNCTIONAL EARTH CONDUCTORS		N/A
7.7.4	Neutral conductors of POWER SUPPLY CORDS are “light blue”	Component, to be determined as part of the end product investigation	N/A
7.7.5	Colours of conductors in POWER SUPPLY CORDS in accordance with IEC 60227-1 or IEC 60245-1		N/A
7.8	Indicator lights and controls		N/A
7.8.1	Red indicator lights, not flashing used only for Warning		N/A
	Yellow indicator lights, not flashing used only for Caution		N/A
	Green indicator lights used only for Ready for use		N/A
	Red flashing used only for HIGH PRIORITY ALARM CONDITION, interruption of current workflow needed		N/A
	Yellow flashing used only MEDIUM PRIORITY ALARM CONDITION, re-planning of workflow needed		N/A
	Yellow or Cyan, not flashing used for LOW PRIORITY ALARM CONDITION, planning of future workflow needed.		N/A
	Other colours: Meaning other than red, yellow, cyan or green (colour, meaning)……:		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
7.8.2	Red used only for emergency control		N/A
7.9	**ACCOMPANYING DOCUMENTS**		N/A
7.9.1	ME EQUIPMENT accompanied by documents containing instructions for use, and a technical description		N/A
	ACCOMPANYING DOCUMENTS identify ME EQUIPMENT by the following, as applicable:		N/A
	– Name or trade-name of MANUFACTURER and contact information for the RESPONSIBLE ORGANIZATION can be referred to……..:		N/A
	– MODEL or TYPE REFERENCE……:		N/A
	When ACCOMPANYING DOCUMENTS provided electronically, USABILITY ENGINEERING PROCESS includes instructions as to what is required in hard copy or as markings on ME EQUIPMENT		N/A
	ACCOMPANYING DOCUMENTS specify special skills, training, and knowledge required of OPERATOR or RESPONSIBLE ORGANIZATION and environmental restrictions on locations of use		N/A
	ACCOMPANYING DOCUMENTS written at a level consistent with education, training, and other needs of individuals for whom they are intended		N/A
7.9.2	Instructions for use include the required information		N/A
7.9.2.1	– use of ME EQUIPMENT as intended by the MANUFACTURER:	Component, to be determined as part of the end product investigation	N/A
	– frequently used functions,		N/A
	– known contraindication(s) to use of ME EQUIPMENT		N/A
	- parts of the ME EQUIPMENT that are not serviced or maintained while in use with the patient		N/A
	– name or trademark and address of the MANUFACTURER		N/A
	– MODEL OR TYPE REFERENCE		N/A
	Instruction for use included the following when the PATIENT is an intended OPERATOR:		N/A
	– the PATIENT is an intended OPERATOR		N/A
	– warning against servicing and maintenance while the ME EQUIPMENT is in use		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- functions the PATIENT can safely use and, where applicable, which functions the PATIENT cannot safely use; and		N/A
	–maintenance the PATIENT can perform		N/A
	Classifications as in Clause 6, all markings per Clause 7.2, and explanation of SAFETY SIGNS and symbols marked on ME EQUIPMENT		N/A
	Instructions for use are in a language acceptable to the intended operator		N/A
7.9.2.2	Instructions for use include all warning and safety notices		N/A
	Warning statement for CLASS I ME EQUIPMENT included		N/A
	Warnings regarding significant RISKS of reciprocal interference posed by ME EQUIPMENT during specific investigations or treatments		N/A
	Information on potential electromagnetic or other interference and advice on how to avoid or minimize such interference		N/A
	Warning statement for ME EQUIPMENT supplied with an integral MULTIPLE SOCKET-OUTLET provided		N/A
	The RESPONSIBLE ORGANIZATION is referred to this standard for the requirements applicable to ME SYSTEMS		N/A
7.9.2.3	Statement on ME EQUIPMENT for connection to a separate power supply provided in instructions		N/A
7.9.2.4	Warning statement for mains- operated ME EQUIPMENT with additional power source not automatically maintained in a fully usable condition indicating the necessity for periodic checking or replacement of power source		N/A
	RISK MANAGEMENT FILE assesses the RISK resulting from leakage of batteries…….: (ISO 14971 Cl. 5.2-5.5, 6, 7.2)		N/A
	Where the RISK is unacceptable, the IFU includes a warning to remove the battery if the ME EQUIPMENT is not likely to be used for some time :		N/A
	Specifications of replaceable INTERNAL ELECTRICAL POWER SOURCE when provided…….:		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Warning indicating ME EQUIPMENT must be connected to an appropriate power source when loss of power source would result in an unacceptable RISK……:		N/A
7.9.2.5	Instructions for use include a description of ME EQUIPMENT, its functions, significant physical and performance characteristics together with the expected positions of OPERATOR, PATIENT, or other persons near ME EQUIPMENT in NORMAL USE		N/A
	Information provided on materials and ingredients PATIENT or OPERATOR is exposed to		N/A
	Restrictions specified on other equipment or NETWORK/DATA COUPLINGS, other than those forming part of an ME SYSTEM, to which a SIGNAL INPUT/OUTPUT PART may be connected		N/A
	APPLIED PARTS specified		N/A
7.9.2.6	Information provided indicating where the installation instructions may be found or information on qualified personnel who can perform the installation		N/A
7.9.2.7	Instructions provided indicating not to position ME EQUIPMENT to make it difficult to operate the disconnection device		N/A
7.9.2.8	Necessary information provided for OPERATOR to bring ME EQUIPMENT into operation		N/A
7.9.2.9	Information provided to operate ME EQUIPMENT		N/A
	Meanings of figures, symbols, warning statements, abbreviations and indicator lights described in instructions for use		N/A
7.9.2.10	A list of all system messages, error messages, and fault messages provided with an explanation of messages including important causes and possible action(s) to be taken to resolve the problem indicated by the message		N/A
7.9.2.11	Information provided for the OPERATOR to safely terminate operation of ME EQUIPMENT		N/A
7.9.2.12	Information provided on cleaning, disinfection, and sterilization methods, and applicable parameters that can be tolerated by ME EQUIPMENT parts or ACCESSORIES specified		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Components, ACCESSORIES or ME EQUIPMENT marked for single use, except when required by MANUFACTURER to be cleaned, disinfected, or sterilized prior to use		N/A
7.9.2.13	Instructions provided on preventive inspection, calibration, maintenance and its frequency		N/A
	Information provided for safe performance of routine maintenance necessary to ensure continued safe use of ME EQUIPMENT		N/A
	Parts requiring preventive inspection and maintenance to be performed by SERVICE PERSONNEL identified including periods of application		N/A
	Instructions provided to ensure adequate maintenance of ME EQUIPMENT containing rechargeable batteries to be maintained by anyone other than SERVICE PERSONNEL		N/A
7.9.2.14	A list of ACCESSORIES, detachable parts, and materials for use with ME EQUIPMENT provided		N/A
	Other equipment providing power to ME SYSTEM sufficiently described		N/A
7.9.2.15	Disposal of waste products, residues, etc., and of ME EQUIPMENT and ACCESSORIES at the end of their EXPECTED SERVICE LIFE are identified in the instruction for us……..:		N/A
7.9.2.16	Instructions for use include information specified in 7.9.3 or identify where it can be found (e.g. in a service manual)		N/A
7.9.2.17	Instruction for use for ME EQUIPMENT emitting radiation for medical purposes, indicate the nature, type, intensity and distribution of this radiation		N/A
7.9.2.18	The instructions for use for ME EQUIPMENT or ACCESSORIES supplied sterile indicate that they have been sterilized and the method of sterilization		N/A
	The instructions for use indicate the necessary instructions in the event of damage to the sterile packaging, and where appropriate, details of the appropriate methods of re-sterilization		N/A
7.9.2.19	The instructions for use contain a unique version identifier……..:		N/A

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

7.9.3	**Technical description**		N/A
7.9.3.1	All essential data provided for safe operation, transport, storage, and measures or conditions necessary for installing ME EQUIPMENT, and preparing it for use including	Component, to be determined as part of the end product investigation	N/A
	-information required in 7.2		N/A
	-permissible environmental conditions of use including conditions for transport and storage…….. :		N/A
	-characteristics of the ME EQUIPMENT, including range(s), accuracy, and precision of the displayed values or an indication where they can be found		N/A
	-special installation requirements such as the maximum permissible apparent impedance of SUPPLY MAINS		N/A
	-permissible range of values of inlet pressure and flow, and the chemical composition of cooling liquid		N/A
	-description of the means for checking the oil level in partially sealed oil filled ME EQUIPMENT or its parts		N/A
	-warning statement that addresses the HAZARDS that can result from unauthorized modification of the ME EQUIPMENT		N/A
	-information pertaining to ESSENTIAL PERFORMANCE and any necessary recurrent ESSENTIAL PERFORMANCE and BASIC SAFETY testing including details of the means, methods and recommended frequency		N/A
	Technical description separable from instructions for use contains required information, as follows		N/A
	-information required by 7.2		N/A
	–applicable classifications in Clause 6, warning and safety notices, and explanation of SAFETY SIGNS marked on ME EQUIPMENT		N/A
	– brief description of the ME EQUIPMENT, how the ME EQUIPMENT functions and its significant physical and performance characteristics; and		N/A
	a unique version identifier……..:		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	MANUFACTURER'S optional requirements for minimum qualifications of SERVICE PERSONNEL documented in technical description		N/A
7.9.3.2	**The technical description contains the following required information**		N/A
	–type and full rating of fuses used in SUPPLY MAINS external to PERMANENTLY INSTALLED ME EQUIPMENT……:		N/A
	– a statement for ME EQUIPMENT with a non-DETACHABLE POWER SUPPLY CORD if POWER SUPPLY CORD is replaceable by SERVICE PERSONNEL, and		N/A
	– instructions for correct replacement of interchangeable or detachable parts specified by MANUFACTURER as replaceable by SERVICE PERSONNEL, and		N/A
	RISK MANAGEMENT FILE includes an assessment to determine if replacement of components results in any unacceptable RISKS……: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)		N/A
	– warnings identifying nature of HAZARD when replacement of a component could result in an unacceptable RISK, and when replaceable by SERVICE PERSONNEL all information necessary to safely replace the component		N/A
7.9.3.3	Technical description indicates, MANUFACTURER will provide circuit diagrams, component part lists, descriptions, calibration instructions to assist to SERVICE PERSONNEL in parts repair		N/A
7.9.3.4	Means used to comply with requirements of 8.11.1 clearly identified in technical description		N/A
8	**PROTECTION AGAINST ELECTRICAL HAZARDS FROM ME EQUIPMENT**		Pass
8.1	Limits specified in Clause 8.4 not exceeded for ACCESSIBLE PARTS and APPLIED PARTS in NORMAL or SINGLE FAULT CONDITIONS	Component, to be determined as part of the end product investigation	N/A
	RISK MANAGEMENT FILE identifies conductors and connectors where breaking free results in a HAZARDOUS SITUATION……..: (ISO 14971 Cl. 5.4)		N/A
8.2	**Requirements related to power sources**		N/A
8.2.1	**Connection to a separate power source**		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	When ME EQUIPMENT specified for connection to a separate power source other than SUPPLY MAINS, separate power source considered as part of ME EQUIPMENT or combination considered as an ME SYSTEM		N/A
	Tests performed with ME EQUIPMENT connected to separate power supply when one specified		N/A
	When a generic separate power supply specified, specification in ACCOMPANYING DOCUMENTS examined		N/A
8.2.2	**Connection to an external d.c. power source**		N/A
	No HAZARDOUS SITUATION as described in 13.1 developed when a connection with wrong polarity made for ME EQUIPMENT from an external d.c. source	Component, to be determined in the end product investigation	N/A
	ME EQUIPMENT connected with correct polarity maintained BASIC SAFETY and ESSENTIAL PERFORMANCE		N/A
	Protective devices that can be reset by anyone without a TOOL returns to NORMAL CONDITION on reset		N/A
8.3	**Classification of APPLIED PARTS**		N/A
	a) APPLIED PART specified in ACCOMPANYING DOCUMENTS as suitable for DIRECT CARDIAC APPLICATION is TYPE CF	No applied parts	N/A
	b) An APPLIED PART provided with a PATIENT CONNECTION intended to deliver electrical energy or an electrophysiological signal to or from PATIENT is TYPE BF or CF APPLIED PART		N/A
	c) An APPLIED PART not covered by a) or b) is a TYPE B, BF, or CF		N/A
8.4	**Limitation of voltage, current or energy**		Pass
8.4.2	**ACCESSIBLE PARTS and APPLIED PARTS**		N/A
	a) Currents from, to, or between PATIENT CONNECTIONS did not exceed limits for PATIENT LEAKAGE CURRENT & PATIENT AUXILIARY CURRENT……:	No applied parts	N/A
	b) LEAKAGE CURRENTS from, to, or between ACCESSIBLE PARTS did not exceed limits for TOUCH CURRENT……:	Component, to be determined in the end product investigation	N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	c) Limits specified in b) not applied to parts when probability of a connection to a PATIENT, directly or through body of OPERATOR, is negligible in NORMAL USE, and the OPERATOR is appropriately instructed	Component, to be determined in the end product investigation	N/A
	Voltage to earth or to other ACCESSIBLE PARTS did not exceed 42.4 V peak a.c. or 60 V d.c. for above parts in NORMAL or single fault condition (V a.c. or d.c.)……:		N/A
	Energy did not exceed 240 VA for longer than 60 s or stored energy available did not exceed 20 J at a potential of 2 V or more (VA or J)…….:		N/A
	Limits in b) does not apply to SIP/SOP connectors and separate power supply connectors if the voltage measured is less than or equal to 60 V d.c. or 42,4 V peak a.c		N/A
	d) Voltage and energy limits specified in c) above also applied to the following:	Component, to be determined in the end product investigation	N/A
	– internal parts touchable by test pin in Fig 8 inserted through an opening in an ENCLOSURE; and		N/A
	– internal parts touchable by a metal test rod with a diameter of 4 mm and a length 100 mm, inserted through any opening on top of ENCLOSURE or through any opening provided for adjustment of pre-set controls by RESPONSIBLE ORGANIZATION in NORMAL USE using a TOOL		N/A
	Test pin or the test rod inserted through relevant openings with minimal force of no more than 1 N		N/A
	Test rod inserted in every possible position through openings provided for adjustment of pre-set controls that can be adjusted in NORMAL USE, with a force of 10 N		N/A
	Test repeated with a TOOL specified in instructions for use		N/A
	Test rod freely and vertically suspended through openings on top of ENCLOSURE		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	e) Devices used to de-energize parts when an ACCESS COVER opened without a TOOL gives access to parts at voltages above levels permitted by this Clause comply with 8.11.1 for mains isolating switches and remain effective in SINGLE FAULT CONDITION	Component, to be determined in the end product investigation	N/A
	A TOOL is required when it is possible to prevent the devices from operating		N/A
8.4.3	Worst case voltage between pins of plug and between either supply pin and ENCLOSURE did not exceed 60 V one sec after disconnecting the plug of ME EQUIPMENT or its parts (V)……:	See appended Table 8.4.3	Pass
	When voltage exceeded 60 V, calculated or measured stored charge didn't exceed 45µC….:	Did not exceed 60V	N/A
8.4.4	Residual voltage of conductive parts of capacitive circuits, having become accessible after ME EQUIPMENT was de-energized after removal of ACCESS COVERS, didn't exceed 60V or calculated stored charge didn't exceed 45µC….:		N/A
	A device manually discharging capacitors used when automatic discharging was not possible and ACCESS COVERS could be removed only with aid of a TOOL		N/A
	Capacitor(s) and connected circuitry marked with symbol 24 of Table D.1, and manual discharging device specified in technical description……:		N/A
8.5	**Separation of parts**		Pass
8.5.1	**MEANS OF PROTECTION (MOP)**		Pass
8.5.1.1	Two MEANS of PROTECTION provided for ME EQUIPMENT to prevent APPLIED and other ACCESSIBLE PARTS from exceeding limits in 8.4	See appended Table to insulation diagram	Pass
	A MEANS OF PROTECTION protecting APPLIED PARTS or parts identified by 4.6 as parts subject to the same requirements, considered as MEANS OF PATIENT PROTECTION……:	See appended table to insulation diagram	Pass
	Varnishing, enamelling, oxidation, and similar protective finishes and coatings with sealing compounds re-plasticizing at temperatures expected during operation and sterilization disregarded as MEANS OF PROTECTION	Noted	Pass

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Components and wiring forming a MEANS OF PROTECTION comply with 8.10	See appended table 8.10	Pass
8.5.1.2	MEANS OF PATIENT PROTECTION (MOPP)		N/A
	Solid insulation forming a MEANS OF PATIENT PROTECTION complied with dielectric strength test…….:	See appended table 8.8.3	N/A
	CREEPAGE and CLEARANCES forming a MEANS OF PATIENT PROTECTION complied with Table 12	See appended table to insulation diagram	N/A
	PROTECTIVE EARTH CONNECTIONS forming a MEANS OF PATIENT PROTECTION complied with Cl. 8.6	Component, also to be evaluated as part of the end product investigation	N/A
	Y1 or Y2 capacitor complying with standard IEC 60384-14 considered one MEANS OF PATIENT PROTECTION ……..:	See table 8.10	N/A
	Single Y1 capacitor used for two MEANS OF PATIENT PROTECTION when the working voltage is less than 42,4 V peak a.c. or 60 V d.c…….:		N/A
	Two capacitors used in series, each RATED for total WORKING VOLTAGE across the pair and have the same NOMINAL capacitance	See table 8.10 for CYP4, CYP5	N/A
	Voltage $_{\text{Total Working}}$ (V) and C $_{\text{Nominal}}$ (μF)…….:	4700pF, 250V (D+Kmodels), 2200pF, 250V (A+C and D+C models)	—
	Optocouplers complying with IEC 60747-5-5:2007, or a later edition. Considered equivalent to requirements in 8.8.2 and 8.9.3	See table 8.10	N/A
	Measurement of Air Clearance and Creepage distance on the outside	See insulation table 8.8.3, dielectric strength tests	N/A
	Dielectric strength test across optocoupler		N/A
8.5.1.3	MEANS OF OPERATOR PROTECTION (MOOP)		Pass
	Solid insulation forming a MEANS OF OPERATOR PROTECTION complied with:		N/A
	– dielectric strength test …….:		N/A
	– requirements of IEC 60950-1:2005, IEC 60950-1:2005/A1:2009 and IEC 60950:2005/A2:2013 or requirements of IEC 62368-1:2018 for INSULATION CO-ORDINATION		N/A
	CREEPAGE and CLEARANCES forming a MEANS OF OPERATOR PROTECTION complied with:		N/A
	– limits of Tables 13 to 16 (inclusive); or		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	– requirements of IEC 60950-1:2005, IEC 60950-1:2005/A1:2009 and IEC 60950:2005/A2:2013 or requirements of IEC 62368-1:2018 for INSULATION CO-ORDINATION		N/A
	PROTECTIVE EARTH CONNECTIONS forming a MEANS OF OPERATOR PROTECTION complied with Cl. 8.6		N/A
	– or with requirements and tests of IEC 60950-1:2005, IEC 60950-1:2005/A1:2009 and IEC 60950:2005/A2:2013 or requirements of IEC 62368-1:2018 for protective earthing……:		N/A
	A Y2 (IEC 60384-14) capacitor is considered one MEANS OF OPERATOR PROTECTION……:		N/A
	A Y1 (IEC 60384-14) capacitor is considered two MEANS OF OPERATOR PROTECTION……..:		N/A
	Two capacitors used in series each RATED for total WORKING VOLTAGE across the pair and have the same NOMINAL capacitance	(see appended table 8.10)	N/A
	Voltage $_{\text{Total Working}}$ (V) and C $_{\text{Nominal}}$ (μF)……..:		—
	Optocouplers complying with IEC 60747-5-5:2007, or a later edition. Considered equivalent to requirements in 8.8.2 and 8.9.3		N/A
	Measurement of Air Clearance and Creepage distance on the outside		N/A
	Dielectric strength test across optocoupler		N/A
	Points and applied parts at which impedances of components, CREEPAGE, CLEARANCES, PROTECTIVE EARTH CONNECTIONS or insulation, prevent ACCESSIBLE PARTS from exceeding limits in 8.4 were examined whether a failure at any of these points is to be regarded as a NORMAL or SINGLE FAULT CONDITION		N/A
8.5.2	**Separation of PATIENT CONNECTIONS**		N/A
8.5.2.1	PATIENT CONNECTIONS of F-TYPE APPLIED PART separated from all other parts by equivalent to one MEANS OF PATIENT PROTECTION for a WORKING VOLTAGE equal to the MAX. MAINS VOLTAGE……:	No patient connections, component only, to be determined in the end product evaluation.	N/A
	Separation requirement not applied between multiple functions of a single F-TYPE APPLIED PART		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	PATIENT CONNECTIONS treated as one APPLIED PART in the absence of electrical separation between PATIENT CONNECTIONS of same or another function		N/A
	MANUFACTURER has defined if multiple functions are to be considered as all within one APPLIED PART or as multiple APPLIED PARTS…….:		N/A
	Classification as TYPE BF, CF, or DEFIBRILLATION-PROOF applied to one entire APPLIED PART		N/A
	LEAKAGE CURRENT tests conducted per 8.7.4….:		N/A
	Dielectric strength test conducted per 8.8.3……:		N/A
	CREEPAGE and CLEARANCES measured ……:		N/A
	A protective device connected between PATIENT CONNECTIONS of an F-TYPE APPLIED PART and ENCLOSURE to protect against excessive voltages did not operate below 500 V r.m.s		N/A
8.5.2.2	PATIENT CONNECTIONS of a TYPE B APPLIED PART not PROTECTIVELY EARTHED are separated by one MEANS OF PATIENT PROTECTION from metal ACCESSIBLE PARTS not PROTECTIVELY EARTHED…:	No patient connections, component only, to be determined in the end product evaluation.	N/A
	– except when metal ACCESSIBLE PART is physically close to APPLIED PART and can be regarded as a part of APPLIED PART; and		N/A
	– RISK that metal ACCESSIBLE PART will make contact with a source of voltage or LEAKAGE CURRENT above permitted limits is acceptably low. In this case 8.7.4.7 d) does not apply		N/A
	LEAKAGE CURRENT tests conducted per 8.7.4…:		N/A
	Dielectric strength test conducted per 8.8.3 …..:		N/A
	Relevant CREEPAGE and CLEARANCES measured		N/A
	RISK MANAGEMENT FILE includes an assessment of the RISK of metal ACCESSIBLE PARTS contacting a source of voltage or LEAKAGE CURRENT above the limits……: (ISO 14971 Cl. 5.2-5.5, 6)		N/A
8.5.2.3	**A connector on a PATIENT lead or PATIENT cable located at the end of the lead or cable distal from PATIENT, with conductive part not separated from all PATIENT CONNECTIONS by one MEANS OF PATIENT PROTECTION for a WORKING VOLTAGE equal to MAXIMUM MAINS VOLTAGE**		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- cannot be connected to earth or hazardous voltage while the PATIENT CONNECTIONS are in contact with PATIENT……:	No patient connections, component only, to be determined in the end product evaluation.	N/A
	– conductive part of connector not separated from all PATIENT CONNECTIONS did not come into contact with a flat conductive plate of not less than 100 mm diameter		N/A
	– CLEARANCE between connector pins and a flat surface is at least 0.5 mm		N/A
	– conductive part pluggable into a mains socket protected from contacting parts at MAINS VOLTAGE by insulation with a CREEPAGE DISTANCE of at least 1.0 mm, a 1500 V dielectric strength and complying with 8.8.4.1		N/A
	– required test finger did not make electrical contact with conductive part when applied against access openings with a force of 10 N,		N/A
	Test finger test (10 N)……:		N/A
	Except when RISK MANAGEMENT PROCESS includes an assessment of RISKS resulting from contact with objects other than mains sockets or flat surfaces……..: (ISO 14971 Cl. 5.2-5.5, 6)		N/A
8.5.4	**WORKING VOLTAGE**		Pass
	– Input supply voltage to ME EQUIPMENT was RATED voltage or voltage within RATED range resulting in highest measured value (V)……..:	Tested at 240V	Pass
	– WORKING VOLTAGE for d.c. voltages with superimposed ripple was average value when peak-to-peak ripple less than 10% of average value or peak voltage when peak-to-peak ripple exceeding 10% of average value (V)…….:	Considered for DC output	Pass
	– WORKING VOLTAGE for each MEANS OF PROTECTION forming DOUBLE INSULATION was voltage DOUBLE INSULATION, as a whole, subjected to (V)……:	See Insulation Diagram and Insulation Table	Pass
	– Intentional or accidental earthing of PATIENT regarded as a NORMAL CONDITION for WORKING VOLTAGE involving a PATIENT CONNECTION not connected to earth	No applied parts	N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	– WORKING VOLTAGE between PATIENT CONNECTIONS of an F-TYPE APPLIED PART and ENCLOSURE was highest voltage appearing across insulation in NORMAL USE including earthing of any part of APPLIED PART (V)……..:	No applied parts	N/A
	– WORKING VOLTAGE for DEFIBRILLATION-PROOF APPLIED PARTS determined disregarding possible presence of defibrillation voltages	No applied parts	N/A
	– WORKING VOLTAGE was equal to resonance voltage in case of motors provided with capacitors between the point where a winding and a capacitor are connected together and a terminal for external conductors (V)…….:	No motors	N/A
8.5.5	DEFIBRILLATION-PROOF APPLIED PARTS	No Defibrillation-proof applied parts.	N/A
8.5.5.1	Classification "DEFIBRILLATION-PROOF APPLIED PART" applied to one APPLIED PART in its entirety		N/A
	Isolation of PATIENT CONNECTIONS of a DEFIBRILLATION-PROOF APPLIED PART from other parts of ME EQUIPMENT accomplished as follows:		N/A
	a) No hazardous electrical energies appear during a discharge of cardiac defibrillator ……...:		N/A
	b) ME EQUIPMENT complied with relevant requirements of this standard, providing BASIC SAFETY and ESSENTIAL PERFORMANCE following exposure to defibrillation voltage, and recovery time stated in ACCOMPANYING DOCUMENTS……..:		N/A
8.5.5.2	Means provided to limit energy delivered to a 100 Ω load……:		N/A
8.6	**Protective and functional earthing and potential equalization of ME EQUIPMENT**		N/A
8.6.1	Requirements of 8.6.2 to 8.6.8 applied	Component, to be determined in the end product	N/A
	Parts complying with IEC 60950-1:2005, IEC 60950-1:2005/AMD1:2009 and IEC 60950-1:2005/AMD2:2013 or IEC 62368-1:2018 for protective earthing and serving as MEANS OF OPERATOR PROTECTION but not PATIENT PROTECTION exempted from requirements of 8.6.2 to 8.6.8		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
8.6.2	PROTECTIVE EARTH TERMINAL is suitable for connection to an external protective earthing system by a PROTECTIVE EARTH CONDUCTOR in a POWER SUPPLY CORD and a suitable plug or by a FIXED PROTECTIVE EARTH CONDUCTOR……:	Component, to be determined in the end product investigation	N/A
	Clamping means of PROTECTIVE EARTH TERMINAL of ME EQUIPMENT for FIXED supply conductors or POWER SUPPLY CORDS comply with 8.11.4.3, and cannot be loosened without TOOL		N/A
	Screws for internal PROTECTIVE EARTH CONNECTIONS completely covered or protected against accidental loosening from outside……..:		N/A
	Earth pin of APPLIANCE INLET forming supply connection to ME EQUIPMENT regarded as PROTECTIVE EARTH TERMINAL		N/A
	PROTECTIVE EARTH TERMINAL not used for mechanical connection between different parts of ME EQUIPMENT or securing components not related to protective or functional earthing		N/A
8.6.3	PROTECTIVE EARTH CONNECTION not used for a moving part,	No such parts	N/A
	except when MANUFACTURER demonstrated in RISK MANAGEMENT FILE connection will remain reliable during EXPECTED SERVICE LIFE ……: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)		N/A
8.6.4	a) PROTECTIVE EARTH CONNECTIONS carried fault currents reliably and without excessive voltage drop……:	Component, to be determined as part of the end product investigation	N/A
	b) Allowable TOUCH CURRENT and PATIENT LEAKAGE CURRENT in SINGLE FAULT CONDITION were not exceeded, when impedance of PROTECTIVE EARTH CONNECTIONS exceeded values in 8.6.4 a) and Table 8.6.4, due to limited current capability of relevant circuits……..:		N/A
	DETACHABLE POWER SUPPLY CORD specified by manufacturer or delivered with product		N/A
8.6.5	**Surface coatings**		N/A
	Poorly conducting surface coatings on conductive elements removed at the point of contact		N/A
	Coating not removed when requirements for impedance and current-carrying capacity met		N/A

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

8.6.6	**Plugs and sockets**		N/A
	PROTECTIVE EARTH CONNECTION where connection between SUPPLY MAINS and ME EQUIPMENT or between separate parts of ME EQUIPMENT made via a plug and socket was made before and interrupted after supply connections		N/A
	- applied also where interchangeable parts are PROTECTIVELY EARTHED		N/A
8.6.7	**Terminal for connection of a POTENTIAL EQUALIZATION CONDUCTOR**		N/A
	– Terminal is accessible to OPERATOR with ME EQUIPMENT in any position of NORMAL USE	No such parts	N/A
	–accidental disconnection avoided in NORMAL USE		N/A
	– Terminal allows conductor to be detached without a TOOL		N/A
	– Terminal not used for a PROTECTIVE EARTH CONNECTION		N/A
	– Terminal marked with symbol 8 of Table D.1		N/A
	– Instructions for use contain information on function and use of POTENTIAL EQUALIZATION CONDUCTOR together with a reference to requirements of this standard		N/A
	POWER SUPPLY CORD does not incorporate a POTENTIAL EQUALIZATION CONDUCTOR		N/A
8.6.8	FUNCTIONAL EARTH TERMINAL not used to provide a PROTECTIVE EARTH CONNECTION	Component, to be determined as part of the end product investigation	N/A
8.6.9	**Class II ME EQUIPMENT**		N/A
	Third conductor of POWER SUPPLY CORD connected to protective earth contact of MAINS PLUG provided with CLASS II ME EQUIPMENT with isolated internal screens used as functional earth connection to the screen's FUNCTIONAL EARTH TERMINAL, coloured green and yellow	Component, to be determined as part of the end product investigation	N/A
	ACCOMPANYING DOCUMENTS include a statement that the third conductor in the POWER SUPPLY CORD is only a functional earth.	Component, to be determined as part of the end product investigation	N/A
	Two MEANS OF PROTECTION provided between insulation of internal screens and all internal wiring connected to them and ACCESSIBLE PARTS		N/A
8.7	**LEAKAGE CURRENTS and PATIENT AUXILIARY CURRENTS**		Pass

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
8.7.1	a) Electrical isolation providing protection against electric shock limits currents to values in 8.7.3……..:	See appended Table 8.7	Pass
	b) Specified values of EARTH LEAKAGE, TOUCH, PATIENT LEAKAGE, and PATIENT AUXILIARY CURRENTS applied in combination of conditions in appended Table 8.7……..:	See appended Table 8.7	Pass
8.7.2	Allowable values specified in 8.7.3 applied under SINGLE FAULT CONDITIONS of 8.1 b), except	(see appended table 8.7)	Pass
	– where insulation used in conjunction with a PROTECTIVE EARTH CONNECTION, insulation short circuited only under conditions in 8.6.4 b)	Considered	Pass
	– the only SINGLE FAULT CONDITION for EARTH LEAKAGE CURRENT was interruption of one supply conductor at a time	(see appended table 8.7)	Pass
	– LEAKAGE CURRENTS and PATIENT AUXILIARY CURRENT not measured in SINGLE FAULT CONDITION of short circuiting of one constituent part of DOUBLE INSULATION		Pass
	SINGLE FAULT CONDITIONS not applied at same time as special test conditions of MAXIMUM MAINS VOLTAGE on APPLIED PARTS and non-PROTECTIVELY EARTHED parts of ENCLOSURE	Component, to be determined in the end product investigation	N/A
8.7.3	**Allowable Values**		Pass
	a) Allowable values in 8.7.3 b), c), and d) measured based on, and are relative to currents in Fig 12 a), or by a device measuring frequency contents of currents as in Fig 12 b……..:	See appended Table 8.7	Pass
	b) Allowable values of PATIENT LEAKAGE and AUXILIARY CURRENTS are according to Tables 3 & 4, and values of a.c. are relative to currents having a frequency not less than 0.1Hz……..:		N/A
	c) TOUCH CURRENT did not exceed 100µA in NORMAL CONDITION and 500µA in SINGLE FAULT CONDITION (I_{TNC}, I_{TSFC})……..:	Component intended for building-in, to be determined in the end product investigation.	N/A
	d) EARTH LEAKAGE CURRENT did not exceed 5 mA in NORMAL CONDITION and 10 mA in SINGLE FAULT CONDITION (I_{ENC}, I_{ESFC})……..:	See appended Table 8.7	Pass

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Higher values of EARTH LEAKAGE CURRENT permitted for PERMANENTLY INSTALLED ME EQUIPMENT connected to a supply circuit supplying only this ME EQUIPMENT according to local regulations or IEC 60364-7-710……:		N/A
	e) LEAKAGE CURRENTS, regardless of waveform and frequency, did not exceed 10 mA r.m.s. in NORMAL or in SINGLE FAULT CONDITION (measured with a non-frequency-weighted device……:	Component only, to be determined as part of the end product investigation	N/A
	f) LEAKAGE CURRENTS flowing in a FUNCTIONAL EARTH CONDUCTOR in a non-PERMANENTLY INSTALLED ME EQUIPMENT are 5 mA in NORMAL CONDITION, 10 mA in SINGLE FAULT CONDITION….:	Component only, to be determined as part of the end product investigation	N/A
8.7.4	LEAKAGE and PATIENT AUXILIARY CURRENTS measurements……..:	See appended Table 8.7	Pass
8.8	Insulation		Pass
8.8.1	Insulation relied on as MEANS OF PROTECTION, including REINFORCED INSULATION subjected to testing		Pass
	Insulation exempted from test (complies with clause 4.8)		N/A
	Insulation forming MEANS OF OPERATOR PROTECTION and complying with IEC 60950-1 for INSULATION CO-ORDINATION not tested as in 8.8		N/A
8.8.2	**Distance through solid insulation or use of thin sheet material**		Pass
	Solid insulation forming SUPPLEMENTARY or REINFORCED INSULATION for a PEAK WORKING VOLTAGE greater than 71 V provided with:		Pass
	a) 0.4 mm, min, distance through insulation, or	Min .4mm DTI on optical isolators	Pass
	b) does not form part of an ENCLOSURE and not subject to handling or abrasion during NORMAL USE, and comprised of:		N/A
	– at least two layers of material, each passed the appropriate dielectric strength test *……:*		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	– or three layers of material, for which all combinations of two layers together passed the appropriate dielectric strength test ..... :		N/A
	Dielectric strength test for one or two layers was same as for one MEANS OF PROTECTION for SUPPLEMENTARY INSULATION		N/A
	Dielectric strength test for one or two layers was same as for two MEANS OF PROTECTION for REINFORCED INSULATION		N/A
	BASIC, SUPPLEMENTARY, and REINFORCED INSULATION required between windings of wound components separated by interleaved insulation complying with a) or b), or both, except when		N/A
	c) Wire with solid insulation, other than solvent based enamel, complying with a)		N/A
	d) Wire with multi-layer extruded or spirally wrapped insulation complying with b) and complying with Annex L	Evaluated as part of separate component evaluation	Pass
	e) Finished wire with spirally wrapped or multi-layer extruded insulation, complying with Annex L	Evaluated as part of separate component evaluation	Pass
	– BASIC INSULATION: minimum two wrapped layers or one extruded layer		N/A
	– SUPPLEMENTARY INSULATION: minimum two layers, wrapped or extruded		N/A
	– REINFORCED INSULATION: minimum three layers, wrapped or extruded	Evaluated as part of separate component evaluation	Pass
	In d) and e), for spirally wrapped insulation with CREEPAGE DISTANCES between layers less than in Table 12 or 16 (Pollution Degree 1) depending on type of insulation, path between layers sealed as a cemented joint in 8.9.3.3 and test voltages of TYPE TESTS in L.3 equal 1.6 times of normal values		N/A
	Protection against mechanical stress provided where two insulated wires or one bare and one insulated wire are in contact inside wound component, crossing at an angle between 45° and 90° and subject to winding tension……:		N/A
	Finished component complied with routine dielectric strength tests of 8.8.3……:	See appended table 8.8.3	Pass

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Tests of Annex L not repeated since material data sheets confirm compliance……:	Tests not repeated based on UL Certification. See table 8.10 for details.	Pass
8.8.3	**Dielectric Strength**		Pass
	Solid insulating materials with a safety function withstood dielectric strength test voltages ……..:	See appended Table 8.8.3	Pass
8.8.4	**Insulation other than wire insulation**		Pass
8.8.4.1	Resistance to heat retained by all insulation and insulating partition walls during EXPECTED SERVICE LIFE of ME EQUIPMENT		Pass
	ME EQUIPMENT and design documentation examined……:	See attachments	Pass
	RISK MANAGEMENT FILE examined in conjunction with resistance to moisture, dielectric strength, and mechanical strength tests……..: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)		N/A
	Satisfactory evidence of compliance provided by manufacturer for resistance to heat……..:	Thermoset Bobbin materials are used	Pass
	Tests conducted in absence of satisfactory evidence for resistance to heat……..:	See appended table 8.8.4.1	N/A
	a) ENCLOSURE and other external parts of insulating material, except insulation of flexible cords and parts of ceramic material, subjected to ball-pressure test using Fig 21 apparatus…..:		N/A
	b) Parts of insulating material supporting uninsulated parts of MAINS PART subjected to ball-pressure test in a), except at 125 °C ± 2 ° C or ambient indicated in technical description ±2°C plus temperature rise determined during test of 11.1 of relevant part, if higher (°C)……:	See appended table 8.8.4.1	N/A
	Test not performed on parts of ceramic material, insulating parts of commutators, brush-caps, and similar, and on coil formers not used as REINFORCED INSULATION		N/A
8.8.4.2	**Resistance to environmental stress**		N/A
	Insulating characteristics and mechanical strength of all MEANS OF PROTECTION not likely to be impaired by environmental stresses including deposition of dirt resulting from wear of parts within EQUIPMENT, potentially reducing CREEPAGE and CLEARANCES below 8.9	Component, to be determined as part of end product evaluation	N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Ceramic and similar materials not tightly sintered, and beads alone not used as SUPPLEMENTARY or REINFORCED INSULATION		N/A
	Insulating material with embedded heating conductors considered as one MEANS OF PROTECTION but not two MEANS OF PROTECTION		N/A
	Parts of natural latex rubber aged by suspending samples freely in an oxygen cylinder containing commercial oxygen to a pressure of 2.1 MPa ± 70 kPa, with an effective capacity of at least 10 times volume of samples		N/A
	There were no cracks visible to naked eyes after samples kept in cylinder at 70 °C ± 2 °C for 96h, and afterwards, left at room temperature for at least 16h		N/A
8.9	**CREEPAGE DISTANCES and AIR CLEARANCES**		Pass
8.9.1.1	CREEPAGE DISTANCES and AIR CLEARANCES are equal to or greater than values in Tables 12 to 16 (inclusive)…….:	Refer to Insulation Diagram / Table	Pass
8.9.1.15	CREEPAGE DISTANCES and AIR CLEARANCES for DEFIBRILLATION-PROOF APPLIED PARTS are 4 mm or more to meet 8.5.5.1	No such parts	N/A
8.9.1.16	Conductive coatings applied to non-metallic surfaces, do not result in flaking or peeling reducing any AIR CLEARANCE or CREEPAGE DISTANCE		N/A
8.9.2	a) Short circuiting of each single one of CREEPAGE DISTANCES and CLEARANCES in turn did not result in a HAZARDOUS SITUATION , min CREEPAGE and CLEARANCES not applied……..:	min CREEPAGES and CLEARANCES provided	N/A
8.9.3	**Spaces filled by insulating compound**		N/A
8.9.3.1	Only solid insulation requirements applied where distances between conductive parts filled with insulating compound		N/A
	Thermal cycling, humidity preconditioning, and dielectric strength tests		N/A
8.9.3.2	For insulating compound forming solid insulation between conductive parts, a single sample subjected to thermal cycling PROCEDURE of 8.9.3.4 followed by humidity preconditioning per 5.7 (for 48 hours), followed by dielectric strength test (cl. 8.8.3 at 1,6 x test voltage)…….:		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Cracks or voids in insulating compound affecting homogeneity of material didn't occur		N/A
8.9.3.3	Where insulating compound forms a cemented joint with other insulating parts, three samples tested for reliability of joint		N/A
	A winding of solvent-based enamelled wire replaced for the test by a metal foil or by a few turns of bare wire placed close to cemented joint, and three samples tested as follows:		N/A
	– One sample subjected to thermal cycling PROCEDURE of 8.9.3.4, and immediately after the last period at highest temperature during thermal cycling followed by dielectric strength test of cl. 8.8.3 at 1.6 x the test voltage ……..:		N/A
	– The other two samples subjected to humidity preconditioning of 5.7, except for 48 hours only followed by a dielectric strength test of cl. 8.8.3 at 1.6 times the test voltage		N/A
8.9.4	Minimum spacing of grooves transvers to the CREEPAGE DISTANCES considered a MEANS OF OPERATOR PROTECTION adjusted based on pollution degree ……..……:	Pollution Degree 2	Pass
	Force was applied between bare conductors and outside metal enclosure when measuring CREEPAGE DISTANCES and AIR CLEARANCES		Pass
8.10	**Components and wiring**		Pass
8.10.1	Components of ME EQUIPMENT likely to result in an unacceptable RISK by their movements mounted securely……:	Shrink Tubing or RTV is used on components which can move	Pass
	RISK MANAGEMENT FILE includes an assessment of RISKS related to unwanted movement of components……..: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)		N/A
8.10.2	Conductors and connectors of ME EQUIPMENT adequately secured or insulated to prevent accidental detachment……:	T1 flying leads are secured to the PWB with RTV. Connectors are soldered to the PWB	Pass
	Stranded conductors are not solder-coated when secured by clamping means to prevent HAZARDOUS SITUATIONS		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
8.10.3	Interconnecting flexible cords detachable without a TOOL used provided with means for connection to comply with requirements for metal ACCESSIBLE PARTS when a connection is loosened or broken ……:	Component, to be determined as part of the end product investigation	Pass
8.10.4	**Cord-connected HAND-HELD parts and cord-connected foot-operated control devices**		N/A
8.10.4.1	Control devices of ME EQUIPMENT and their connection cords contain only conductors and components operating at 42.4 V peak a.c., max, or 60 V d.c. in circuits isolated from MAINS PART by two MEANS OF PROTECTION	No such parts	N/A
8.10.4.2	Connection and anchorage of a flexible cord to a HAND-HELD or foot-operated control device of ME EQUIPMENT, at both ends of the cable to the control device, complies with the requirements for POWER SUPPLY CORDS in Cl. 8.11.3		N/A
	Other HAND-HELD parts, if disturbance or breaking of one or more of the connections could result in a HAZARDOUS SITUATION, also comply with tests of Cl. 8.11.3		N/A
8.10.5	**Mechanical protection of wiring**		Pass
	a) Internal cables and wiring adequately protected against contact with a moving part or from friction at sharp corners and edges…….:	No moving parts. Wiring routed away from sharp part	Pass
	b) Wiring, cord forms, or components are not likely to be damaged during assembly or during opening or closing of ACCESS COVERS	Component, to be determined in the end product investigation	N/A
8.10.6	Guiding rollers prevent bending of movable insulated conductors around a radius of less than five times the outer diameter of the lead	No such parts	N/A
8.10.7	a) Insulating sleeve adequately secured…….:	see Table 8.10), can only be removed by breaking or cutting	Pass
	b) Sheath of a flexible cord not used as a MEANS OF PROTECTION inside ME EQUIPMENT when it is subject to mechanical or thermal stresses beyond its RATED characteristics	No such parts	N/A
	c) Insulated conductors of ME EQUIPMENT subject to temperatures exceeding 70 °C…….:	No such parts	N/A
8.11	**MAINS PARTS, components and layout**		Pass

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
8.11.1	a) ME EQUIPMENT provided with means of electrically isolating its circuits from SUPPLY MAINS simultaneously on all poles……..:		N/A
	PERMANENTLY INSTALLED ME EQUIPMENT connected to a poly-phase SUPPLY MAINS equipped with a device not interrupting neutral conductor, provided local installation conditions prevent voltage on neutral conductor from exceeding limits in 8.4.2 c)		N/A
	PERMANENTLY INSTALLED ME EQUIPMENT provided with means to isolate its circuits electrically from the SUPPLY MAINS are capable of being locked in the off position	Not permanently connect, subject to end product investigation	N/A
	- the isolation device specified in the ACCOMPANYING DOCUMENTS		N/A
	b) Means of isolation incorporated in ME EQUIPMENT, or if external, described in technical description ……:	Component, to be determined as part of end product investigation	N/A
	c) A SUPPLY MAINS switch used to comply with 8.11.1 a) complies with CREEPAGE / CLEARANCES for a MAINS TRANSIENT VOLTAGE of 4 kV……:	No mains switch provided	N/A
	d) A SUPPLY MAINS switch not incorporated in a POWER SUPPLY CORD or external flexible lead		N/A
	e) Actuator of a SUPPLY MAINS switch used to comply with 8.11.1 a) complies with IEC 60447	Component, to be determined as part of end product investigation	N/A
	f) A suitable plug device used in non-PERMANENTLY INSTALLED ME EQUIPMENT with no SUPPLY MAINS SWITCH……:	Component, to be determined as part of end product investigation	N/A
	g) A fuse or a semiconductor device not used as an isolating means		Pass
	h) ME EQUIPMENT not provided with a device causing disconnection of ME EQUIPMENT from SUPPLY MAINS by producing a short circuit resulting in operation of an overcurrent protection device		N/A
	i) Parts within ENCLOSURE of ME EQUIPMENT with a circuit > 42.4 V peak a.c. or 60 V d.c. that cannot be disconnected from its supply by an external switch or a plug device accessible at all times is protected against touch even after opening ENCLOSURE by an additional covering	Component, to be determined as part of end product investigation	N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	A clear warning notice is marked on outside of ME EQUIPMENT to indicate it exceeds allowable touch voltage		N/A
	For a part that could not be disconnected from supply by an external switch or a plug device accessible at all times, the required cover or warning notice complied with this clause		N/A
	Standard test finger applied		N/A
8.11.2	MULTIPLE SOCKET-OUTLETS integral with ME EQUIPMENT complied with 16.2 d), second dash; and 16.9.2	No such parts	N/A
8.11.3	**POWER SUPPLY CORDS**		N/A
8.11.3.1	MAINS PLUG not fitted with more than one POWER SUPPLY CORD		N/A
8.11.3.2	POWER SUPPLY CORDS are no less robust than ordinary tough rubber sheathed flexible cord (IEC 60245-1:2003, Annex A, designation 53) or ordinary polyvinyl chloride sheathed flexible cord (IEC 60227-1:1993, Annex A, design 53):		N/A
	Only polyvinyl chloride insulated POWER SUPPLY CORD with appropriate temperature rating used for ME EQUIPMENT having external metal parts with a temperature > 75 °C touchable by the cord in NORMAL USE ……:		N/A
8.11.3.3	NOMINAL cross-sectional area of conductors of POWER SUPPLY CORDS of ME EQUIPMENT is not less than in Table 17……:		N/A
	For ME EQUIPMENT utilizing POWER SUPPLY CORDS and operating at currents greater than 63 A, apply the electrical regulations appropriate for the jurisdiction in which the ME EQUIPMENT is to be used.		N/A
8.11.3.4	APPLIANCE COUPLERS complying with IEC 60320-1 are considered to comply with 8.11.3.5 and 8.11.3.6 ……:		N/A
8.11.3.5	**Cord anchorage**		N/A
	a) Conductors of POWER SUPPLY CORD provided with strain relief and insulation protected from abrasion at point of entry to ME EQUIPMENT or a MAINS CONNECTOR by a cord anchorage		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	b) Cord anchorage of POWER SUPPLY CORD is an insulating material, or		N/A
	– metal, insulated from conductive ACCESSIBLE PARTS non-PROTECTIVELY EARTHED by a MEANS OF PROTECTION, or		N/A
	– metal provided with an insulating lining affixed to cord anchorage		N/A
	c) Cord anchorage prevents cord from being clamped by a screw bearing directly on cord insulation		N/A
	d) Screws to be operated when replacing POWER SUPPLY CORD do not serve to secure any components		N/A
	e) Conductors of POWER SUPPLY CORD arranged to prevent PROTECTIVE EARTH CONDUCTOR against strain as long as phase conductors are in contact with their terminals		N/A
	f) Cord anchorage prevents POWER SUPPLY CORD from being pushed into ME EQUIPMENT or MAINS CONNECTOR		N/A
	Conductors of POWER SUPPLY CORD supplied by MANUFACTURER disconnected from terminals or from MAINS CONNECTOR and cord subjected 25 times to a pull applied with no jerks, each time for 1 s, on sheath of the value in Table 18 ..... :		N/A
	Cord subjected to a torque in Table 18 for one minute immediately after pull tests		N/A
	Cord anchorage did not allow cord sheath to be longitudinally displaced by more than 2 mm or conductor ends to move over a distance of more than 1 mm from their connected position		N/A
	CREEPAGE and CLEARANCES not reduced below limits in 8.9		N/A
	It was not possible to push the cord into ME EQUIPMENT or MAINS CONNECTOR to an extent the cord or internal parts would be damaged		N/A
8.11.3.6	POWER SUPPLY CORDS protected against excessive bending at inlet opening of equipment	Component, to be determined as part of the end product investigation	N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Cord guard complied with test of IEC 60335-1:2001, Clause 25.14, or		N/A
	ME EQUIPMENT placed such that axis of cord guard projected at an angle of 45° with cord free from stress, and a mass equal 10 x D^2 gram attached to the free end of cord (g)……..:		N/A
	Cord guard of temperature-sensitive material tested at 23 °C ± 2 °C, and flat cords bent in the plane of least resistance		N/A
	Curvature of the cord radius, immediately after mass attached, was not less than 1.5 x D ……..:		N/A
8.11.4	**MAINS TERMINAL DEVICES**		N/A
8.11.4.1	PERMANENTLY INSTALLED and ME EQUIPMENT with non-DETACHABLE POWER SUPPLY CORD provided with MAINS TERMINAL DEVICES ensuring reliable connection	Component, to be determined as part of end product investigation	N/A
	Terminals alone are not used to keep conductors in position		N/A
	Terminals of components other than terminal blocks complying with requirements of this Clause and marked accordingly used as terminals intended for external conductors		N/A
	Screws and nuts clamping external conductors do not serve to secure any other component		N/A
8.11.4.2	**Arrangement of MAINS TERMINAL DEVICES**		N/A
	a) Terminals provided for connection of external cords or POWER SUPPLY CORDS together with PROTECTIVE EARTH TERMINAL grouped to provide convenient means of connection	No such parts	N/A
	d) MAINS TERMINAL DEVICES not accessible without use of a TOOL	No such parts	N/A
	e) MEANS OF PROTECTION are not short circuited when one end of a flexible conductor with NOMINAL cross-sectional area is stripped 8 mm and a single free wire is bent in each possible direction		N/A
8.11.4.3	Internal wiring not subjected to stress and CREEPAGE and CLEARANCES not reduced after fastening and loosening a conductor of largest cross-sectional area 10 times	No such parts	N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
8.11.4.4	Terminals with clamping means for a rewireable flexible cord did not require special preparation of conductors and conductors were not damaged and did not slip out when clamping means tightened	No such parts	N/A
8.11.4.5	Adequate space provided inside ME EQUIPMENT designed for FIXED wiring or a rewireable POWER SUPPLY CORD to allow for connection of conductors		N/A
	Correct connection and positioning of conductors before ACCESS COVER verified by an installation test		N/A
8.11.5	**Mains fuses and OVER-CURRENT RELEASES**		Pass
	A fuse or OVER-CURRENT RELEASE provided in each supply lead for CLASS I and CLASS II ME EQUIPMENT with a functional earth connection….:	Each supply conductor is provided with supplementary fuse	Pass
	- in at least one supply lead for other single-phase CLASS II ME EQUIPMENT…….:	Each supply conductor is provided with supplementary fuse	Pass
	– neutral conductor not fused for PERMANENTLY INSTALLED ME EQUIPMENT	Component, to be determined as part of the end product investigation	N/A
	– fuses or OVER-CURRENT RELEASES omitted due to provision of two MEANS OF PROTECTION between all parts within MAINS PART		N/A
	Protective devices have adequate breaking capacity based on MANUFACTURER'S expectation of the highest branch circuit current and/or prospective short circuit current:	Supplementary Type	Pass
	A fuse or OVER-CURRENT RELEASE not provided in a PROTECTIVE EARTH CONDUCTOR		Pass
	Justification for omission of fuses or OVER-CURRENT RELEASES documented…….:		N/A
8.11.6	**Internal wiring of the MAINS PART**		Pass
	a) Cross-sectional area of internal wiring in a MAINS PART between MAINS TERMINAL DEVICE or APPLIANCE INLET and protective devices suitable.. :	No such wiring	N/A
	b) Cross-sectional area of other wiring in MAINS PART and sizes of tracks on printed wiring circuits are sufficient…….:	See appended table and PWB layout drawings	Pass

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

9	**PROTECTION AGAINST MECHANICAL HAZARDS OF ME EQUIPMENT AND ME SYSTEMS**		N/A
9.2	**HAZARDS associated with moving parts**		N/A
9.2.1	When ME EQUIPMENT with moving parts PROPERLY INSTALLED, used per ACCOMPANYING DOCUMENTS or under foreseeable misuse, RISKS associated with moving parts reduced to an acceptable level……:	Component has no moving parts, to be determined as part of end product investigation	N/A
	RISK from contact with moving parts reduced to an acceptable level using protective measures, (access, function, shape of parts, energy, speed of motion, and benefits to PATIENT considered)		N/A
	RESIDUAL RISK associated with moving parts considered acceptable when exposure was needed for ME EQUIPMENT to perform its intended function, and		N/A
	RISK CONTROLS implemented……..:		N/A
	RISK MANAGEMENT FILE includes an assessment of RISKS associated with moving parts……..: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)		N/A
	All RISKS associated with moving parts have been reduced to an acceptable level		N/A
9.2.2	**TRAPPING ZONE**		N/A
9.2.2.1	ME EQUIPMENT with a TRAPPING ZONE complied with one or more of the following as feasible:		N/A
	– Gaps in Clause 9.2.2.2, or		N/A
	– Safe distances in Clause 9.2.2.3, or		N/A
	– GUARDS and other RISK CONTROL measures in 9.2.2.4, or		N/A
	– Continuous activation in Clause 9.2.2.5		N/A
	Control of relevant motion complied with 9.2.2.6 when implementation of above protective measures were inconsistent with INTENDED USE of ME EQUIPMENT or ME SYSTEM		N/A
9.2.2.2	A TRAPPING ZONE considered not to present a MECHANICAL HAZARD when gaps of TRAPPING ZONE complied with dimensions per Table 20….:		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
9.2.2.3	A TRAPPING ZONE considered not to present a MECHANICAL HAZARD when distances separating OPERATOR, PATIENT, and others from TRAPPING ZONES exceeded values in ISO 13857:2008 …:		N/A
9.2.2.4	**GUARDS and other RISK CONTROL measures**		N/A
9.2.2.4.1	A TRAPPING ZONE do not to present a MECHANICAL HAZARD when GUARDS or other RISK CONTROL measures are of robust construction, not easy to bypass or render non-operational, and did not introduce additional unacceptable RISK……:		N/A
9.2.2.4.2	FIXED GUARDS held in place by systems that can only be dismantled with a TOOL		N/A
9.2.2.4.3	Movable GUARDS that can be opened without a TOOL remained attached when GUARD was open		N/A
	– they are associated with an interlock preventing relevant moving parts from starting to move while TRAPPING ZONE is accessible, and stops movement when the GUARD is opened,		N/A
	– absence or failure of one of their components prevents starting, and stops moving parts		N/A
	Movable GUARDS complied with any applicable tests		N/A
9.2.2.4.4	Other RISK CONTROL designed and incorporated into to the control system stops movement and		N/A
	– SINGLE FAULT CONDITIONS have a second RISK CONTROL, or		N/A
	ME EQUIPMENT is SINGLE FAULT SAFE		N/A
9.2.2.5	**Continuous activation**		N/A
	Continuous activation used as a RISK CONTROL, complies with the following		N/A
	a) movement was in OPERATOR'S field of view		N/A
	b) movement of ME EQUIPMENT or its parts was possible only by continuous activation of control by OPERATOR		N/A
	c) a second RISK CONTROL provided for SINGLE FAULT CONDITION of continuous activation system, or		N/A
	- the continuous activation system is SINGLE FAULT SAFE		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
9.2.2.6	Speed of movement(s) positioning parts of ME EQUIPMENT or PATIENT limited to allow OPERATOR control of the movement		N/A
	Over travel of such movement occurring after operation of a control to stop movement, did not result in an unacceptable RISK		N/A
9.2.3	**Other MECHANICAL HAZARDS associated with moving parts**		N/A
9.2.3.1	Controls positioned, recessed, or protected by other means so that they cannot be accidentally actuated		N/A
	- unless for the intended PATIENT, the USABILITY ENGINEERING PROCESS concludes otherwise (e.g. PATIENT with special needs), or		N/A
	- activation does not result in an unacceptable RISK		N/A
9.2.3.2	Over travel past range limits of the ME EQUIPMENT prevented……:		N/A
	Over travel means provided with mechanical strength to withstand loading in NORMAL CONDITION & reasonably foreseeable misuse…..:		N/A
9.2.4	**Emergency stopping devices**		N/A
	Where necessary to have one or more emergency stopping device(s), emergency stopping device complied with all the following, except for actuating switch capable of interrupting all power……:		N/A
	a) Emergency stopping device reduced RISK to an acceptable level		N/A
	RISK MANAGEMENT FILE indicates the use of an emergency stopping device reduces the RISK to an acceptable level……..: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.5)		N/A
	b) Proximity and response of OPERATOR to actuate emergency stopping device could be relied upon to prevent HARM		N/A
	c) Emergency stopping device actuator was readily accessible to OPERATOR		N/A
	d) Emergency stopping device(s) are not part of normal operation of ME EQUIPMENT		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	e) Emergency switching operation or stopping means neither introduced further HAZARD nor interfered with operation necessary to remove original MECHANICAL HAZARD		N/A
	f) Emergency stopping device was able to break full load of relevant circuit, including possible stalled motor currents and the like		N/A
	g) Means for stopping of movements operate as a result of one single action		N/A
	h) Emergency stopping device provided with an actuator in red and easily distinguishable and identifiable from other controls		N/A
	i) An actuator interrupting/opening mechanical movements marked on or immediately adjacent to face of actuator with symbol 18 of Table D.1 or "STOP"		N/A
	j) Emergency stopping device, once actuated, maintained ME EQUIPMENT in disabled condition until a deliberate action, different from that used to actuate it, was performed		N/A
	k) Emergency stopping device is suitable for its application		N/A
9.2.5	Means provided to permit quick and safe release of PATIENT in event of breakdown of ME EQUIPMENT or failure of power supply, activation of a RISK CONTROL measure, or emergency stopping.....:		N/A
	– and uncontrolled or unintended movement of ME EQUIPMENT that could result in an unacceptable RISK prevented		N/A
	– Situations where PATIENT is subjected to unacceptable RISKS due to proximity of moving parts, removal of normal exit routes, or other HAZARDS prevented		N/A
	– Measures provided to reduce RISK to an acceptable level when after removal of counterbalanced parts, other parts of ME EQUIPMENT can move in a hazardous way		N/A
	RISK MANAGEMENT FILE includes an assessment of RISKS to the PATIENT related to breakdown of the ME EQUIPMENT ……: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
9.3	Rough surfaces, sharp corners and edges of ME EQUIPMENT that could result in injury or damage avoided or covered……..:		N/A
9.4	**Instability HAZARDS**		N/A
9.4.1	ME EQUIPMENT and its parts, other than FIXED, for placement on a surface did not overbalance (tip over) or move unexpectedly in NORMAL USE		N/A
9.4.2	**Instability – overbalance**		N/A
9.4.2.1	ME EQUIPMENT or its parts did not overbalance when prepared per ACCOMPANYING DOCUMENTS, or when tested ……..:		N/A
9.4.2.2	**Instability excluding transport**		N/A
	ME EQUIPMENT or its did not overbalance when placed in different positions of NORMAL USE, ... :		N/A
	A warning provided when overbalance occurred during 10° inclined plane test		N/A
9.4.2.3	**Instability from horizontal and vertical forces**		N/A
	a) ME EQUIPMENT or its parts with a mass of 25kg or more, intended to be used on the floor, didn't overbalance due to pushing, leaning against it		N/A
	Surfaces of ME EQUIPMENT or its parts where a RISK of overbalancing exists from pushing, etc., permanently marked with a warning of the RISK		N/A
	ME EQUIPMENT did not overbalance when tested according to Cl. 9.4.2.3 a)		N/A
	b) ME EQUIPMENT, for use on the floor or on a table, did not overbalance due to sitting or stepping		N/A
	ME EQUIPMENT or its parts, for use on the floor or on a table, where RISK of overbalancing exists, permanently marked with the RISK warning ..... :		N/A
	ME EQUIPMENT did not overbalance when tested according to Cl. 9.4.2.3b)……:		N/A
9.4.2.4	**Castors and wheels**		N/A
9.4.2.4.1	Means used for transportation of MOBILE ME EQUIPMENT did not result in an unacceptable RISK when MOBILE ME EQUIPMENT moved or parked in NORMAL USE		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
9.4.2.4.2	Force required to move MOBILE ME EQUIPMENT did not exceed 200 N ……:		N/A
9.4.2.4.3	MOBILE ME EQUIPMENT exceeding 45 kg able to pass over threshold ……:		N/A
9.4.3	**Instability from unwanted lateral movement (including sliding)**		N/A
9.4.3.1	a) Brakes of power-driven MOBILE ME EQUIPMENT normally activated and could only be released by continuous actuation of a control		N/A
	b) MOBILE ME EQUIPMENT provided with locking means to prevent unwanted movements		N/A
	c) No unwanted lateral movement resulted when MOBILE ME EQUIPMENT placed in its transport position when test per 9.4.3.1		N/A
9.4.3.2	**Instability excluding transport**		N/A
	a) MOBILE ME EQUIPMENT provided with wheel locks or braking system compliant with 5° tilt test .....:		N/A
	b) MOBILE ME EQUIPMENT provided with wheel locks or braking system compliant with lateral stability test		N/A
9.4.4	**Grips and other handling devices**		N/A
	a) ME EQUIPMENT with a mass of over 20 kg requiring lifting in NORMAL USE or transport provided with suitable handling means, or ACCOMPANYING DOCUMENTS specify safe lifting method		N/A
	Handles, suitably placed to enable ME EQUIPMENT or its part to be carried by two or more persons and by examination of EQUIPMENT, its part, or ACCOMPANYING DOCUMENTS		N/A
	b) PORTABLE ME EQUIPMENT with a mass > 20 kg provided with one or more carrying-handles suitably placed to enable carrying by two or more persons as confirmed by actual carrying		N/A
	c) Carrying handles and grips and their means of attachment withstood loading test .....:		N/A
9.5	**Expelled parts HAZARD**		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
9.5.1	Suitability of means of protecting against expelled parts determined by assessment and examination of RISK MANAGEMENT FILE .....: (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
	All identified RISKS associated with expelled parts mitigated to an acceptable level		N/A
9.5.2	Cathode Ray tube(s) complied with IEC 60065:2001, Clause 18, or IEC 61965 .....:		N/A
9.6	**Acoustic energy (including infra- and ultrasound) and vibration**		N/A
9.6.1	Human exposure to acoustic energy and vibration from ME EQUIPMENT doesn't result in unacceptable RISK and		N/A
	If necessary, confirmed in RISK MANAGEMENT FILE including audibility of auditory alarm signals, and PATIENT sensitivity .....:		N/A
	If necessary, confirmed in RISK MANAGEMENT FILE including audibility of auditory alarm signals, PATIENT sensitivity, and (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)		N/A
	All identified RISKS mitigated to an acceptable level		N/A
9.6.2	**Acoustic energy**		N/A
9.6.2.1	PATIENT, OPERATOR, and other persons are not exposed to acoustic energy from ME EQUIPMENT in NORMAL USE		N/A
	– 80 dBA for a cumulative exposure of 24 h over a 24 h period (dBA).....:		—
	- 83 dBA (when halving the cumulative exposure time) (dBA).....:		—
	– 140 dBC (peak) sound pressure level for impulsive or impact acoustic energy (dB).....:		—
9.6.2.2	RISK MANAGEMENT FILE examined.....: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)		N/A
9.6.3	**Hand-transmitted vibration**		N/A
	Means provided to protect PATIENT and OPERATOR when hand-transmitted frequency-weighted r.m.s. acceleration generated in NORMAL USE exceeds specified values		N/A

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

	– 2.5 m/s^2 for a cumulative time of 8 h during a 24 h period (m/s^2)..... :		N/A
	– Accelerations for different times, inversely proportional to square root of time (m/s^2) ..... :		N/A
9.7	**Pressure vessels and parts subject to pneumatic and hydraulic pressure**		N/A
9.7.2	Pneumatic and hydraulic parts of ME EQUIPMENT or ACCESSORIES met requirements based on examination of RISK MANAGEMENT FILE ..... : (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
	– No unacceptable RISK resulted from loss of pressure or loss of vacuum		N/A
	– No unacceptable RISK resulted from a fluid jet caused by leakage or a component failure		N/A
	– Elements of ME EQUIPMENT or an ACCESSORY, especially pipes and hoses leading to an unacceptable RISK protected against harmful external effects		N/A
	– Reservoirs and similar vessels leading to an unacceptable RISK are automatically depressurized when ME EQUIPMENT is isolated from its power supply		N/A
	Means provided for isolation, or local depressurizing reservoirs and similar vessels, and pressure indication when above not possible		N/A
	– All elements remaining under pressure after isolation of ME EQUIPMENT or an ACCESSORY from its power supply resulting in an unacceptable RISK provided with clearly identified exhaust devices, and a warning to depressurize these elements before setting or maintenance activity		N/A
9.7.4	MAXIMUM EQUIPMENT PRESSURE did not exceed MAXIMUM PERMISSIBLE WORKING PRESSURE for the part, except allowed for pressure relief devices in 9.7.7confirmed by inspection of THE MANUFACTURER'S data for the component, ME EQUIPMENT, and by functional tests..... :		N/A
9.7.5	A pressure vessel withstood a HYDRAULIC TEST PRESSURE when MAXIMUM EQUIPMENT PRESSURE was more than 50 kPa, and product of MAXIMUM EQUIPMENT PRESSURE and volume was more than 200 kPa..... :		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
9.7.6	Pressure-control device regulating pressure in ME EQUIPMENT with pressure-relief device completed 100,000 cycles of operation under RATED load and prevented pressure from exceeding 90 % of setting of pressure-relief device in different conditions of NORMAL USE .....:		N/A
9.7.7	Pressure-relief device(s) used where MAXIMUM PERMISSIBLE WORKING PRESSURE could otherwise be exceeded met the following, as confirmed by MANUFACTURER'S data, ME EQUIPMENT, RISK MANAGEMENT FILE, and functional tests .....:		N/A
	a) Connected as close as possible to pressure vessel or parts of system it is to protect		N/A
	b) Installed to be readily accessible for inspection, maintenance, and repair		N/A
	c) Could be adjusted or rendered inoperative without a TOOL		N/A
	d) With discharge opening located and directed as to not to release material towards any person		N/A
	e) With discharge opening located and directed as to not to deposit material on parts that could result in an unacceptable RISK		N/A
	f) Adequate discharge capacity provided to ensure that pressure will not exceed MAXIMUM PERMISSIBLE EQUIPMENT PRESSURE of system it is connected to by more than 10 % when failure occurs in control of supply pressure		N/A
	g) No shut-off valve provided between a pressure-relief device and parts it is to protect		N/A
	h) Min number of cycles of operation 100 000, except for one-time use devices (bursting disks)		N/A
	RISK MANAGEMENT FILE includes an assessment of the risks associated with the discharge opening of the pressure relief device.....: ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
9.8	**HAZARDS associated with support systems**		N/A
9.8.1	ME EQUIPMENT parts designed to support loads or provide actuating forces when a mechanical fault could constitute an unacceptable RISK .....:		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	– Construction of support, suspension, or actuation system complied with Table 21 and TOTAL LOAD		N/A
	– Means of attachment of ACCESSORIES prevent possibility of incorrect attachment that could result in an unacceptable RISK		N/A
	– RISK ANALYSIS of support systems included MECHANICAL HAZARDS from static, dynamic, vibration, foundation and other movements, impact and pressure loading, temperature, environmental, manufacture and service conditions ..... : (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)		N/A
	– RISK ANALYSIS included effects of failures such as excessive deflection, plastic deformation, ductile/brittle fracture, fatigue fracture, instability (buckling), stress-assisted corrosion cracking, wear, material creep and deterioration, and residual stresses from manufacturing PROCESSES		N/A
	– Instructions on attachment of structures to a floor, wall, ceiling, included in ACCOMPANYING DOCUMENTS making adequate allowances for quality of materials used to make the connection and list the required materials		N/A
	Additional instructions provided on checking adequacy of surface of structure parts will be attached to		N/A
9.8.2	Support systems maintain structural integrity during EXPECTED SERVICE LIFE, and TENSILE SAFETY FACTORS are not less than in Table 21, except when an alternative method used to demonstrate structural integrity throughout EXPECTED SERVICE LIFE, or for a foot rest		N/A
	Compliance with 9.8.1 and 9.8.2 confirmed by examination of ME EQUIPMENT, RISK MANAGEMENT FILE, specifications and material processing ..... :		N/A
	RISK MANAGEMENT FILE includes an assessment of the structural integrity of support system ..... : (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
	All identified RISKS are mitigated to an acceptable level		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	When test was conducted, testing consisted of application of a test load to support assembly equal to TOTAL LOAD times required TENSILE SAFETY FACTOR while support assembly under test was in equilibrium after 1 min, or not resulted in an unacceptable RISK ..... :		N/A
	Where the equipment is not at equilibrium after 1 min, the RISK MANAGEMENT FILE includes an assessment of the test results ..... : (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
9.8.3	**Strength of PATIENT or OPERATOR support or suspension systems**		N/A
9.8.3.1	ME EQUIPMENT parts supporting or immobilizing PATIENTS presents no unacceptable RISK of physical injuries and accidental loosening of secured joints ..... :		N/A
	RISK MANAGEMENT FILE includes assessment of the RISKS associated with physical injuries and accidental loosening of fixings ..... : (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
	SAFE WORKING LOAD of ME EQUIPMENT or its parts supporting or suspending PATIENTS or OPERATORS is sum of mass of PATIENTS or mass of OPERATORS plus mass of ACCESSORIES supported by ME EQUIPMENT or its parts		N/A
	Supporting and suspending parts for adult human PATIENTS or OPERATORS designed for a PATIENT or OPERATOR with a min mass of 135 kg and ACCESSORIES with a min mass of 15 kg, unless stated by MANUFACTURER		N/A
	Maximum mass of PATIENT included in SAFE WORKING LOAD of ME EQUIPMENT or its parts supporting or suspending PATIENTS adapted when MANUFACTURER specified applications		N/A
	Max allowable PATIENT mass < 135 kg marked on ME EQUIPMENT and stated in ACCOMPANYING DOCUMENTS		N/A
	Max allowable PATIENT mass over 135 kg stated in ACCOMPANYING DOCUMENTS		N/A
	Examination of markings, ACCOMPANYING DOCUMENTS, and RISK MANAGEMENT FILE confirmed compliance ..... :		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
9.8.3.2	a) Entire mass of PATIENT or OPERATOR distributed over an area of 0.1 m^2 on a foot rest temporarily supporting a standing PATIENT or OPERATOR.....:		N/A
	Compliance confirmed by examination of ME EQUIPMENT specifications of materials and their processing, and tests.....:		N/A
	b) Deflection of a support surface from PATIENT or OPERATOR loading on an area of support/ suspension where a PATIENT or OPERATOR can sit did not result in an unacceptable RISK		N/A
	Compliance confirmed by examination of ME EQUIPMENT, specifications of materials and their processing, and by a test.....:		N/A
9.8.3.3	Dynamic forces that can be exerted on equipment parts supporting or suspending a PATIENT or OPERATOR in NORMAL USE maintained BASIC SAFETY and ESSENTIAL PERFORMANCE confirmed test		N/A
9.8.4	**Systems with MECHANICAL PROTECTIVE DEVICES**		N/A
9.8.4.1	a) A MECHANICAL PROTECTIVE DEVICE provided for the support system		N/A
	b) MECHANICAL PROTECTIVE complies with the requirements as follows:		N/A
	– Designed based on TOTAL LOAD		N/A
	– Has TENSILE SAFETY FACTORS for all parts not less than Table 21, row 7		N/A
	– Activated before travel produced an unacceptable RISK		N/A
	– Considers Clauses 9.2.5 and 9.8.4.3		N/A
	Compliance confirmed by examination of ME EQUIPMENT over travel calculations and evaluation plus functional tests .....:		N/A
9.8.4.2	Activation of MECHANICAL PROTECTIVE DEVICE is made obvious to OPERATOR when ME EQUIPMENT can still be used after failure of suspension or actuation means and activation of a MECHANICAL PROTECTIVE DEVICE		N/A
	MECHANICAL PROTECTIVE DEVICE requires use of a TOOL to be reset or replaced		N/A
9.8.4.3	**MECHANICAL PROTECTIVE DEVICE intended to function once**		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	–use of ME EQUIPMENT not possible until replacement of MECHANICAL PROTECTIVE DEVICE .:		N/A
	– ACCOMPANYING DOCUMENTS provided with required information on replacement by service personal		N/A
	– ME EQUIPMENT permanently marked with SAFETY SIGN 2 of Table D.		N/A
	– Marking is adjacent to MECHANICAL PROTECTIVE DEVICE		N/A
	– Compliance confirmed by examination and following test .....:		N/A
	A chain, cable, band, spring, belt, jack screw nut, pneumatic or hydraulic hose, structural part or the like, employed to support a load, defeated by a convenient means causing maximum normal load to fall from most adverse position permitted by construction of ME EQUIPMENT		N/A
	Load included SAFE WORKING LOAD in 9.8.3.1 when system was capable of supporting a PATIENT or OPERATOR		N/A
	No evidence of damage to MECHANICAL PROTECTIVE DEVICE affecting its ability to perform its intended function		N/A
9.8.5	**Systems without MECHANICAL PROTECTIVE DEVICES**		N/A
	Support Systems does not require MECHANICAL PROTECTIVE DEVICES .....:		N/A
	RISK MANAGEMENT FILE includes an assessment of RISKS associated with wear on the support system.....: (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
10	**PROTECTION AGAINST UNWANTED AND EXCESSIVE RADIATION HAZARDS**		N/A
10.1	**X-Radiation**		N/A
10.1.1	The air kerma did not exceed 5 µGy/hat 5 cm from surface of ME EQUIPMENT.....:	No such parts	N/A
	Annual exposure reduced taking into account the irradiated body part, national regulations, and/or international recommendations for ME EQUIPMENT that has permanent proximity to a PATIENT as part of the INTENDED USE		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
10.1.2	RISK from unintended X-radiation from ME EQUIPMENT producing X-radiation for diagnostic and therapeutic purposes addressed application of applicable particular and collateral standards, or .....:		N/A
	RISK MANAGEMENT PROCESS as indicated in RISK MANAGEMENT ILE.....: (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
10.2	RISK associated with alpha, beta, gamma, neutron, and other particle radiation, addressed in RISK MANAGEMENT PROCESS as shown in RISK MANAGEMENT FILE.....: (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
10.3	The power density of unintended microwave radiation at frequencies between 1 GHz and 100 GHz does not exceed 10 W/m2		N/A
	Microwave radiation is propagated intentionally		N/A
10.4	Relevant requirements of IEC 60825-1:2014 applied to lasers including laser diodes, laser light barriers or similar with a wavelength range of 180nm to 1 mm.		N/A
10.5	RISK associated with visible electromagnetic radiation other than emitted by lasers when applicable, addressed in RISK MANAGEMENT PROCESS as indicated in RISK MANAGEMENT FILE...: (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
10.6	RISK associated with infrared radiation other than emitted by lasers addressed in RISK MANAGEMENT PROCESS as indicated in RISK MANAGEMENT FILE...: (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
10.7	RISK associated with ultraviolet radiation other than emitted by lasers and LEDS addressed in RISK MANAGEMENT PROCESS as indicated in RISK MANAGEMENT FILE.....: (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
11	**PROTECTION AGAINST EXCESSIVE TEMPERATURES AND OTHER HAZARDS**		Pass
11.1	**Excessive temperatures in ME EQUIPMENT**		Pass
11.1.1	Temperatures on ACCESSIBLE PARTS did not exceed values in Tables 22 and .....:	Refer to Temperature Table - Component only, temperatures to be considered during the end product investigation	Pass

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Surfaces of test corner did not exceed 90 °C	Component for building-in, to be considered as part of end product investigation	N/A
	THERMAL CUT-OUTS did not operate in NORMAL CONDITION	No such parts	N/A
	RISK MANAGEMENT FILE includes an assessment of the duration of contact for all APPLIED PARTS and ACCESSIBLE PARTS.....: (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
11.1.2	**Temperature of APPLIED PARTS**		N/A
11.1.2.1	APPLIED PARTS (hot or cold intended to supply heat to a PATIENT comply .....:	No such parts	N/A
	Clinical effects determined and documented in the RISK MANAGEMENT FILE (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
	Temperature (hot or cold) of APPLIED PARTS intended to supply heat to a PATIENT disclosed in the instructions for use		N/A
11.1.2.2	APPLIED PARTS not intended to supply heat to a PATIENT complies with the limits of Table 24 in NORMAL CONDITION and SINGLE FAULT CONDITION..:		N/A
	APPLIED PARTS surface temperature exceeds 41°C disclosed in the instruction manual:		N/A
	Maximum Temperature.....:		—
	Conditions for safe contact, e.g. duration or condition of the PATIENT.....:		—
	Clinical effects with respect to characteristics taken or surface pressure documented in the RISK MANAGEMENT FILE (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
	APPLIED PARTS surface temperature of equal to or less than 41°C		N/A
	Analysis documented in the RISK MANAGEMENT FILE show that APPLIED PART temperatures are not affected by operation of the ME EQUIPMENT including SINGLE FAULT CONDITIONS. Measurement of APPLIED PART temperature according to 11.1.3 is not conducted .....:		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Surfaces of APPLIED PARTS that are cooled below ambient temperatures evaluated in the RISK MANAGEMENT PROCESS .....: (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
11.1.3	Measurements not made when engineering judgment and rationale by MANUFACTURER indicated temperature limits could not exceed, as documented in RISK MANAGEMENT FILE .....: (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
	Test corner not used where engineering judgment and rationale by MANUFACTURER indicated test corner will not impact measurements, as documented in RISK MANAGEMENT FILE.....: (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
	Probability of occurrence and duration of contact for parts likely to be touched and for APPLIED PARTS documented in RISK MANAGEMENT FILE.....: (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
	e) Where thermal regulatory devices make this method inappropriate, alternative methods for measurement are justified in the RISK MANAGEMENT FILE.....:		N/A
11.1.4	GUARDS preventing contact with hot or cold accessible surfaces removable only with a TOOL		N/A
11.2	**Fire prevention**		N/A
11.2.1	ENCLOSURE has strength and rigidity necessary to prevent a fire and met mechanical strength tests for ENCLOSURES in 15.3	Component, to be determined as part of end product investigation	N/A
11.2.2	**Me equipment and me systems used in conjunction with OXYGEN RICH ENVIRONMENTS**		N/A
11.2.2.1	RISK of fire in an OXYGEN RICH ENVIRONMENT reduced by means limiting spread of .....:	Component, not evaluate for use with oxygen enriched environment	N/A
	a) No sources of ignition discovered in an OXYGEN RICH ENVIRONMENT under any of the following conditions		N/A
	1) when temperature of material raised to its ignition temperature		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	2) when temperatures affected solder or solder joints causing loosening, short circuiting, or other failures causing sparking or increasing material temperature to its ignition temperature		N/A
	3) when parts affecting safety cracked or changed outer shape exposing temperatures higher than 300°C or sparks due to overheating		N/A
	4) when temperatures of parts or components exceeded 300°C, atmosphere was 100 % oxygen, contact material solder, and fuel cotton		N/A
	5) when sparks provided adequate energy for ignition by exceeding limits of Figs 35 to 37 (inclusive), atmosphere was 100 % oxygen, contact material solder, and fuel cotton		N/A
	Deviations from worst case limits in 4) and 5) above based on lower oxygen concentrations or less flammable fuels justified and documented in RISK MANAGEMENT FILE……..: (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
	Alternative test in this clause did not identify existence of ignition sources at highest voltage or current, respectively……:		N/A
	A safe upper limit determined by dividing upper limit of voltage or current, respectively, with safety margin factor of three ..... :		N/A
	b) RESIDUAL RISK of fire in an OXYGEN RICH ENVIRONMENT as determined by application of RISK MANAGEMENT PROCESS is based on following configurations, or in combination …….: (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
	1) Electrical components in an OXYGEN RICH ENVIRONMENT provided with power supplies having limited energy levels lower than those considered sufficient for ignition in 11.2.2.1 a) as determined by examination, measurement or calculation of power, energy, and temperatures in NORMAL and SINGLE FAULT CONDITIONS identified in 11.2.3……:		N/A
	2) Max oxygen concentration measured until it did not exceed 25 % in ventilated compartments with parts that can be a source of ignition only in SINGLE FAULT CONDITION and can be penetrated by oxygen due to an undetected leak (%)……:		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	3) A compartment with parts or components that can be a source of ignition only under SINGLE FAULT CONDITION separated from another compartment containing an OXYGEN RICH ENVIRONMENT by sealing all joints and holes for cables, shafts, or other purposes		N/A
	Effect of possible leaks and failures under SINGLE FAULT CONDITION that could cause ignition evaluated using a RISK ASSESSMENT to determine maintenance intervals by examination of documentation and RISK MANAGEMENT FILE……..:		N/A
	4) Fire initiated in ENCLOSURE of electrical components in a compartment with OXYGEN RICH ENVIRONMENT that can become a source of ignition only under SINGLE FAULT CONDITIONS self-extinguished rapidly and no hazardous amount of toxic gases reached PATIENT as determined by analysis of gases ……..:		N/A
11.2.2.2	RISK of ignition did not occur, and oxygen concentration did not exceed 25% in immediate surroundings due to location of external exhaust outlets of an OXYGEN RICH ENVIRONMENT		N/A
11.2.2.3	Electrical connections within a compartment containing an OXYGEN RICH ENVIRONMENT under NORMAL USE did not produce sparks		N/A
	– Screw-attachments protected against loosening during use by varnishing, use of spring washers, or adequate torques		N/A
	– Soldered, crimped, and pin-and-socket connections of cables exiting ENCLOSURE include additional mechanical securing means		N/A
11.2.3	**SINGLE FAULT CONDITIONS related to OXYGEN RICH ENVIRONMENTS ME EQUIPMENT and ME SYSTEMS considered**		N/A
	– Failure of a ventilation system constructed in accordance with 11.2.2.1 b) 2)……:		N/A
	– Failure of a barrier constructed in accordance with 11.2.2.1 b) 3)……:		N/A
	– Failure of a component creating a source of ignition (as defined in 11.2.2.1 a)……..:		N/A

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

	– Failure of solid insulation or creepage and clearances providing equivalent of at least one MEANS OF PATIENT PROTECTION but less than two MEANS OF PATIENT PROTECTION that could create a source of ignition defined in 11.2.2.1 a)…….:		N/A
	– Failure of a pneumatic component resulting in leakage of oxygen-enriched gas……..:		N/A
11.3	**Constructional requirements for fire ENCLOSURES of ME EQUIPMENT**		N/A
	ME EQUIPMENT met this clause for alternate means of compliance with selected HAZARDOUS SITUATIONS and fault conditions in 13.1.2…….:	Component not provided with fire enclosure, to be determined as part of end product investigation	N/A
	Constructional requirements were met, or		N/A
	- constructional requirements specifically analysed in RISK MANAGEMENT FILE …….. : (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
	Justification, when requirement not met…….:		N/A
	a) Flammability classification of insulated wire and connectors within fire ENCLOSURE is minimum V-2, , when test in accordance with IEC 60695-11-10 or :		N/A
	insulated with PVC, TFE, PTFE, FEP, polychloroprene or polyimide as determined by examination of data on materials……..:		N/A
	Flammability classification of printed circuit boards, and insulating material on which components are mounted is V-2, or better, based on IEC 60695-11-10 as decided by examination of materials data……:		N/A
	If no Certification, V tests based on IEC 60695-11-10 conducted on 3 samples of complete parts (or sections of it), including area with min. thickness, ventilation openings		N/A
	b) Fire ENCLOSURE met following:		N/A
	1) No openings at bottom or, as specified in Fig 39, constructed with baffles as in Fig 38, or made of perforated metal as in Table 25, or a metal screen with a mesh $\leq$ 2 × 2 mm centre to centre and wire diameter of at least 0.45 mm		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	2) No openings on the sides within the area included within the inclined line C in Fig 39 or made of perforated metal as in Table 25, or a metal screen with a mesh ≤ 2 × 2 mm centre to centre and wire diameter of at least 0.45 mm		N/A
	3) ENCLOSURE, baffles, and flame barriers have adequate rigidity and are made of appropriate metal or of non-metallic materials…….:		N/A
11.4	**ME EQUIPMENT and ME SYSTEMS intended for use with flammable anaesthetics**		N/A
	ME EQUIPMENT, ME SYSTEMS and parts described in ACCOMPANYING DOCUMENTS for use with flammable with Annex G	Not evaluated for use in the presence of flammable anaesthetics	N/A
11.5	**ME EQUIPMENT and ME SYSTEMS intended for use in conjunction with flammable agents**		N/A
	MANUFACTURER'S RISK MANAGEMENT PROCESS addresses possibility of fire and associated mitigations as confirmed by examination of RISK MANAGEMENT FILE …….: (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
11.6	**Overflow, spillage, leakage, ingress of water or particulate matter, cleaning, disinfection, sterilization and compatibility with substances used with the ME EQUIPMENT**		N/A
11.6.1	Sufficient degree of protection provided against overflow, spillage, leakage, ingress of water or particulate matter, cleaning, disinfection and sterilization, and compatibility with substances used with ME EQUIPMENT.....:	Component, to be evaluated as part of end use investigation	N/A
11.6.2	**Overflow in ME EQUIPMENT**		N/A
	ME EQUIPMENT incorporates a reservoir or liquid storage that did not wet any MEANS OF PROTECTION, nor result in the loss of BASIC SAFETY or ESSENTIAL PERFORMANCE…….:	Component, to be evaluated as part of end use investigation	N/A
	Maximum fill level is indicated by marking on the ME EQUIPMENT and a warning or safety notice is given, no HAZARDOUS SITUATION (as specified in 13.1) or unacceptable RISK due to overflow developed when the reservoir or liquid storage chamber is filled to its maximum capacity and the TRANSPORTABLE ME EQUIPMENT is tilted through an angle of 10°, or for MOBILE ME EQUIPMENT exceeding 45 kg, is moved over a threshold as described in 9.4.2.4.3.		N/A

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

	No warning or safety notice provided regarding the maximum fill level, no HAZARDOUS SITUATION (as specified in 13.1) or unacceptable RISK due to overflow developed when the reservoir or liquid storage chamber was filled to 15 % above the maximum capacity and the TRANSPORTABLE ME EQUIPMENT was tilted through an angle of 10°, or in MOBILE ME EQUIPMENT exceeding 45 kg, was moved over a threshold as described in 9.4.2.4.3.		N/A
11.6.3	**Spillage on ME EQUIPMENT and ME SYSTEM**		N/A
	ME EQUIPMENT and ME SYSTEMS handling liquids constructed that spillage does not wet parts as determined by review of the RISK MANAGEMENT FILE and test……..: (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
	RISK ANALYSIS identifies the type of liquid, volume, duration and location of the spill…….:		N/A
11.6.5	**Ingress of water or particulate matter into ME EQUIPMENT and ME SYSTEMS**		N/A
	ME EQUIPMENT with IP Code placed in least favourable position of NORMAL USE and subjected to tests of IEC 60529 (IP Code)…….:		N/A
	ME EQUIPMENT met dielectric strength and LEAKAGE CURRENT tests and there were no bridging of insulation or electrical components that could result in the loss of BASIC SAFETY or ESSENTIAL PERFORMANCE in NORMAL CONDITION or in combination with a SINGLE FAULT CONDITION .....:		N/A
11.6.6	**Cleaning and disinfection of ME EQUIPMENT and ME SYSTEMS**		N/A
	ME EQUIPMENT/ME SYSTEM and their parts and ACCESSORIES cleaned or disinfected using methods specified in instructions for use……..…:	Component, to be evaluated as part of end use investigation	N/A
	Effects of multiple cleanings/disinfections during EXPECTED SERVICE LIFE of EQUIPMENT evaluated by MANUFACTURER……:		N/A
11.6.7	**Sterilization of ME EQUIPMENT and ME SYSTEMS**		N/A
	ME EQUIPMENT, ME SYSTEMS and their parts or ACCESSORIES intended to be sterilized assessed and documented and compliant with tests……:	Component, to be evaluated as part of end use investigation	N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	RISK MANAGEMENT FILE includes an assessment of the RISKS associated with any deterioration following sterilization……: (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
11.6.8	RISKS associated with compatibility of substances used with ME EQUIPMENT addressed in RISK MANAGEMENT PROCESS……: (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)		N/A
11.7	ME EQUIPMENT, ME SYSTEM, and ACCESSORIES coming into direct or indirect contact with biological tissues, cells, or body fluids assessed and documented	Component, to be evaluated as part of end use investigation	N/A
11.8	Interruption and restoration of power supply did not result in a loss of BASIC SAFETY or ESSENTIAL PERFORMANCE	Component, to be evaluated as part of end use investigation	N/A
12	**ACCURACY OF CONTROLS AND INSTRUMENTS AND PROTECTION AGAINST HAZARDOUS OUTPUTS**		N/A
12.1	RISKS associated with accuracy of controls and instruments stated.....: (ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)	Component, to be evaluated as part of end use investigation	N/A
12.2	RISK of poor USABILITY, including identification, marking, and documents addressed in a USABILITY ENGINEERING……:		N/A
12.3	MANUFACTURER implemented an ALARM SYSTEM compliant with IEC 60601-1-8:2006, IEC 60601-1-8:2006/AMD1:2012 and IEC 60601-1-8:2006/AMD2:2020……..:		N/A
12.4	**Protection against hazardous output**		N/A
12.4.1	RISKS associated with hazardous output arising from intentional exceeding of safety limits addressed in RISK MANAGEMENT PROCESS……: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)		N/A
12.4.2	- need for indication associated with hazardous output addressed in RISK MANAGEMENT PROCESS .....: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4))		N/A
12.4.3	RISKS associated with accidental selection of excessive output values for ME EQUIPMENT with a multi-purpose unit addressed in RISK MANAGEMENT PROCESS .....: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
12.4.4	RISKS associated with incorrect output addressed in RISK MANAGEMENT PROCESS .....: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)		N/A
12.4.5	**Diagnostic or therapeutic radiation**		N/A
12.4.5.1	Adequate provisions to protect OPERATORS, PATIENTS, other persons and sensitive devices in vicinity of unwanted or excessive radiation		N/A
	Radiation safety ensured by compliance with requirements of appropriate standards		N/A
12.4.5.2	ME EQUIPMENT and ME SYSTEMS designed to produce X-radiation for diagnostic imaging purposes complied with IEC 60601-1-3.....:		N/A
12.4.5.3	RISKS associated with radiotherapy addressed in RISK MANAGEMENT PROCESS as .....: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)		N/A
12.4.5.4	RISKS associated with ME EQUIPMENT producing diagnostic or therapeutic radiation other than diagnostic X-rays and radiotherapy addressed in RISK MANAGEMENT PROCESS as .....: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)		N/A
12.4.6	RISKS associated with diagnostic or therapeutic acoustic pressure addressed in RISK MANAGEMENT .....: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)		N/A
13	**HAZARDOUS SITUATIONS AND FAULT CONDITIONS**		Pass
13.1	**Specific HAZARDOUS SITUATIONS**		Pass
13.1.2	**Emissions, deformation of ENCLOSURE or exceeding maximum temperature**		Pass
	– Emission of flames, molten metal, poisonous or ignitable substance in hazardous quantities did not occur	Unit for building-in, to be determined as part of end product investigation	N/A
	– Deformation of ENCLOSURE impairing compliance with 15.3.1 did not occur		N/A
	– Temperatures of APPLIED PARTS did not exceed allowable values in Table 24 .....:	no applied part	N/A
	– Temperatures of Accessible PARTS THAT ARE LIKELY TO BE TOUCHED, but not intended to be touched did not exceed limits in Table 34 .....:	Unit for building-in, to be determined as part of end product investigation	N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- Temperatures of ACCESSIBLE PARTS intended to be touched did not exceed limits in Table 23	Unit for building-in, to be determined as part of end product investigation	N/A
	–Allowable values for “other components and materials” in Table 22 times 1.5 minus 12.5 °C were not exceeded		Pass
	Limits for windings in Tables 26, 27, and 31 not exceeded		Pass
	Table 22 not exceeded in all other cases		Pass
	Temperatures measured according to 11.1.3		Pass
	SINGLE FAULT CONDITIONS in 4.7, 8.1 b), 8.7.2, and 13.2.2 relative to emission of flames, molten metal, or ignitable substances, not applied to parts and components where:	See Table 8.7	Pass
	– Supply circuit was unable to supply 15 W one minute after 15 W drawn from supply circuit in SINGLE FAULT CONDITION ..... :		N/A
	- or secondary circuits mounted on materials with a minimum flame rating of -V1, and		N/A
	- Secondary circuits energized by less than 60 Vdc, 42.4 Vpeak in NC and SFC, and		N/A
	- Secondary circuits limited to 100 VA or 6000 J in NC and SFC, and		N/A
	- Wire insulation in secondary circuits of types PVC, TFE, PTFE, FEP, polychloroprene or polybromide		N/A
	- or components in the circuit have HIGH INTEGRITY CHARACTERISTICS..... :		N/A
	– or parts and components completely contained within a fire ENCLOSURE complying with 11.3 as verified by review of design documentation		N/A
	After tests of this Clause, settings of THERMAL CUT-OUTS and OVER-CURRENT RELEASES did not change sufficiently to affect their safety function	See appended table 13.1.2	Pass
13.1.3	– limits for LEAKAGE CURRENT in SINGLE FAULT CONDITION did not exceed……..:	See appended tables 8.7 and 13.2	Pass
	– voltage limits for ACCESSIBLE PARTS and APPLIED PARTS did not exceed……..:		N/A
13. 2	**SINGLE FAULT CONDITIONS**		Pass

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
13.2.1	During the application of the SINGLE FAULT CONDITIONS listed in 13.2.2 to 13.2.13 (inclusive), the NORMAL CONDITIONS identified in 8.1 a) also applied in the least favourable combination		Pass
	ME EQUIPMENT complied with 13.2.2 -13.2.12…..:	See appended table 13.2	Pass
	RISK MANAGEMENT FILE includes an assessment of RISKS associated with leakage of liquid in a SINGLE FAULT CONDITION.....: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)		N/A
	RISK MANAGEMENT FILE defines the appropriate test conditions.....:		N/A
13.2.13	ME EQUIPMENT remained safe after tests of 13.2.13.2 to 13.2.13.4, and cooling down to within 3 °C of test environment temperature		N/A
	ME EQUIPMENT examined for compliance or appropriate tests such as dielectric strength of motor insulation according to 8.8.3 conducted		N/A
13.2.13.2	**ME EQUIPMENT with heating elements**		N/A
	a 1) thermostatically controlled ME EQUIPMENT with heating elements for building-in, r for unattended operation, or with a capacitor not protected by a fuse connected in parallel with THERMOSTAT contacts met tests	No heating elements	N/A
	a 2) ME EQUIPMENT with heating elements RATED for non-CONTINUOUS OPERATION met tests		N/A
	a 3) other ME EQUIPMENT with heating elements met test		N/A
	When more than one test was applicable to same ME EQUIPMENT, tests performed consecutively		N/A
	Heating period stopped when a heating element or an intentionally weak part of a non-SELF-RESETTING THERMAL CUT-OUT ruptured, or current interrupted before THERMAL STABILITY without possibility of automatic restoration		N/A
	Test repeated on a second sample when interruption was due to rupture of a heating element or an intentionally weak part		N/A
	Both samples met 13.1.2, and open circuiting of a heating element or an intentionally weak part in second sample not considered a failure by itself		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	b) ME EQUIPMENT with heating elements without adequate heat discharge, and supply voltage set at 90 or 110 % of RATED supply voltage, least favourable of the two (V) ..... :		N/A
	Operating period stopped when a non-SELF-RESETTING THERMAL CUT-OUT operated, or current interrupted without possibility of automatic restoration before THERMAL STABILITY		N/A
	ME EQUIPMENT switched off as soon as THERMAL STABILITY established and allowed to cool to room temperature when current not interrupted		N/A
	Test duration was equal to RATED operating time for non-CONTINUOUS OPERATION		N/A
	c) Heating parts of ME EQUIPMENT tested with ME EQUIPMENT operated in NORMAL CONDITION at 110 % of RATED supply voltage and as in 11.1, and		N/A
	1) Controls limiting temperature in NORMAL CONDITION disabled, except THERMAL CUT-OUTS		N/A
	2) When more than one control provided, they were disabled in turn		N/A
	3) ME EQUIPMENT operated at RATED DUTY CYCLE until THERMAL STABILITY achieved, regardless of RATED operating time		N/A
13.2.13.3	**ME EQUIPMENT with motors**		N/A
	a 1) For the motor part of the ME EQUIPMENT, compliance checked by tests of 13.2.8- 13.2.10, 13.2.13.3 b), 13.2.13.3 c), and 13.2.13.4, as applicable	No motors	N/A
	To determine compliance with 13.2.9 and 13.2.10 motors in circuits running at 42.4 V peak a.c./ 60 V d.c. or less are covered with a single layer of cheesecloth which did not ignite during the test		N/A
	a 2) Tests on ME EQUIPMENT containing heating parts conducted at prescribed voltage with motor & heating parts operated simultaneously to produce the least favourable condition		N/A
	a 3) Tests performed consecutively when more tests were applicable to the same ME EQUIPMENT		N/A
	b) Motor met running overload protection test of this clause when:		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	1) it is intended to be remotely or automatically controlled by a single control device with no redundant protection, or		N/A
	2) it is likely to be subjected to CONTINUOUS OPERATION while unattended		N/A
	Motor winding temperature determined during each steady period and maximum value did not exceed Table 27 (Insulation Class, Maximum temperature measured °C) .....:		N/A
	Motor removed from ME EQUIPMENT and tested separately when load could not be changed in appropriate steps		N/A
	Running overload test for motors operating at 42.4 V peak a.c./60 V d.c. or less performed only when examination and review of design indicated possibility of an overload		N/A
	Test not conducted where electronic drive circuits maintained a substantially constant drive current		N/A
	Test not conducted based on other justifications (justification) .....:		N/A
	c) ME EQUIPMENT with 3-phase motors operated with normal load, connected to a 3-phase SUPPLY MAINS with one phase disconnected, and periods of operation per 13.2.10		N/A
13.2.13.4	**ME EQUIPMENT RATED for NON-CONTINUOUS OPERATION**		N/A
	ME EQUIPMENT (other than HAND-HELD) operated under normal load and at RATED voltage or at upper limit of RATED voltage range until increase in temperature was ≤ 5 °C in one hour, or a protective device operated		N/A
	When a load-reducing device operated in NORMAL USE, test continued with ME EQUIPMENT running idle		N/A
	Motor winding temperatures did not exceed values in 13.2.10…….:		N/A
	Insulation Class…….:		—
	Maximum temperature measured (°C)…….:		—

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

14	**PROGRAMMABLE ELECTRICAL MEDICAL SYSTEMS (PEMS)**		N/A
14.1	Requirements in 14.2 to 14,12 not applied to PEMS when it provides no functionality necessary for BASIC SAFETY or ESSENTIAL PERFORMANCE, or		N/A
	- when application of RISK MANAGEMENT showed that failure of PESS does not lead to unacceptable RISK……..:		N/A
	RISK MANAGEMENT FILE contains an assessment of RISKS associated with the failure of the PESS: (ISO 14971 Cl. 5.2-5.5, 6)		N/A
	Requirements of 14.13 not applied to PEMS intended to be incorporated into an IT NETWORK		N/A
	When the requirements of 14.2 to 14.13 apply, the requirements of IEC 62304:2006 and IEC 62304:2006/AMD1:2015 clause 4.3, 5, 7, 8 and 9 apply for the development or modification of software of each PESS		N/A
	Software development process for Software Classification applied in accordance with Clause 4.3 and 4.4 of IEC 62304:2006 and IEC 62304:2006/AMD1:2015……..:		N/A
	Software development process applied according to Clause 5 of IEC 62304:2006 and IEC 62304:2006/AMD1:2015……:		N/A
	Software development process for Software risk management applied according to Clause 7 of IEC 62304:2006 and IEC 62304:2006/AMD1:2015……..:		N/A
	Software development process Configuration Management applied according to Clause 8 of IEC 62304:2006 and IEC 62304:2006/ AMD1:2015……..:		N/A
	Software development process for Software Problem Resolution applied according to Clause 9 of IEC 62304:2006 and IEC 62304:2006/AMD1:2015……..:		N/A
14.2	Documents required by Clause 14 reviewed, approved, issued and revised according to a formal document control process……:		N/A
14.3	RISK MANAGEMENT plan required by 4.2.2 includes reference to PEMS VALIDATION plan		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
14.4	A PEMS DEVELOPMENT LIFE-CYCLE including a set of defined milestones has been documented		N/A
	At each milestone, activities to be completed, and VERIFICATION methods to be applied to activities have been defined		N/A
	Each activity including its inputs and outputs defined, and each milestone identifies RISK MANAGEMENT activities that must be completed before that milestone		N/A
	PEMS DEVELOPMENT LIFE-CYCLE tailored for a specific development by making plans detailing activities, milestones		N/A
	PEMS DEVELOPMENT LIFE-CYCLE includes documentation requirements		N/A
14.5	A documented system for problem resolution within and between all phases and activities of PEMS DEVELOPMENT LIFE-CYCLE has been developed and maintained		N/A
14.6	**RISK MANAGEMENT PROCESS**		N/A
14.6.1	MANUFACTURER considered HAZARDS associated with software and hardware aspects of PEMS including those associated with the incorporating PEMS into an IT-NETWORK, components of third-party origin, legacy subsystems when compiling list of known or foreseeable HAZARDS……..:		N/A
	RISK MANAGEMENT FILE includes known or foreseeable HAZARDS associated with software, hardware, incorporation of the PEMS into an IT-NETWORK, components of 3rd party origin and legacy subsystems……: (ISO 14971 Cl. 5.3)		N/A
14.6.2	Suitably validated tools and PROCEDURES assuring each RISK CONTROL measure reduces identified RISK(S) satisfactorily provided in addition to PEMS requirements in Clause 4.2.2…:		N/A
	RISK MANAGEMENT FILE documents the suitability of tools and procedures to validate each RISK CONTROL measure……: (ISO 14971 Cl. 7.1)		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
14.7	A documented requirement specification for PEMS and each of its subsystems (e.g. for a PESS) which includes ESSENTIAL PERFORMANCE and RISK CONTROL measures implemented by that system or subsystem……: (ISO 14971 Cl. 7.2)		N/A
14.8	An architecture satisfying the requirement is specified for PEMS and each of subsystems …..: (ISO 14971 Cl. 7.2)		N/A
14.9	Design is broken up into sub systems and descriptive data on design environment documented……:		N/A
14.10	A VERIFICATION plan containing the specified information used to verify and document functions implementing BASIC SAFETY, ESSENTIAL PERFORMANCE, or RISK CONTROL measures……..: (ISO 14971 Cl. 7.2)		N/A
	– milestone(s) when VERIFICATION is to be performed for each function		N/A
	– selection and documentation of VERIFICATION strategies, activities, techniques, and appropriate level of independence of the personnel performing the VERIFICATION		N/A
	– selection and utilization of VERIFICATION tools		N/A
	– coverage criteria for VERIFICATION		N/A
	The VERIFICATION performed according to the VERIFICATION plan and results of the VERIFICATION activities documented		N/A
14.11	A PEMS VALIDATION plan containing validation of BASIC SAFETY & ESSENTIAL PERFORMANCE ..... :		N/A
	The PEMS VALIDATION performed according to the PEMS VALIDATION plan with results of PEMS VALIDATION activities and methods used for PEMS VALIDATION documented		N/A
	The person with overall responsibility for PEMS VALIDATION is independent		N/A
	All professional relationships of members of PEMS VALIDATION team with members of design team documented in RISK MANAGEMENT FILE (ISO 14971 Cl. 7.2)		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
14.12	Continued validity of previous design documentation assessed under a documented modification/change PROCEDURE		N/A
	Software Classification for Software changes applied in accordance with Clause 4.3 and 4.4 of IEC 62304:2006 and IEC 62304:2006/ AMD1:2015……:		N/A
	Software Process for Software changes applied according to Clause 5 of IEC 62304:2006 and IEC 62304:2006/ AMD1:2015 .....:		N/A
	RISK MANAGEMENT for Software changes applied according to Clause 7 of IEC 62304:2006 and IEC 62304:2006/ AMD1:2015 .....:		N/A
	Configuration management of software changes applied per Clause 8 of IEC 62304:2006 and IEC 62304:2006/ AMD1:2015……:		N/A
	Problem resolution for Software changes applied according to Clause 9 of IEC 62304:2006 and IEC 62304:2006/ AMD1:2015 .....:		N/A
14.13	For PEMS incorporated into an IT-NETWORK not VALIDATED by the PEMS MANUFACTURER, instructions made available for implementing the connection include the following……:		N/A
	a) Purpose of the PEMS connection to an IT-NETWORK		N/A
	b) required characteristics of the IT-NETWORK		N/A
	c) required configuration of the IT-NETWORK		N/A
	d) technical specifications of the network connection, including security specifications		N/A
	e) intended information flow between the PEMS, the IT-NETWORK and other devices on the IT-NETWORK, and the intended routing through the IT-NETWORK		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	f) a list of HAZARDOUS SITUATIONS resulting from failure of the IT-NETWORK to provide the required characteristics (ISO 14971 Cl. 5.2-5.5, 6, 7.1, 7.2)		N/A
	ACCOMPANYING DOCUMENTS for the RESPONSIBLE ORGANIZATION include the following:		N/A
	– statement that connection to IT-NETWORKS including other equipment could result in previously unidentified RISKS TO PATIENTS, OPERATORS or third parties		N/A
	– Notification that the RESPONSIBLE ORGANIZATION identify, analyse, evaluate and control these RISKS		N/A
	– Notification that changes to the IT-NETWORK could introduce new RISKS that require additional analysis		N/A
	- Changes to the IT-NETWORK include: - changes in network configuration - connection of additional items - disconnection of items - update of equipment - upgrade of equipment		N/A
15	**CONSTRUCTION OF ME EQUIPMENT**		Pass
15.1	RISKS associated with arrangement of controls and indicators of ME EQUIPMENT addressed through the application of a USABILITY ENGINEERING PROCESS……..:	No such parts	N/A
15.2	Parts of ME EQUIPMENT subject to mechanical wear, electrical, environmental degradation or ageing resulting in unacceptable RISK when unchecked for a long period, are accessible for inspection, replacement, and maintenance		N/A
	Inspection, servicing, replacement, and adjustment of parts of ME EQUIPMENT can easily be done without damage to or interference with adjacent parts or wiring		N/A
15.3	**Mechanical strength**		N/A
15.3.1	Mould stress relief, push, impact, drop, and rough handling tests did not result in loss of BASIC SAFETY or ESSENTIAL PERFORMANCE	Component for building-in, to be considered as part of the end product investigation	N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
15.3.2	Push test conducted ……..:	Component for building-in, to be considered as part of the end product investigation	N/A
	No damage resulting in an unacceptable RISK sustained	Component for building-in, to be considered as part of the end product investigation	N/A
15.3.3	Impact test conducted……:	Component for building-in, to be considered as part of the end product investigation	N/A
	No damage resulting in an unacceptable RISK sustained		N/A
15.3.4	**Drop test**		N/A
15.3.4.1	Sample of HAND-HELD ME EQUIPMENT, ACCESSORIES and HAND-HELD part with SAFE WORKING LOAD tested ……..:	Component for building-in, to be considered as part of the end product investigation	N/A
	No unacceptable RISK resulted		N/A
15.3.4.2	Sample of PORTABLE ME EQUIPMENT, ACCESSORIES and PORTABLE part with SAFE WORKING LOAD withstood stress as demonstrated by test……:		N/A
	No damage resulting in an unacceptable RISK sustained		N/A
15.3.5	MOBILE ME EQUIPMENT and MOBILE part with SAFE WORKING LOAD and in most adverse condition in NORMAL USE passed Rough Handling tests…….:	Component for building-in, to be considered as part of the end product investigation	N/A
	No damage resulting in an unacceptable RISK sustained		N/A
15.3.6	Examination of ENCLOSURE made from moulded or formed thermoplastic material indicated that material distortion due to release of internal stresses by moulding or forming operations will not result in an unacceptable RISK	Component for building-in, to be considered as part of the end product investigation	N/A
	Mould-stress relief test conducted by placing one sample of complete ME EQUIPMENT, ENCLOSURE or a portion of larger ENCLOSURE, for 7 hours in a circulating air oven at 10°C over the max temperature measured on ENCLOSURE in 11.1.3, but no less than 70 °C……:		N/A
	No damage resulting in an unacceptable RISK		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
15.3.7	INTENDED USE, EXPECTED SERVICE LIFE, and conditions for transport and storage were taken into consideration for selection and treatment of materials used in construction of ME EQUIPMENT		N/A
	Based on review of EQUIPMENT, ACCOMPANYING DOCUMENTS, specifications and processing of materials, and MANUFACTURER'S relevant tests or calculations, corrosion, ageing, mechanical wear, degradation of biological materials due to bacteria, plants, animals and the like, will not result in an unacceptable RISK		N/A
15.4	**ME EQUIPMENT components and general assembly**		N/A
15.4.1	Incorrect connection of accessible connectors, removable without a TOOL, prevented where an unacceptable RISK exists,……..: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)		N/A
	a) Plugs for connection of PATIENT leads or PATIENT cables cannot be connected to outlets on same ME EQUIPMENT intended for other functions,……:	No patient leads	N/A
	b) Medical gas connections on ME EQUIPMENT for different gases to be operated in NORMAL USE are not interchangeable inspection……:	No gas connection	N/A
15.4.2	**Temperature and overload control devices**		N/A
15.4.2.1	a) THERMAL CUT-OUTS and OVER-CURRENT RELEASES with automatic resetting not used in ME EQUIPMENT when their use could lead to a HAZARDOUS SITUATION……..: (ISO 14971 Cl. 5.2-5.5, 6)	No such parts relied upon for safety	N/A
	b) THERMAL CUT-OUTS with a safety function with reset by a soldering not fitted in ME EQUIPMENT	No such parts relied upon for safety	N/A
	c) An additional independent non-SELF-RESETTING THERMAL CUT-OUT is provided……..: (ISO 14971 Cl. 5.2-5.5)	No such parts relied upon for safety	N/A
	d) Operation of THERMAL CUT-OUT or OVER CURRENT RELEASE doesn't result in a HAZARDOUS SITUATION or loss of ESSENTIAL PERFORMANCE ….: (ISO 14971 Cl. 5.2-5.5)		N/A
	e) Capacitors or other spark-suppression devices not connected between contacts of THERMAL CUT-OUTS		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	f) Use of THERMAL CUT-OUTS or OVER-CURRENT RELEASES do not affect safety as verified by following tests		N/A
	- Positive temperature coefficient devices) complied with IEC 60730-1: 2010, Clauses 15, 17, J.15, and J.17		N/A
	- ME EQUIPMENT containing THERMAL CUT-OUTS and OVER-CURRENT RELEASES operated under the conditions of Clause 13……:		N/A
	- SELF-RESETTING THERMAL CUT-OUTS and OVER-CURRENT RELEASES including circuits performing equivalent functions Certified according to appropriate standards……:		N/A
	- In the absence of Certification in accordance with IEC standards, SELF-RESETTING THERMAL CUT-OUTS and OVER-CURRENT RELEASES including circuits performing equivalent functions operated 200 times		N/A
	Manual reset THERMAL CUT-OUTS and OVER-CURRENT RELEASES Certified in accordance with appropriate IEC standards		N/A
	manual reset THERMAL CUT-OUTS and OVER-CURRENT RELEASES operated 10 times		N/A
	Thermal protective devices tested separately from ME EQUIPMENT when engineering judgment indicated test results would not be impacted		N/A
	g) Protective device incorporating a fluid filled container with heating means, operated when heater switched on with container empty and prevented an unacceptable RISK due to overheating		N/A
	h) ME EQUIPMENT with tubular heating elements provided with protection against overheating…..: (ISO 14971 Cl. 5.2-5.5)		N/A
15.4.2.2	Temperature settings clearly indicated when means provided to vary setting of THERMOSTATS	No such parts	N/A
15.4.3	**Batteries**		N/A
15.4.3.1	Battery housings provided with ventilation…….: (ISO 14971 Cl. 5.2-5.5)		N/A
	Battery compartments designed to prevent accidental short circuiting		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
15.4.3.2	Means provided to prevent incorrect connection of polarity		N/A
	RISK MANAGEMENT FILE includes an assessment of RISKS associated with incorrect connection or replacement of batteries……: (ISO 14971 Cl. 5.2-5.5)		N/A
15.4.3.3	Overcharging of battery prevented by virtue of design……:		N/A
	RISK MANAGEMENT FILE includes an assessment of RISKS associated with overcharging of batteries……: (ISO 14971 Cl. 5.2-5.5)		N/A
15.4.3.4	Primary lithium batteries comply with IEC 60086-4		N/A
	Secondary lithium batteries comply with IEC 62133 or IEC 62133-2		N/A
15.4.3.5	A properly RATED protective device provided within INTERNAL ELECTRICAL POWER SOURCE to protect against fire……..:		N/A
	Protective device has adequate breaking capacity		N/A
	Justification for OVER-CURRENT RELEASES or FUSE exclusion is documented		N/A
	Short circuit test between the positive and negative poles of an INTERNAL ELECTRICAL POWER SOURCE between the output and protective device(s) omitted where 2 MOOPs provided, or		N/A
	Short circuit between the positive and negative poles of an INTERNAL ELECTRICAL POWER SOURCE between the output and protective device(s) does not result in any HAZARDOUS SITUATION		N/A
15.4.4	Indicator lights provided to indicate ME EQUIPMENT is ready for……:	No such parts	N/A
	An additional indicator light provided on ME EQUIPMENT with a stand-by state or a warm-up state exceeding 15 s,		N/A
	Indicator lights provided on ME EQUIPMENT incorporating non-luminous heaters to indicate heaters are operational		N/A

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

	RISK MANAGEMENT FILE includes an assessment of RISKS associated with the use of indicator lights for EQUIPMENT incorporating non-luminous heaters……..: (ISO 14971 Cl. 5.2-5.5)		N/A
	Requirement not applied to heated stylus-pens for recording purposes		N/A
	Indicator lights provided on ME EQUIPMENT to indicate an output exists		N/A
	Colours of indicator lights complied with 7.8.1		N/A
	Charging mode visibly indicated		N/A
15.4.5	RISKS associated with pre-set controls addressed in RISK MANAGEMENT PROCESS……: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)		N/A
15.4.6	**Actuating parts of controls of ME EQUIPMENT**		N/A
15.4.6.1	a) Actuating parts cannot be pulled off or loosened during NORMAL USE	No such parts	N/A
	b) Controls secured so that the indication of any scale always corresponds to the position of the control		N/A
	c) Incorrect connection prevented by adequate construction when it could be separated without use of a TOOL		N/A
	When torque values per Table 30 applied knobs did not rotate ……..:.		N/A
	Tests conducted with no unacceptable RISK …..:		N/A
15.4.6.2	Stops on rotating/ movable parts of controls are of adequate mechanical strength ……..:		N/A
	Torque values in Table 30 applied…….:		N/A
	No unexpected change of the controlled parameter when tested……:		N/A
15.4.7	**Cord-connected HAND-HELD and foot-operated control devices**		N/A
15.4.7.1	a) HAND-HELD control devices of ME EQUIPMENT complied with 15.3.4.1	No such parts	N/A
	b) Foot-operated control device supported an actuating force of 1350 N in its position of NORMAL USE with no damage……..:		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
15.4.7.2	Control device of HAND-HELD and foot-operated control devices turned in all possible abnormal positions and placed on a flat surface……..:		N/A
	No unacceptable RISK caused by changing control setting when accidentally placed in an abnormal position		N/A
15.4.7.3	a) Foot-operated control device is at least rated IPX1……..:	No such parts	N/A
	b) ENCLOSURE of foot operated control devices containing electrical circuits is at least IPX6……:		N/A
15.4.8	Aluminium wires less than 16 mm^2 in cross-sectional area are not used		N/A
15.4.9	a) Oil container in PORTABLE ME EQUIPMENT allows for expansion of oil and is adequately sealed	No such parts	N/A
	b) Oil containers in MOBILE ME EQUIPMENT sealed to prevent loss of oil during transport		N/A
	A pressure-release device operating during NORMAL USE is provided		N/A
	c) Partially sealed oil-filled ME EQUIPMENT and its parts provided with means for checking the oil level to detect leakage		N/A
	ME EQUIPMENT and technical description examined, and manual tests conducted to confirm compliance with above requirements		N/A
15.5	**MAINS SUPPLY TRANSFORMERS OF ME EQUIPMENT and transformers providing separation in accordance with 8.5**		Pass
15.5.1	**Overheating**		Pass
15.5.1.1	Transformers of ME EQUIPMENT are protected against overheating……..:	See appended tables 15.5.1.2 and 15.5.1.3	Pass
	During tests, windings did not open, no HAZARDOUS SITUATION occurred, and maximum temperatures of windings did not exceed values in Table 31		Pass
	Dielectric strength test conducted after short circuit and overload tests ……..:	See appended tables 15.5.1.2 and 15.5.1.3	Pass
15.5.1.2	Transformer output winding short circuited, and test continued until protective device operated or THERMAL STABILITY achieved ……..:	See appended table 15.5.1.2	Pass
	Short circuit applied directly across output windings		Pass

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

15.5.1.3	Multiple overload tests conducted on windings:		N/A
15.5.2	Transformers operating at a frequency above 1kHz tested according to clause 8.8.3……:	Tested according to 8.8.3	N/A
	Transformer windings provided with adequate insulation		N/A
	Dielectric strength tests were conducted ……:	Tested according to 8.8.3	N/A
15.5.3	Transformers forming MEANS OF PROTECTION as required by 8.5 comply with……..:	See appended table 8.10	Pass
	- Means provided to prevent displacement of end turns		Pass
	- protective earth screens with a single turn have insulated overlap		N/A
	- Exit of wires form internal windings of toroid transformers protected with double sleeving		N/A
	- insulation between primary and secondary windings complies with 8.8.2		Pass
	- CREEPAGE DISTANCES and AIR CLEARANCE comply with 8.9.4		Pass
16	**ME SYSTEMS**		N/A
16.1	After installation or subsequent modification, ME SYSTEM didn't result in an unacceptable RISK		N/A
	RISK MANAGEMENT FILE includes an assessment of RISKS associated with installation and modification of an ME SYSTEM……..: (ISO 14971 Cl. 5.2-5.5, 6)		N/A
	Only HAZARDS arising from combining various equipment to form a ME SYSTEM considered		N/A
	– ME SYSTEM provides the level of safety within the PATIENT ENVIRONMENT equivalent to ME EQUIPMENT complying with this standard		N/A
	– ME SYSTEM provides the level of safety outside PATIENT ENVIRONMENT equivalent to equipment complying with their respective IEC or ISO safety standards		N/A
	– tests performed in NORMAL CONDITION, except as specified		N/A
	– tests performed under operating conditions specified by MANUFACTURER of ME SYSTEM		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Safety tests previously conducted on individual equipment of ME SYSTEM according to relevant standards not repeated		N/A
	RISK MANAGEMENT methods used by MANUFACTURER of an ME SYSTEM reconfigurable by RESPONSIBLE ORGANIZATION or OPERATOR		N/A
	Non-ME EQUIPMENT used in ME SYSTEM complied with applicable IEC or ISO safety standards		N/A
	Equipment relying only on BASIC INSULATION for protection against electric shock not used in ME SYSTEM		N/A
16.2	**ACCOMPANYING DOCUMENTS of an ME SYSTEM**		N/A
	Documents containing all data necessary for ME SYSTEM to be used as intended by MANUFACTURER including a contact address accompany ME SYSTEM or modified ME SYSTEM		N/A
	ACCOMPANYING DOCUMENTS regarded as a part of ME SYSTEM		N/A
	a) ACCOMPANYING DOCUMENTS provided for each item of ME EQUIPMENT supplied by MANUFACTURER		N/A
	b) ACCOMPANYING DOCUMENTS provided for each item of non-ME EQUIPMENT supplied by MANUFACTURER		N/A
	c) the required information is provided:		N/A
	– specifications, instructions for use as intended by MANUFACTURER, and a list of all items forming the ME SYSTEM		N/A
	– instructions for installation, assembly, and modification of ME SYSTEM to ensure continued compliance with this standard		N/A
	– instructions for cleaning and, when applicable, disinfecting and sterilizing each item of equipment or equipment part forming part of the ME SYSTEM		N/A
	– additional safety measures to be applied during installation of ME SYSTEM		N/A
	– identification of parts of ME SYSTEM suitable for use within the PATIENT ENVIRONMENT		N/A
	– additional measures to be applied during preventive maintenance		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	– a warning forbidding placement of MULTIPLE SOCKET-OUTLET, when provided and it is a separate item, on the floor		N/A
	– a warning indicating an additional MULTIPLE SOCKET-OUTLET or extension cord not to be connected to ME SYSTEM		N/A
	– a warning to connect only items that have been specified as part of ME SYSTEM or specified as being compatible with ME SYSTEM		N/A
	– maximum permissible load for any MULTIPLE SOCKET-OUTLET(S) used with ME SYSTEM		N/A
	– instructions indicating MULTIPLE SOCKET-OUTLETS provided with the ME SYSTEM to be used only for supplying power to equipment intended to form part of ME SYSTEM		N/A
	– an explanation indicating RISKS of connecting non-ME EQUIPMENT supplied as a part of ME SYSTEM directly to wall outlet when non-ME EQUIPMENT is intended to be supplied via a MULTIPLE SOCKET-OUTLET with a separating transformer		N/A
	– an explanation indicating RISKS of connecting any equipment supplied as a part of ME SYSTEM to MULTIPLE SOCKET-OUTLET		N/A
	– permissible environmental conditions of use for ME SYSTEM including conditions for transport and storage		N/A
	– instructions to OPERATOR not to, simultaneously, touch parts referred to in 16.4 and PATIENT		N/A
	d) the following instructions provided for use by RESPONSIBLE ORGANIZATION:		N/A
	– adjustment, cleaning, sterilization, and disinfection PROCEDURES		N/A
	– assembly of ME SYSTEMS and modifications during actual service life evaluated based on the requirements of this standard		N/A
16.3	Instructions for use of ME EQUIPMENT intended to receive its power from other equipment in an ME SYSTEM, describe the other equipment to ensure compliance with these requirements		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Transient currents restricted to allowable levels for the specified IPS or UPS ..... :		N/A
	Technical description and installation instructions specify the actual transient currents where an IPS or UPS is not specified		N/A
16.4	Parts of non-ME EQUIPMENT in PATIENT ENVIRONMENT subject to contact by OPERATOR during maintenance, calibration, after removal of covers, connectors operated at a voltage ≤ voltage in 8.4.2 c)		N/A
16.5	Safety measures incorporating a SEPARATION DEVICE applied when FUNCTIONAL CONNECTION between ME EQUIPMENT and other items of an ME SYSTEM or other systems can cause allowable values of LEAKAGE CURRENT to exceed		N/A
	SEPARATION DEVICE has dielectric strength, CREEPAGE and CLEARANCES required for one MEANS OF OPERATOR PROTECTION		N/A
	WORKING VOLTAGE was highest voltage across SEPARATION DEVICE during a fault condition, but not less than MAXIMUM MAINS VOLTAGE (V)..... :		N/A
16.6	**LEAKAGE CURRENTS**		N/A
16.6.1	TOUCH CURRENT in NORMAL CONDITION did not exceed 100µA.....:		N/A
	TOUCH CURRENT did not exceed 500µA in event of interruption of any non-PERMANENTLY INSTALLED PROTECTIVE EARTH CONDUCTOR .....:		N/A
16.6.2	Current in PROTECTIVE EARTH CONDUCTOR of MULTIPLE SOCKET-OUTLET didn't exceed 5 mA .....:		N/A
16.6.3	PATIENT LEAKAGE CURRENT and total PATIENT LEAKAGE CURRENT of ME SYSTEM in NORMAL CONDITION did not exceed values .....:		N/A
16.7	ME SYSTEM complied with applicable requirements of Clause 9.....:		N/A
16.8	Interruption and restoration power to the ME SYSTEM or any part of the ME SYSTEM did not result in a loss of BASIC SAFETY or ESSENTIAL PERFORMANCE		N/A
16.9	**ME SYSTEM connections and wiring**		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
16.9.1	Incorrect connection of accessible connectors, removable without a TOOL, prevented where unacceptable RISK can result……:		N/A
	RISK MANAGEMENT FILE includes an assessment of RISKS associated with plugs for connection of PATIENT leads or cables likely to be located in the PATIENT ENVIRONMENT……..: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)		N/A
	– Plugs for connection of PATIENT leads or PATIENT cables could not be connected to other outlets of the same ME SYSTEM likely to be located in PATIENT ENVIRONMENT, except when examination of connectors and interchanging them proved no unacceptable RISK results		N/A
	Medical gas connections on the ME SYSTEM for different gasses operated in NORMAL USE are not interchangeable		N/A
16.9.2	**MAINS PARTS, components and layout**		N/A
16.9.2.1	a) – MULTIPLE SOCKET-OUTLET only allows connection using a TOOL, or		N/A
	– MULTIPLE SOCKET-OUTLET is of a type that cannot accept MAINS PLUGS of any of the kinds specified in IEC/TR 60083, or		N/A
	– MULTIPLE SOCKET-OUTLET is supplied via a separating transformer		N/A
	b) – MULTIPLE SOCKET-OUTLET marked with SAFETY SIGN 2 of Table D.2 visible in NORMAL USE, and		N/A
	– marked either individually or in combinations, with the maximum allowed continuous output in amperes or volt-amperes, or		N/A
	– marked to indicate the equipment or equipment parts it may safely be attached to		N/A
	– MULTIPLE SOCKET-OUTLET is a separate item or an integral part of ME EQUIPMENT or non-ME EQUIPMENT		N/A
	c) MULTIPLE SOCKET-OUTLET complied with IEC 60884-1 and the following requirements:		N/A
	– CREEPAGE and CLEARANCES complied with 8.9		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	– It is CLASS I, and PROTECTIVE EARTH CONDUCTOR is connected to earthing contacts in socket-outlets		N/A
	– PROTECTIVE EARTH TERMINALS and PROTECTIVE EARTH CONNECTIONS comply with 8.6:		N/A
	– ENCLOSURE complied with 8.4.2 d)		N/A
	– MAINS TERMINAL DEVICES and wiring complied with 8.11.4, when applicable		N/A
	– RATINGS of components are not in conflict with conditions of use ……:		N/A
	– Electrical terminals and connectors of MULTIPLE SOCKET-OUTLETS prevent incorrect connection of accessible connectors removable without a TOOL		N/A
	– POWER SUPPLY CORD complied with 8.11.3		N/A
	d) Additional requirements applied when MULTIPLE SOCKET-OUTLET combined with a separating transformer:		N/A
	– Separating transformer complied with this standard or IEC 61558-2-1,……:		N/A
	– Separating transformer is CLASS I		N/A
	– Degree of protection against ingress of water specified as in IEC 60529		N/A
	– Separating transformer assembly marked according to 7.2 and 7.3		N/A
	– MULTIPLE SOCKET-OUTLET permanently connected to separating transformer, or socket-outlet of separating transformer assembly cannot accept MAINS PLUGS as identified in IEC/TR 60083		N/A
16.9.2.2	The impedance between the protective earth pin in the MAINS PLUG and any part that is PROTECTIVELY EARTHED and protected by only the SUPPLY MAINS circuit over-current release, did not exceed 200 mΩ		N/A
	The impedance of an earth pathway protected by an additional intermediate circuit breaker or fuse rated 13A or lower, did not exceed 400 mΩ		N/A
	Removal of any single item of equipment in ME SYSTEM will not interrupt the protective earthing of any other part without simultaneous disconnection of electrical supply to that part		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Additional PROTECTIVE EARTH CONDUCTORS can be detachable only by use of a TOOL		N/A
16.9.2.3	Conductors connecting different items within an ME SYSTEM protected against mechanical damage		N/A
17	**ELECTROMAGNETIC COMPATIBILITY OF ME EQUIPMENT AND ME SYSTEMS**		N/A
	RISKS associated confirmed by review…….:		N/A
	RISK MANAGEMENT FILE includes an assessment of risks associated with the introduction of electromagnetic phenomena into the environment by the EQUIPMENT or SYSTEM……: (ISO 14971 Cl. 5.2-5.5, 6, 7.1-7.4)		N/A
ANNEX G	**PROTECTION AGAINST HAZARDS OF IGNITION OF FLAMMABLE ANESTHETIC MIXTURES**		N/A
G.2	**Locations and basic requirements**		N/A
G.2.1	Parts of CATEGORY APG ME EQUIPMENT in which a FLAMMABLE ANAESTHETIC MIXTURE WITH AIR occurs are CATEGORY AP or APG ME EQUIPMENT and complied with G.3, G.4, and G.5	Not evaluated for use in the presence of Flammable Anaesthetic Mixtures	N/A
G.2.2	FLAMMABLE AESTHETIC MIXTURE WITH		N/A
G.2.3	A FLAMMABLE AESTHETIC MIXTURE WITH OXYGEN or NITROUS OXIDE		N/A
G.2.4	ME EQUIPMENT specified for use with FLAMMABLE AESTHETIC MIXTURE WITH AIR complied with G.4 and G.5		N/A
G.2.5	ME EQUIPMENT or parts thereof for use with FLAMMABLE AESTHETIC MIXTURE WITH OXYGEN OR NITROUS OXIDE comply with G.4 and G.6		N/A
	ME EQUIPMENT in G.2.4 to G.2.5 met appropriate tests of G.3-G.6 conducted after tests of 11.6.6 and 11.6.7		N/A
G.3	**Marking, ACCOMPANYING DOCUMENTS**		N/A
G.3.1	CATEGORY APG ME EQUIPMENT prominently marked "APG" (symbol 23 in Table D.1) ..... :		N/A
	Length of green-coloured band is ≥ 4 cm, and size of marking is as large as possible for particular case		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	When above marking not possible, relevant information included in instructions for use ..... :		N/A
	Marking complied with tests and criteria of 7.1.2 and 7.1.3		N/A
G.3.2	CATEGORY AP ME EQUIPMENT prominently marked, with a green-coloured circle "AP" (symbol 22 in Table D.1) ..... :		N/A
	Marking is as large as possible for the particular case		N/A
	When above marking not possible, the relevant information included in instructions for use ..... :		N/A
	Marking complied with tests and criteria of 7.1.2 and 7.1.3		N/A
G.3.3	The marking placed on major part of ME EQUIPMENT for CATEGORY AP or APG parts		N/A
G.3.4	ACCOMPANYING DOCUMENTS contain an indication enabling the RESPONSIBLE ORGANIZATION to distinguish between CATEGORY AP and APG parts		N/A
G.3.5	Marking clearly indicates which parts are CATEGORY AP or APG when only certain ME EQUIPMENT parts are CATEGORY AP or APG		N/A
G.4	**Common requirements for CATEGORY AP and CATEGORY APG ME EQUIPMENT**		N/A
G.4.1	a) CREEPAGE and CLEARANCES are according to Table 12 for one MEANS OF PATIENT PROTECTION		N/A
	b) Connections protected against accidental disconnection		N/A
	c) CATEGORY AP and APG not provided with a DETACHABLE POWER SUPPLY CORD,		N/A
G.4.2	**Construction details**		N/A
	a) Opening of an ENCLOSURE protecting against penetration of gases or vapours into ME EQUIPMENT or its parts possible only with a TOOL		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	b) ENCLOSURE complies with ..... :		N/A
	– no openings on top covers of ENCLOSURE,		N/A
	– openings in side-covers prevented penetration of a solid cylindrical test rod		N/A
	– openings in base plates prevented penetration of a solid cylindrical test		N/A
	c) Short circuiting conductor(s) to a conductive part (when no explosive gasses) did not result in loss of integrity of the part, an unacceptable temperature, or any HAZARDOUS SITUATION		N/A
G.4.3	a) Electrostatic charges prevented on CATEGORY AP and APG ME EQUIPMENT by a combination of appropriate measures		N/A
	– Use of antistatic materials with a limited electrical resistance ..... :		N/A
	– Provision of electrically conductive paths from ME EQUIPMENT or its parts to a conductive floor, protective earth or potential equalization system, or via wheels to an antistatic floor		N/A
	b) Electrical resistance limits of aesthetic tubing, mattresses/ pads, castor tires & other antistatic material comply with ISO 2882 ..... :		N/A
G.4.4	Corona cannot be produced by components or parts of ME EQUIPMENT operating at more than 2000 V a.c. or 2400 V d.c. and not included in ENCLOSURES complying with G.5.4 or G.5.5		N/A
G.5	**Requirements and tests for CATEGORY AP ME EQUIPMENT, parts and components**		N/A
G.5.1	ME EQUIPMENT, its parts or components do not ignite FLAMMABLE AESTHETIC MIXTURES WITH AIR under NORMAL USE and CONDITIONS based on compliance with G.5.2 to G.5.5		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Alternatively, ME EQUIPMENT, its parts, and components complied with requirements of IEC 60079-0 for pressurized ENCLOSURES (IEC 60079-2); for sand-filled ENCLOSURES, IEC 60079-5; or for oil immersed equipment, IEC 60079-6; and with this standard excluding G.5.2 to G.5.5 ..... :		N/A
G.5.2	Temperature limits ..... :		N/A
G.5.3	ME EQUIPMENT, its parts, and components producing sparks in NORMAL USE and CONDITION complied with temperature requirements of G.5.2, and U_{max} and I_{max} occurring in their circuits, and complied as follows:		N/A
	Measured $U_{max} \leq U_{zR}$ with I_{zR} as in Fig. G.1 ..... :		N/A
	Measured $U_{max} \leq U_c$ with C_{max} as in Fig. G.2 ..... :		N/A
	Measured $I_{max} \leq I_{zR}$ with U_{zR} as in Fig G.1 ..... :		N/A
	Measured $I_{max} \leq I_{zL}$ with L_{max} and a $U_{max} \leq 24$ V as in Fig G.3 ..... :		N/A
	– Combinations of currents and corresponding voltages within the limitations IzR.UzR ≤ 50 W extrapolated from Fig G.1		N/A
	No extrapolation made for voltages above 42 V		N/A
	– Combinations of capacitances and corresponding voltages within limitations of $C/2U^2 \leq 1.2$ mJ extrapolated from Fig G.2		N/A
	No extrapolation made for voltages above 242V		N/A
	U_{max} determined using actual resistance R		N/A
	– Combinations of currents and corresponding inductances within limitations $L/2I^2 \leq 0.3$ mJ extrapolated from Fig G.3		N/A
	No extrapolation made for inductances larger than 900 mH		N/A
	– U_{max} was the highest supply voltage occurring in circuit under investigation with sparking contact open		N/A
	– I_{max} was the highest current flowing in circuit under investigation with sparking contact closed		N/A

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

	– C_{max} and L_{max} taken as values occurring at the component under investigation producing sparks		N/A
	– Peak value considered when a.c. supplied		N/A
	– An equivalent circuit calculated to determine equivalent max capacitance, inductance, and equivalent U_{max} and I_{max}, either as d.c. or a.c. peak values in case of a complicated circuit ..... :		N/A
	Temperature measurements made according to 11.1, and U_{max}, I_{max}, R, L_{max} , and C_{max} determined with application of Figs G.1-G.3 ..... :		N/A
	Alternatively, compliance was verified by examination of design data.....:		N/A
G.5.4	**External ventilation with internal overpressure**		N/A
	ME EQUIPMENT, its parts, and components enclosed in an ENCLOSURE with external ventilation by means of internal overpressure complied with the following requirements:		N/A
	a) FLAMMABLE AESTHETIC MIXTURES WITH AIR t removed by ventilation before EQUIPMENT energized,		N/A
	b) Overpressure inside ENCLOSURE was 75 Pa, min., in NORMAL CONDITION (Pa) ..... :		N/A
	Overpressure maintained at the site of potential ignition		N/A
	ME EQUIPMENT could be energized only after the required minimum overpressure was present long enough to ventilate the ENCLOSURE		N/A
	ME EQUIPMENT energized at will or repeatedly when overpressure was continuously present		N/A
	c) Ignition sources de-energized automatically when during operation overpressure dropped below 50 Pa (Pa) ..... :		N/A
	d) External surface of ENCLOSURE did not exceed 150 °C in 25 °C ..... :		N/A
G.5.5	**ENCLOSURES with restricted breathing**		N/A
	ME EQUIPMENT, its parts, and components enclosed in an ENCLOSURE with restricted breathing complied with the following:		N/A

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

	a) A FLAMMABLE AESTHETIC MIXTURE WITH AIR did not form inside ENCLOSURE with restricted breathing		N/A
	b) Gasket or sealing material used to maintain tightness complied with aging test B-b of IEC 60068-2-2, Clause 15, at 70 °C ± 2 °C and 96 h ..... :		N/A
	c) Gas-tightness of ENCLOSURE containing inlets for flexible cords maintained		N/A
	Cords are fitted with adequate anchorages to limit stresses as determined by test		N/A
	Overpressure not reduced below 200 Pa		N/A
	Tests waived when examination of ENCLOSURE indicated it is completely sealed or gas-tight without a doubt (100 % degree of certainty)		N/A
	Operating temperature of external surface of ENCLOSURE was ≤ 150 °C in 25 °C (°C) ..... :		N/A
	Steady state operating temperature of ENCLOSURE also measured (°C) ..... :		N/A
G.6	**CATEGORY APG ME EQUIPMENT, parts and components thereof**		N/A
G.6.1	ME EQUIPMENT, its parts, and components did not ignite FLAMMABLE AESTHETIC MIXTURE WITH OXYGEN OR NITROUS OXIDE under NORMAL USE and SINGLE FAULT CONDITION		N/A
	ME EQUIPMENT, its parts, and components not complying with G.6.3 subjected to a CONTINUOUS OPERATION test		N/A
G.6.2	Parts and components of CATEGORY APG ME EQUIPMENT operating in a FLAMMABLE AESTHETIC MIXTURE WITH OXYGEN OR NITROUS OXIDE supplied from a source isolated from earth by insulation equal to one MEANS OF PATIENT PROTECTION and from electrical parts by insulation twice the MEANS OF PATIENT PROTECTION ..... :		N/A
G.6.3	Test of G.6.1 waived when the following requirements were met in NORMAL USE and under NORMAL and SINGLE FAULT CONDITIONS ..... :		N/A

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

	a) no sparks produced and temperatures did not exceed 90 °C, or		N/A
	b) a temperature limit of 90 °C not exceeded, sparks produced in NORMAL USE, and SINGLE FAULT CONDITIONS, except U_{max} and I_{max} occurring in their circuits complied with requirements, taking C_{max} and L_{max} into consideration:		N/A
	Measured $U_{max} \leq U_{zR}$ with I_{zR} as in Fig. G.4 ..... :		N/A
	Measured $U_{max} \leq U_{zC}$ with C_{max} as in Fig. G.5 ..... :		N/A
	Measured $I_{max} \leq I_{zR}$ with U_{zR} as in Fig G.4 ..... :		N/A
	Measured $I_{max} \leq I_{zL}$ with L_{max} and a $U_{max} \leq 24$ V as in Fig G.6 ..... :		N/A
	– Extrapolation from Figs G.4, G.5, and G.6 was limited to areas indicated		N/A
	– U_{max} was the highest no-load voltage occurring in the circuit under investigation, taking into consideration mains voltage variations as in Cl. 4.10		N/A
	– I_{max} was the highest current flowing in the circuit under investigation, considering MAINS VOLTAGE variations as in Cl. 4.10		N/A
	– C_{max} and L_{max} are values occurring in relevant circuit		N/A
	– U_{max} additionally determined with actual resistance R when equivalent resistance R in Fig G.5 was less than 8000 Ω		N/A
	– Peak value considered when a.c. supplied		N/A
	– An equivalent circuit calculated to determine max capacitance, inductance, and U_{max} and I_{max}, either as d.c. or a.c. peak values in case of a complicated circuit ..... :		N/A
	– When energy produced in an inductance or capacitance in a circuit is limited by voltage or current-limiting devices, two independent components applied, to obtain the required limitation even when a first fault (short or open circuit) in one of these components		N/A
	- requirement not applied to transformers complying with this standard		N/A

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- requirement not applied to wire-wound current-limiting resistors provided with a protection against unwinding of the wire in case of rupture		N/A
	Compliance verified by examination of CATEGORY APG ME EQUIPMENT, parts, and components , or		N/A
	Temperature measurements made in accordance with 11.1 ..... :		N/A
	- or U_{max}, I_{max}, R, L_{max} and C_{max} determined together with application of Figs G.4-G.6 ..... :		N/A
	Alternatively, compliance verified by comparison with design data.....:		N/A
G.6.4	ME EQUIPMENT, its parts, and components heating a FLAMMABLE AESTHETIC MIXTURE WITH OXYGEN OR NITROUS OXIDE provided with a non-SELF-RESETTING THERMAL CUT-OUT and complied with 15.4.2.1 ..... :		N/A
	Current-carrying part of heating element is not in direct contact with FLAMMABLE AESTHETIC MIXTURE WITH OXYGEN OR NITROUS OXIDE		N/A
G.7	Test apparatus for flammable mixtures according to this Clause and Fig G.7		N/A

ANNEX L	**INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION**		Pass
L.1	BASIC, SUPPLEMENTARY, DOUBLE, and REINFORCED INSULATION in wound components without interleaved insulation complied with this Annex	Triple Wire	Pass
L.2	**Wire construction**		Pass
	Overlap of layers when wire is insulated with two or more spirally wrapped layers of tape is adequate to ensure continued overlap during manufacture of wound component		Pass
	Layers of spirally wrapped wire insulation are sufficiently secured to maintain the overlap		N/A
L.3	**Type Test**		Pass
	The wire subjected to tests of L.3.1 to L.3.4 at a temperature and a relative humidity specified	Evaluated as part of the component evaluation	Pass
	Temperature (°C)..... :		—

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

	Humidity (%) ..... :		—
L.3.1	Dielectric strength		Pass
	Dielectric strength test of Clause 8.8.3 for the appropriate type and number of MOP(s) conducted with no breakdown:	Evaluated as part of the component evaluation	Pass
	– 3000 V for BASIC and SUPPLEMENTARY INSULATION (V) ..... :		N/A
	– 6000 V for REINFORCED INSULATION (V) ..... :	Evaluated as part of the component evaluation	Pass
L.3.2	**Flexibility and adherence**		Pass
	Sample subjected to flexibility and adherence		Pass
	Sample examined per IEC 60851-3: 1997, cl. 5.1.1.4, followed by dielectric test of cl. 8.8.3, with no breakdown	Evaluated as part of the component evaluation	Pass
	Test voltage was at least the voltage in Tables 6 and 7 but not less than the following:	Evaluated as part of the component evaluation	Pass
	– 1500 V for BASIC and SUPPLEMENTARY INSULATION (V) ..... :		N/A
	– 3000 V for REINFORCED INSULATION (V) ..... :	Evaluated as part of the component evaluation	Pass
	Tension applied to wire during winding on mandrel calculated from the wire diameter equivalent to 118 MPa ± 11.8 MPa ..... :	Evaluated as part of the component evaluation	Pass
L.3.3	**Heat Shock**		Pass
	Sample subjected to heat shock test 9 of IEC 60851-6:1996, followed by dielectric strength test of clause 8.8.3		Pass
	Test voltage was at least the voltage in Tables 6 and 7, but not less than the following:		Pass
	– 1500 V for BASIC and SUPPLEMENTARY INSULATION (V) ..... :		N/A
	– 3000 V for REINFORCED INSULATION (V) ..... :	Evaluated as part of the component evaluation	Pass
	Oven temperature based on Table L.2 (°C) ..... :		—
	Mandrel diameter and tension applied as in clause L.3.2, (MPa; N/mm^2)..... :	Evaluated as part of the component evaluation	Pass
	Dielectric strength test conducted at room temperature after removal from the oven		Pass

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

L.3.4	**Retention of electric strength after bending**		Pass
	Five samples prepared as in L.3.2 subjected to dielectric strength and bending tests	Evaluated as part of the component evaluation	Pass
	Test voltage was at least the voltage in Tables 6 and 7, but not less than the following:		Pass
	– 1500 V for BASIC and SUPPLEMENTARY INSULATION (V) ..... :		N/A
	– 3000 V for REINFORCED INSULATION (V) ..... :	Evaluated as part of the component evaluation	Pass
	Test voltage applied between the shot and conductor		Pass
	Mandrel diameter and tension applied as in L.3.2, (MPa; N/mm^2) ..... :	Evaluated as part of the component evaluation	Pass
L.4	**Tests during manufacture**		Pass
L.4.1	Production line dielectric strength tests done by the manufacture per L.4.2 and L.4.3 .....:	Evaluated as part of the component evaluation	Pass
L.4.2	Test voltage for routine testing (100 % testing) is at least the voltage in Tables 6 and 7 but not less than the following:	Evaluated as part of the component evaluation	Pass
	– 1500 V r.m.s. or 2100 V peak for BASIC and SUPPLEMENTARY INSULATION (V) .....:		N/A
	– 3000 V r.m.s. or 4200 V peak for REINFORCED INSULATION (V).....:	Evaluated as part of the component evaluation	Pass
L.4.3	Sampling tests conducted using twisted pair samples (IEC 60851-5:1996, clause 4.4.1) .....:	Evaluated as part of the component evaluation	Pass
	Minimum breakdown test voltage at least twice the voltage in Tables 6 and 7 but not less than:		Pass
	– 3000 V r.m.s. or 4200 V peak for BASIC and SUPPLEMENTARY INSULATION ..... :		N/A
	– 6000 V r.m.s. or 8400 V peak for REINFORCED INSULATION ..... :	Evaluated as part of the component evaluation	Pass

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

4.2.2	**RM RESULTS TABLE: General requirements for RISK MANAGEMENT**			N/A
Clause of ISO 14971	**Document Ref. in RMF (Document No. paragraph/clause, version)**		**Result - Remarks**	**Verdict**
	General process	**Particular Medical Device**		
4.1		—		
4.2		—		
4.2		—		
4.2		—		
4.3	—			
4.4a	—			
4.4b	—			
4.4c	—			
4.4d	—			
4.4e	—			
4.4f	—			
4.5	—			
5.1	—			
5.2	—			
5.3	—			
5.4	—			
5.5	—			
6	—			
7.1	—			
7.2	—			
7.3	—			
7.4	—			
7.5a	—			
7.5b	—			
7.6	—			
8	—			
9	—			

Supplementary Information:

Document Ref should be with regards to the policy/procedure documents and documents containing Risk Management Process -specific output.

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

4.3	**TABLE: ESSENTIAL PERFORMANCE**	No Verdict Selected

List of ESSENTIAL PERFORMANCE functions	**MANUFACTURER'S document number reference or reference from this standard or collateral or particular standard(s)**	**Remarks**

Supplementary Information:

ESSENTIAL PERFORMANCE is performance, the absence or degradation of which, would result in an unacceptable risk.

4.11	**TABLE: Power Input**	Pass

Operating Conditions / Ratings	**Voltage (V)**	**Frequency (Hz)**	**Current (A)**	**Power (W or VA)**	**Power factor (cos φ)**
(MINT1065A1275C01) Load 12Vdc, 5.2A	--	--	--	VA	--
	90	50	1.36	122.82	0.59
	100	50	1.25	125.45	0.57
	120	50	1.09	131.07	0.54
	240	50	0.66	159.75	0.43
	264	50	0.62	164.45	0.42
	90	60	1.41	127.08	0.57
	100	60	1.29	129.27	0.55
	120	60	1.11	134.18	0.52
	240	60	0.66	158.98	0.43
	264	60	0.61	163.30	0.42

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

4.11	TABLE: Power Input					Pass
Operating Conditions / Ratings		**Voltage (V)**	**Frequency (Hz)**	**Current (A)**	**Power (W or VA)**	**Power factor (cos φ)**
(MINT1065D4875K01) Load 48Vdc, 1.35A		--	--	--	VA	--
		90	50	1.41	126.97	0.59
		100	50	1.28	128.75	0.57
		120	50	1.10	133.83	0.54
		240	50	0.67	162.78	0.44
		264	50	0.63	167.30	0.43
		90	60	1.41	127.73	0.58
		100	60	1.31	131.04	0.56
		120	60	1.14	137.00	0.53
		240	60	0.69	165.04	0.43
		264	60	0.63	167.90	0.42
(MINT1065D2475K01) Load 24Vdc, 2.7A		--	--	--	VA	--
		90	50	1.43	128.92	0.59
		100	50	1.31	131.22	0.58
		120	50	1.14	137.01	0.54
		240	50	0.69	166.74	0.44
		264	50	0.64	170.38	0.43
		90	60	1.46	132.30	0.58
		100	60	1.33	134.48	0.56
		120	60	1.15	139.43	0.53
		240	60	0.68	165.07	0.44
		264	60	0.63	168.85	0.43
Supplementary Information:						

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

5.9.2	TABLE: Determination of ACCESSIBLE parts		N/A
Location	**Determination method (NOTE1)**	**Comments**	

Supplementary information:

[1)] NOTE: The determination methods are: visual; rigid test finger; jointed test finger; test hook.

7.1.2	TABLE: Legibility of Marking		N/A
Markings tested	**Ambient Illuminance (lx)**	**Remarks**	
Outside Markings (Clause 7.2) .....:			
Inside Markings (Clause 7.3) .....:			
Controls & Instruments (Clause 7.4) .....:			
SAFETY SIGNS (Clause 7.5) .....:			
Symbols (Clause 7.6).....:			

Supplementary information:

Observer, with a visual acuity of 0 on the log Minimum Angle of Resolution (log MAR) scale or 6/6 (20/20) and is able to read N6 of the Jaeger test card in normal room lighting condition (~500lx), reads marking at ambient illuminance least favourable level in the range of 100 lx to 1,500 lx. The ME EQUIPMENT or its part was positioned so that the viewpoint was the intended position of the OPERATOR or if not defined at any point within the base of a cone subtended by an angle of 30° to the axis normal to the centre of the plane of the marking and at a distance of 1 m.

7.1.3	TABLE: Durability of marking test		N/A
Characteristics of the Marking Label tested:		**Remarks**	
Material of Marking Label .....:			
Ink/other printing material or process .....:			
Material (composition) of Warning Label .....:			
Ink/other printing material or process .....:			
Other.....:			
Marking Label Tested:		**Remarks**	

Supplementary information:

Marking rubbed by hand, first for 15 s with a cloth rag soaked with distilled water, then for 15 s with a cloth rag soaked with ethanol 96%, and then for 15 s with a cloth rag soaked with isopropyl alcohol.

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

7.1.3	TABLE: Durability of marking test	N/A
Characteristics of the Marking Label tested:		**Remarks**

8.4.2	TABLE: Working Voltage / Power Measurement					N/A
Test supply voltage/frequency (V/Hz)[1] .....:						240Vac, 60Hz
Location From/To	**Measured values**					**Remarks**
	Vrms	**Vpk or Vdc**	**Peak-to-peak ripple[2]**	**Power W/VA**	**Energy (J)**	
E - T1 Pri-Sec Pins - ALL (max of all measured)	264	504	888			--
Pin 2 to FL1 / B2	2.91	6.16	13.6			60 Hz
Pin 4 to FL1 / B2	210.0	36.0	456.0			60 Hz
Pin 6 to FL1 / B2	222.0	356.0	368.0			60 Hz
Pin 5 to FL1 / B2	264.0	504.0	888.0			60 Hz
Pin 2 to FL2 / A2	3.42	6.40	15.2			60 Hz
Pin 4 to FL2 / A2	209.0	36.0	428.0			60 Hz
Pin 6 to FL2 / A2	222.0	350.0	348.0			60 Hz
Pin 5 to FL2 / A2	248.0	466.0	752.0			60 Hz
H – Across CYS1	1.96	2.43	5.00			60 Hz
F - IC1 and IC2 Pri-Sec Pins - ALL (max of all measured)	216	350	347			60 Hz
IC1 4-1	213.7	348.3	345.5			60 Hz
IC1 4-2	213.9	347.8	345.3			60 Hz
IC1 3-1	215.6	349.8	346.8			60 Hz

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

8.4.2	**TABLE: Working Voltage / Power Measurement**					N/A
IC1 3-2	215.2	349.7	346.3			60 Hz
IC2 4-1	200.2	330.6	344.9			60 Hz
IC2 4-2	199.9	330.3	344.2			60 Hz
IC2 3-1	213.7	348.4	345.4			60 Hz
IC2 3-2	213.9	349.2	346.0			60 Hz

Supplementary Information:

1)The input supply voltage to the ME EQUIPMENT was the RATED voltage or the voltage within the RATED voltage range which results in the highest measured value. See clause 8.5.4.

2). If the d.c peak-to-peak ripple >10%, waveform considered as a.c. See clause 8.4.2.2

3) Voltage measurement of all conductive ACCESSIBLE PARTS of the SIP/SOP connection or separate power supply output connections to earth used a resistor of 10 kΩ + 500 Ω. See clause 8.4.2

MINT1065D2475K01

8.4.3	**TABLE: ME EQUIPMENT for connection to a power source by a plug** **- measurement of voltage or calculation of stored charge 1 s after disconnection of plug from mains supply**	N/A

Maximum allowable voltage (V).....:	60

Voltage measured (V)										
Voltage Measured Between:	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Plug pins 1 and 2										
Plug pin 1 and plug earth pin										
Plug pin 2 and plug earth pin										
Plug pin 1 and enclosure										
Plug pin 2 and enclosure										

Maximum allowable stored charge when measured voltage exceeded 60 v (µc) ..... :	45

Calculated stored charge (µc)										
Voltage Measured Between:	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Plug pins 1 and 2										
Plug pin 1 and plug earth pin										
Plug pin 2 and plug earth pin										
Plug pin 1 and enclosure										

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

Plug pin 2 and enclosure										

Supplementary information:

8.4.4	TABLE: Internal capacitive circuits – measurement of residual voltage or calculation of the stored charge in capacitive circuits (i.e., accessible capacitors or circuit parts) after de-energizing ME EQUIPMENT	N/A

Maximum allowable residual voltage (V) ..... :	60 V
Maximum allowable stored charge when residual voltage exceeded 60 V..... :	45 µC

Description of the capacitive circuit (i.e., accessible capacitor or circuit parts)	Measured residual voltage (V)	Calculated stored charge (µC)	Remarks

Supplementary information:

8.5.5.1a	TABLE: defibrillation-proof applied parts – measurement of hazardous electrical energies	N/A

Test Condition: Figs. 9 & 10	Measurement made on accessible part	Applied part with test voltage	Test voltage polarity	Measured voltage between Y1 and Y2 (mV)	Remarks

Supplementary information:

8.5.5.1b	TABLE: defibrillation-proof applied parts – verification of recovery time	N/A

Applied part with test voltage	Test voltage polarity	Recovery time from documents (s)	Measured recovery time (s)	Remarks

Supplementary information:

8.5.5.2	TABLE: DEFIBRILLATION-PROOF APPLIED PARTS or PATIENT CONNECTIONS of DEFIBRILLATION-PROOF APPLIED PARTS - Energy reduction test –measurement of Energy delivered to a 100 Ω load	N/A

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

Test Voltage applied to	Measured Energy E1 (mJ)	Measured Energy E2 (mJ)	Energy E1 as % of E2 (%)
PATIENT CONNECTION 1 or APPLIED PART with PATIENT CONNECTIONS 2, 3, and 4 of the same APPLIED PART connected to earth			
PATIENT CONNECTION 2 or APPLIED PART with PATIENT CONNECTIONS 1, 3, and 4 of the same APPLIED PART connected to earth			
PATIENT CONNECTION 3 or APPLIED PART with PATIENT CONNECTIONS 1, 2, and 4 of the same APPLIED PART connected to earth			
PATIENT CONNECTION 4 or APPLIED PART with PATIENT CONNECTIONS 1, 2, and 3 of the same APPLIED PART connected to earth			
Supplementary information: For compliance: E1 must at least 90% of E2 E1= Measured energy delivered to 100 Ω with ME Equipment connected; E2= Measured energy delivered to 100 Ω without ME equipment connected.			

8.6.4	**TABLE: Impedance and current-carrying capability of PROTECTIVE EARTH CONNECTIONS**				N/A
Type of ME EQUIPMENT & impedance measured between parts	**Test current (A) /Duration (s)**	**Voltage drop measured between parts (V)**	**Maximum calculated impedance (mΩ)**	**Maximum allowable impedance (mΩ)**	
Supplementary information: **PERMANENTLY INSTALLED ME EQUIPMENT, impedance between PROTECTIVE EARTH TERMINAL and a PROTECTIVELY EARTHED part - Limit 100 mΩME EQUIPMENT with an APPLIANCE INLET, impedance between earth pin in the APPLIANCE INLET and a PROTECTIVELY EARTHED part - Limit 100 mΩ** **ME EQUIPMENT with an APPLIANCE INLET, impedance between earth pin in the protective earth pin on the DETACHABLE POWER SUPPLY CORD and a PROTECTIVELY EARTHED part - Limit 200 mΩ** **ME EQUIPMENT with a non-DETACHABLE POWER SUPPLY CORD, impedance between the protective earth pin in the MAINS PLUG and a PROTECTIVELY EARTHED part - Limit 200 mΩ**					

8.7	**TABLE: leakage current**				Pass
Type of leakage current and test condition (including single faults)	**Supply voltage (V)**	**Supply frequency (Hz)**	**Measured max. value (µA)**	**Remarks**	

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

Fig. 13 - Earth Leakage (ER)	—	—	—	Maximum allowed values: 5 mA NC; 10 mA SFC
NC	264	60	294.8	
SFC	264	60	534.4	
Fig. 14 - Touch Current (TC)	—	—	—	Maximum allowed values: 100 µA NC; 500 µA SFC
NC	264	60	93.7	
SFC	264	60	49.1	
Fig. 15 - Patient Leakage Current (P)	—	—	—	Maximum allowed values: Type B or BF AP: 10 µA NC; 50 µA SFC (d.c. current); 100 µA NC; 500 µA SFC (a.c.) Type CF AP: 10 µA NC; 50 µA SFC (d.c. or a.c. current)
NC	264	60	0.0	
SFC	264	60	0.0	
Fig. 16 - Patient leakage current with mains on the F-type applied parts (PM)	—	—	—	Maximum allowed values: Type B: N/A Type BF AP: 5000 µA Type CF AP: 50 µA
SFC	264	60	0.0	
Fig. 17 - Patient leakage current with external voltage on Signal Input/Output part (SIP/SOP)	—	—	—	Maximum allowed values: Type B or BF AP: 10 µA NC; 50 µA SFC(d.c. current); 100 µA NC; 500 µA SFC (a.c.) ; Type CF AP: 10 µA NC; 50 µA SFC (d.c. or a.c. current)
NC	264	60	0.0	
SFC	264	60	0.0	
Fig. 18 - Patient leakage current with external voltage on metal Accessible Part that is not Protectively Earthed	—	—	—	Maximum allowed values: Type B or BF AP: 500 µA Type CF: N/A
SFC	264	60	0.0	
Fig. 19 – Patient Auxiliary Current	—	—	—	Maximum allowed values: Type B or BF AP: 10 µA NC; 50 µA SFC (d.c. current); 100 µA NC; 500 µA SFC (a.c.) ; Type CF AP: 10 µA NC;50 µA SFC (d.c. or a.c. current)
NC	264	60	0.0	
SFC	264	60	0.0	

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

Fig. 15 and 20 – Total Patient Leakage Current with all AP of same type connected together	—	—	—	Maximum allowed values: Type B or BF AP: 50 µA NC; 100µA SFC (d.c. current); 500 µA NC; 1000 µA SFC (a.c.); Type CF AP: 50 µA NC; 100 µA SFC (d.c. or a.c. current)
NC	264	60	0.0	
SFC	264	60	0.0	
Fig. 17 and 20 – Total Patient Leakage Current with all AP of same type connected together with external voltage on SIP/SOP	—	—	—	Maximum allowed values: Type B or BF AP: 50 µA NC; 100µA SFC (d.c. current); 500 µA NC;1000 µA SFC (a.c.); Type CF AP: 50 µA NC; 100 µA SFC (d.c. or a.c. current)
NC	264	60	0.0	
SFC	264	60	0.0	
Fig. 16 and 20 – Total Patient Leakage Current with all AP of same type connected together with external voltage on F-type AP	—	—	—	Maximum allowed values: Type B: NA Type BF: 5000 µA Type CF: 100 µA
SFC	264	60	0.0	
Fig. 18 and 20 – Total Patient Leakage Current with all AP of same type connected together with external voltage on metal Accessible Part not Protectively Earthed	—	—	—	Maximum allowed values: Type B & BF: 1000 µA Type CF: N/A
SFC	264	60	0.0	
Function Earth Conductor Leakage Current (FECLC)	—	—	—	Maximum allowed values: 5 mA NC; 10 mA SFC

Supplementary information:

Note 1: For EARTH LEAKAGE CURRENT see 8.7.3 d) and 8.7.4.5;

Note 2: For TOUCH CURRENT see 8.7.3 c) and 8.7.4.6;

Note 3: For PATIENT LEAKAGE CURRENT SEE 8.7.3.b) and 8.7.4.7

Note 4: Total PATIENT LEAKAGE CURRENT values are only relative to equipment with multiple APPLIED PARTS of the same type. See 8.7.4.7 h). The individual APPLIED PARTS complied with the PATIENT LEAKAGE CURRENT values.

Note 5: In addition to conditions indicated in the Table, tests conducted at operating temperature and after humidity preconditioning of 5.7, EQUIPMENT energized in stand-by condition and fully operating, max rated supply frequency, at 110 % of the max RATED MAINS VOLTAGE, and after relevant tests of Clause 11.6 (i.e., overflow, spillage, leakage, ingress of water and particulate matter, cleaning & disinfection, & sterilization).

ER - Earth leakage current	A - After humidity conditioning
TC – Touch current	B - Before humidity conditioning
P - Patient leakage current	1 - Switch closed or set to normal polarity

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

PA – Patient auxiliary current
TP – Total Patient current
PM - Patient leakage current with mains on the applied parts
MD - Measuring device

0 - Switch open or set to reversed polarity
NC - Normal condition
SFC - Single fault condition

8.8.3	**TABLE: Dielectric strength test of solid insulating materials with safety function – MEANS OF OPERATOR PROTECTION (MOOP) / MEANS OF PATIENT PROTECTION (MOPP)**	Pass

Insulation under test (area from insulation diagram)	Insulation Type (1 or 2 MOOP/MOPP)	Reference Voltage		A.C. test voltages in V r.m.s[1)]	Dielectric breakdown after 1 minute Yes/No[2)]
		PEAK WORKING VOLTAGE (U) V_{peak}	PEAK WORKING VOLTAGE (U) V d.c.		
B - Primary to Ground	1 MOOP	496Vpk		1740Vac	No
E, F, G, (C+D) – Primary to Secondary	2 MOOP	636 or See Note ***		3000Vac required (Tested at 4799 Vac)	No
H – Secondary to Ground	1 MOOP		48Vdc****	Not Required (Tested at 500 Vac)	No

Supplementary information:

[1] Alternatively, per the Table (i.e., __dc), a d.c. test voltage equal to the peak value of the a.c. test voltage used.

[2] A) Immediately after humidity treatment of 5.7, ME EQUIPMENT de-energized, B) after required sterilization PROCEDURE, ME EQUIPMENT de-energized, C) after reaching steady state operating temperature as during heating test of 11.1.1, and D) after relevant tests of 11.6 (i.e., overflow, spillage, leakage, ingress of water, cleaning, disinfection, and sterilization).

***NOTE: Working Voltage Across T1 did not exceed 636Vpk

****Note: Although secondary is less than 48Vdc, using 48Vdc Hipot value will represent models at 48Vdc output

8.8.4.1	**TABLE: Resistance to heat - Ball pressure test of thermoplastic parts**		N/A
	Allowed impression diameter (mm) .....:	≤ 2 mm	—
	Force (N).....:	20	—

Part/material	Test temperature (°C)	Impression diameter (mm)
Enclosure/External insulating parts		
Insulating material supporting un-insulated Mains Parts		

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

Supplementary information:

resistance to heat for insulation of thermoplastic materials that used as SUPPLEMENTARY INSULATION or REINFORCED INSULATION established by performing the ball-pressure test in at a temperature 25 °C higher than the temperature of the insulation measured during the tests of 13.2.2 to 13.2.13 (inclusive).

8.9.2	**TABLE: Short circuiting of each single one of the CREEPAGE DISTANCES and AIR CLEARANCES for insulation in the MAINS PART between parts of opposite polarity in lieu of complying with the required measurements in 8.9.4**	N/A

Specific areas of circuits short-circuited and test conditions	**Test in lieu of CREEPAGE DISTANCE or AIR CLEARANCE[1)]**	**HAZARDOUS SITUATION observed (i.e., fire hazard, shock hazard, explosion, discharge of parts, etc.)? Yes/No**	**Remarks**

Supplementary information:

[1)] Note: AC - AIR CLEARANCE CD - CREEPAGE DISTANCE

8.9.3.2	**Table: Thermal cycling tests on one sample of insulating compound forming solid insulation between conductive parts**	N/A

Part Test	**8.9.3.4 - Test duration and temperature for 10 cycles after which the sample was subjected to Humidity Preconditioning per Cl. 5.7**	**Dielectric test voltage**	**Dielectric strength test after humidity preconditioning per cl. 5.7 except for 48 h only, Breakdown: Yes/No**	**Crack or voids in the insulating compound: Yes/No**
	68 h at T1 ± 2 °C = ___°C 1)			
	1 h at 25 °C ± 2 °C			
	2 h at 0 °C ± 2 °C			
	1 or more h at 25 °C ± 2 °C			

Supplementary information:

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

8.9.3.2	**Table: Thermal cycling tests on one sample of insulating compound forming solid insulation between conductive parts**			N/A
Part Test	**8.9.3.4 - Test duration and temperature for 10 cycles after which the sample was subjected to Humidity Preconditioning per Cl. 5.7**	**Dielectric test voltage**	**Dielectric strength test after humidity preconditioning per cl. 5.7 except for 48 h only, Breakdown: Yes/No**	**Crack or voids in the insulating compound: Yes/No**
[1)] T1 = 10 °C above the maximum temperature of relevant part determined per 11.1.1, or 85 °C, the higher of the two. 10 °C not added to T1 when temperature measured by an embedded thermocouple. Used gradual transition from one temperature to another.				

8.9.3.3	**Table: Thermal cycling tests on one sample of cemented joint with other insulating parts (see 8.9.3.3)**			N/A
Part tested	**Sample**	**Each test duration and temperature**	**Dielectric test voltage**	**Dielectric strength test Breakdown: Yes/No**
	1	10 Cycles conducted of the following:		
		1 - 68 h at T1 ± 2 °C = ___°C1		
		2 - 1 h at 25 °C ± 2 °C		
		3 - 2 h at 0 °C ± 2 °C		
		4 - 1 or more h at 25 °C ± 2 °C		
	2	Humidity Conditioning per 5.7		
	3	Humidity Conditioning per 5.7		
Supplementary information: [1)] T1 = 10 °C above the maximum temperature of relevant part determined per 11.1.1, or 85 °C, the higher of the two. 10 °C not added to T1 when temperature measured by an embedded thermocouple. Used gradual transition from one temperature to another.				

8.10	**TABLE: Critical components information**	Pass

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

Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity[1)]
1.Connector, Input (CON1)	TYCO ELECTRONICS CORP	MTA156 Type	Min. 7A, 600V	UL 1977	UL (E28476), --
2.Varistor (VR1)	Joyin Co Ltd	10S471K series	300VAC, Min. 85 degree C, Min. V-1	UL 1449	UL (E325508) , VDE (40004658)
3.Transistor (QP1) (primary)	Interchangeable	--	Min. 10A, 700V	--	--, --
4.Fuse (F1, F2)	Suzhou Walter Electronic Co. Ltd.	2010	T 2.5 A, 250 V	UL 248	UL (E56092) , VDE (40018781)
5.Capacitor, (CX1)	CARLI ELECTRONICS CO LTD	MPX Series	Min. 250 V, Max. 0.47 µF	UL 60384-14	UL (E120045) , VDE (40008520)
5a. Capacitor, (CX1)	XIAMEN FARATRONIC CO LTD	MKP62 or C42	Min. 250 V, Max. 0.47 µF	UL 60384-14	UL (E186600) , VDE (40000358)
5b. Capacitor, (CX1)	MERITEK ELECTRONICS CORP	MEX	Min. 250 V, Max. 0.47 µF	UL 60384-14	UL (E197475) , VDE (40044994)
5c. Capacitor, (CX1)	DEC ELECTRONIC	MPX	Min. 250 V, Max. 0.47 µF	UL 60384-14	UL (E147776) , VDE (40018798)
6.Capacitor, X2 type (CX1) - for models: MINT1065DX75 YZ series	CARLI ELECTRONICS CO LTD	MPX Series	Min. 250 V, Max. 0.68 µF	UL 60384-14	UL (E120045) , VDE (40008520)
6a. Capacitor, X2 type (CX1) - for models: MINT1065DX75 YZ series alternate	XIAMEN FARATRONIC CO LTD	MKP62 or C42	Min. 250 V, Max. 0.68 µF	UL 60384-14	UL (E186600) , VDE (40000358)
6b. Capacitor, X2 type (CX1) - for models:	MERITEK ELECTRONICS CORP	MEX	Min. 250 V, Max. 0.68 µF	UL 60384-14	UL (E197475) , VDE (40044994)

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

MINT1065DX75 YZ series alternate					
6c. Capacitor, X2 type (CX1) - for models: MINT1065DX75 YZ series alternate	DEC ELECTRONIC	MPX	Min. 250V, Max. 0.68 µF	UL 60384-14	UL (E147776), VDE (40018798)
7.Capacitor, (CYP4 and CYP5) for models: MINT1065AX75 CZ series	Success Electronics Co., Ltd.	SF Series	Min. 250 V, Max. 4700 pF	UL 60384-14	UL(E114280), VDE (40016665 / 40037217)
7a.Capacitor, (CYP4 and CYP5) for models: MINT1065AX75 CZ series	Success Electronics Co., Ltd.	SE Series	Min. 250 V, Max. 4700 pF	UL 60384-14	UL(E114280), VDE (122995 / 40037218)
7b.Capacitor, (CYP4 and CYP5) for models: MINT1065AX75 CZ series	JYH CHUNG ELECTRONICS CO LTD	JD Series	Min. 250 V, Max. 4700 pF	UL 60384-14	UL (E187963), VDE (137027)
7c.Capacitor, (CYP4 and CYP5) for models: MINT1065AX75 CZ series	JYH HSU (JEC) ELECTRONICS LTD	JD Series	Min. 250 V, Max. 4700 pF	UL 60384-14	UL (E356696), VDE (40038642)
7d.Capacitor, (CYP4 and CYP5) for models: MINT1065AX75 CZ series	JYH CHUNG (JEC) ELECTRONICS CO LTD (E499438)	JD Series	Min. 250 V, Max. 4700 pF	UL 60384-14	UL (E499438), VDE (40047775)
7e.Capacitor, (CYP4 and CYP5)	MERITEK ELECTRONICS CORP.	MCH	Min. 250 V, Max. 4700 pF	UL 60384-14	UL (E197475), VDE (40040309)

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

for models: MINT1065AX75 CZ series					
8.Capacitor, (CYP4 and CYP5) for model: MINT1065D1375 C02	Success Electronics Co., Ltd.	SE Series	Min. 250 V, Max. 1500 pF	UL 60384-14	UL(E114280) , VDE (122995 / 40037218)
8a. Capacitor, (CYP4 and CYP5) for model: MINT1065D1375 C02 alternate	JYH CHUNG ELECTRONICS CO LTD	JD Series	Min. 250 V, Max. 1500 pF	UL 60384-14	UL (E187963) , VDE (137027)
8b. Capacitor, (CYP4 and CYP5) for model: MINT1065D1375 C02 alternate	JYH HSU (JEC) ELECTRONICS LTD	JD Series	Min. 250 V, Max. 1500 pF	UL 60384-14	UL (E356696) , VDE (40038642)
8c. Capacitor, (CYP4 and CYP5) for model: MINT1065D1375 C02 alternate	JYH CHUNG (JEC) ELECTRONICS CO LTD (E499438)	JD Series	Min. 250 V, Max. 1500 pF	UL 60384-14	UL (E499438) , VDE (40047775)
8d. Capacitor, (CYP4 and CYP5) for model: MINT1065D1375 C02 alternate	MERITEK ELECTRONICS CORP.	MCH	Min. 250 V, Max. 1500 pF	UL 60384-14	UL (E197475) , VDE (40040309)
8e. Capacitor, (CYP4 and CYP5) for model:	Success Electronics Co., Ltd.	SF Series	Min. 250 V, Max. 1500 pF	UL 60384-14	UL(E114280) , VDE (40016665 / 40037217)

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

MINT1065D1375C02 alternate					
9.Capacitor, (CYP4 and CYP5) For models: MINT1065DX75YZ series except for model MINT1065D1375C02	Success Electronics Co., Ltd.	SE Series	Min. 250 V, Max. 2200 pF	UL 60384-14	UL(E114280) , VDE (122995 / 40037218)
9a. Capacitor, (CYP4 and CYP5) For models: MINT1065DX75YZ series except for model MINT1065D1375C02 alternate	JYH CHUNG ELECTRONICS CO LTD	JD Series	Min. 250 V, Max. 2200 pF	UL 60384-14	UL (E187963) , VDE (137027)
9b. Capacitor, (CYP4 and 5) For models: MINT1065DX75YZ series except for model MINT1065D1375C02 alternate	JYH HSU (JEC) ELECTRONICS LTD	JD Series	Min. 250 V, Max. 2200 pF	UL 60384-14	UL (E356696) , VDE (40038642)
9c. Capacitor, (CYP4 and 5) For models: MINT1065DX75YZ series except for model MINT1065D1375C02 alternate	JYH CHUNG (JEC) ELECTRONICS CO LTD (E499438)	JD Series	Min. 250 V, Max. 2200 pF	UL 60384-14	UL (E499438) , VDE (40047775)
9d. Capacitor, (CYP4 and 5)	Success Electronics Co., Ltd.	SF Series	Min. 250 V, Max. 2200 pF	UL 60384-14	UL(E114280)

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

For models: MINT1065DX75 YZ series except for model MINT1065D1375 C02 alternate					, VDE (40016665 / 40037217)
10.Capacitor, (CYP3). For models: MINT1065AX75 CZ series	Success Electronics Co., Ltd.	SF Series	Min. 250 V, Max. 2200 pF	UL 60384-14	UL(E114280) , VDE (40016665 / 40037217)
10a.Capacitor, (CYP3). For models: MINT1065AX75 CZ series alternate	Success Electronics Co., Ltd.	SE Series	Min. 250 V, Max. 2200 pF	UL 60384-14	UL(E114280) , VDE (122995 / 40037218)
10b.Capacitor, (CYP3). For models: MINT1065AX75 CZ series alternate	JYH CHUNG ELECTRONICS CO LTD	JD Series	Min. 250 V, Max. 2200 pF	UL 60384-14	UL (E187963) , VDE (137027)
10c.Capacitor, (CYP3). For models: MINT1065AX75 CZ series alternate	JYH HSU (JEC) ELECTRONICS LTD	JD Series	Min. 250 V, Max. 2200 pF	UL 60384-14	UL (E356696) , VDE (40038642)
10d.Capacitor, (CYP3). For models: MINT1065AX75 CZ series alternate	JYH CHUNG (JEC) ELECTRONICS CO LTD (E499438)	JD Series	Min. 250 V, Max. 2200 pF	UL 60384-14	UL (E499438) , VDE (40047775)
11.Capacitor, (CYP3). For models: MINT1065DX75 KZ (Class I)	Success Electronics Co., Ltd.	SE Series	Min. 250 V, Max. 2200 pF	UL 60384-14	UL(E114280) , VDE (122995 / 40037218)

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

11a. Capacitor, (CYP3). For models: MINT1065DX75 KZ (Class I) alternate	JYH CHUNG ELECTRONICS CO LTD	JD Series	Min. 250 V, Max. 2200 pF	UL 60384-14	UL (E187963) , VDE (137027)
11b. Capacitor, (CYP3). For models: MINT1065DX75 KZ (Class I) alternate	JYH HSU (JEC) ELECTRONICS LTD	JD Series	Min. 250 V, Max. 2200 pF	UL 60384-14	UL (E356696) , VDE (40038642)
11c. Capacitor, (CYP3). For models: MINT1065DX75 KZ (Class I) alternate	JYH CHUNG (JEC) ELECTRONICS CO LTD (E499438)	JD Series	Min. 250 V, Max. 2200 pF	UL 60384-14	UL (E499438) , VDE (40047775)
11d. Capacitor, (CYP3). For models: MINT1065DX75 KZ (Class I) alternate	Success Electronics Co., Ltd.	SF Series	Min. 250 V, Max. 2200 pF	UL 60384-14	UL(E114280) , VDE (40016665 / 40037217)
12.Capacitor, (CYP1 and CYP2). For models: MINT1065DX75 KZ (Class I)	Success Electronics Co., Ltd.	SB Series	Min. 250 V, Max. 470 pF	UL 60384-14	UL (E114280) , VDE (40016621 / 40037213)
12a. Capacitor, (CYP1 and CYP2). For models: MINT1065DX75 KZ (Class I) alternate	JYH CHUNG ELECTRONICS CO LTD	JD Series	Min. 250 V, Max. 470 pF	UL 60384-14	UL (E187963) , VDE (137027)
12b. Capacitor, (CYP1 and CYP2). For models:	JYH HSU (JEC) ELECTRONICS LTD	JD Series	Min. 250 V, Max. 470 pF	UL 60384-14	UL (E356696) , VDE (40038642)

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

MINT1065DX75 KZ (Class I) alternate					
12c. Capacitor, type (CYP1 and CYP2). For models: MINT1065DX75 KZ (Class I) alternate	JYH CHUNG (JEC) ELECTRONICS CO LTD (E499438)	JD Series	Min. 250 V, Max. 470 pF	UL 60384-14	UL (E499438) , VDE (40047775)
13.Capacitor, (CYP1 and CYP2). For models: MINT1065AX75 CZ series	Success Electronics Co., Ltd.	SB Series	Min. 250 V, Max. 2200 pF	UL 60384-14	UL (E114280) , VDE (40016621 / 40037213)
13a.Capacitor, (CYP1 and CYP2). For models: MINT1065AX75 CZ series alternate	JYH CHUNG ELECTRONICS CO LTD	JD Series	Min. 250 V, Max. 2200 pF	UL 60384-14	UL (E187963) 7027), VDE (137027)
13b.Capacitor, (CYP1 and CYP2). For models: MINT1065AX75 CZ series alternate	JYH HSU (JEC) ELECTRONICS LTD	JD Series	Min. 250 V, Max. 2200 pF	UL 60384-14	UL (E356696) , VDE (40038642)
13c.Capacitor, (CYP1 and CYP2). For models: MINT1065AX75 CZ series alternate	JYH CHUNG (JEC) ELECTRONICS CO LTD (E499438)	JD Series	Min. 250 V, Max. 2200 pF	UL 60384-14	UL (E499438) , VDE (40047775)
14.Capacitor, (CYP1 and CYP2). For model MINT1065D1875 C02 only	Success Electronics Co., Ltd.	SB Series	Min. 250 V, Max. 4700 pF	UL 60384-14	UL (E114280) , VDE (40016621 / 40037213)

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

(optional)					
14a.Capacitor, (CYP1 and CYP2). For model MINT1065D1875C02 only (optional) alternate	JYH CHUNG ELECTRONICS CO LTD	JD Series	Min. 250 V, Max. 4700 pF	UL 60384-14	UL (E187963), VDE (137027)
14b.Capacitor, (CYP1 and CYP2). For model MINT1065D1875C02 only (optional) alternate	JYH HSU (JEC) ELECTRONICS LTD	JD Series	Min. 250 V, Max. 4700 pF	UL 60384-14	UL (E356696), VDE (40038642)
14c.Capacitor, (CYP1 and CYP2). For model MINT1065D1875C02 only (optional) alternate	JYH CHUNG (JEC) ELECTRONICS CO LTD (E499438)	JD Series	Min. 250 V, Max. 4700 pF	UL 60384-14	UL (E499438), VDE (40047775)
15.Bleeder Resistor (RP4, RP5)	Interchangeable	--	Rated Max. 470 K ohm	--	--, --
15a.Bleeder Resistor (RP4, RP5) alternate	Interchangeable	--	Rated Max. 390 K ohm.	--	--, --
16.Bridge Rectifier (BD1)	Vishay	GBU6J	Min. 6 A, Min. 600 V	UL1012	UL (E54214), --
16a.Bridge Rectifier (BD1) - alternate	HY ECLECTRONIC (CAYMAN) LIMITED	GBU606	Min. 6 A, Min. 600 V	UL 1557	UL (E217139), --
16b.Bridge Rectifier (BD1) - alternate	PAN JIT	GBU6J	Min. 6 A, Min. 600 V	UL 1557	UL (E228882), --

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

16c.Bridge Rectifier (BD1) - alternate	Interchangeable	--	Min. 6 A, Min. 600 V	UL 1557	UL , --
17.Thermistor (TH1)	Thinking Electronics	SCK10054LI	NTC, 5 Ohms, 4 A	UL 1434	UL (E138827), --
18.Capacitor, Electrolytic (CE1)	Interchangeable	--	Max. 150uF, Min. 400 V, Min. 105°C	--	Evaluated as part of this investigation., Evaluated as part of this investigation.
19.Optical Isolator (IC1 and IC2)	COSMO ELECTRONICS CORP	K1010	5000Vac isolation, Min. 115 degree C Creepage and clearance distance: ≥8.0 mm, DTI≥0.4mm	UL 1577	UL (E169586), VDE (101347) / DIN EN IEC 60747-5-5 (VDE 0884-5):2021-10; EN IEC 60747-5-5:2020 / EC 60747-5-5:2020
20.Heatsink (HS1) – Considered as PRIMARY	--	--	Dimensions 59.5x35x21.6 mm by 1.95 mm thick	--	Evaluated as part of this investigation., Evaluated as part of this investigation.
21.Heatsink (HS2) – CONSIDERED AS SECONDARY	--	--	Dimensions 49.5x15.75x21.6 mm by 1.95 mm Thick	--	Evaluated as part of this investigation., Evaluated as part of this investigation.
22.Choke, common mode (LF1)	--	--	Open type with ferrite toroid overall 16 x 12 x 8 mm thick., Coils: UEW type 2 x 70T x 0.5 mm, material rated minimum 130°C.	--	Evaluated as part of this investigation., Evaluated as part of this investigation.
23.Transformer, Drive (T1).	Weihai Dongxing Electronics Co LTD	12V and 13V – 3020204 15V - 3020216	Class B (130 C). See also	--	Evaluated as part of this investigation.,

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

Insulation system described below		18V - 3020213 24V - 3020210 48V - 3020211	constructional diagram		Evaluated as part of this investigation.
Insulation System (T1)	Weihai Dongxing Electronics Co LTD	FIS-B1 (Table II)	Class B (130°C)	UL 1446	UL
Double and Triple insulated wire	Furukawa Electric	TEX-E	Part of Insulation system	UL 2353	UL
Printed Wiring Board	Interchangeable	--	Min. V-1, Min. 130°C	UL 796	UL
Supplementary information: [1)] Provided evidence ensures the agreed level of compliance. See OD-CB2039. License available upon request					

8.10 b	**TABLE: List of identified components with HIGH INTEGRITY CHARACTERISTICS**				
Object / part No.	**Manufacturer/ trademark**	**Type / model**	**Technical data**	**Standard**	**Mark(s) of conformity[1)]**
Supplementary information: [1)] Provided evidence ensures the agreed level of compliance. See OD-CB2039. License available upon request					

8.11.3.5	**TABLE: CORD ANCHORAGES**			N/A
Cord under test	**Mass of equipment (kg)**	**Pull (N)**	**Torque Nm)**	**Remarks**
Supplementary information:				

8.11.3.6	**TABLE: Cord guard**		N/A
Cord under test	**Test mass**	**Measured curvature**	**Remarks**
Supplementary information:			

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

9.2.2.2	TABLE: Measurement of gap "a" according to Table 20 (ISO 13852: 1996)				N/A
Part of body	**Allowable adult gap[1)], mm**	**Measured adult gap, mm**	**Allowable children gap[1)], mm**	**Measured children gap, mm**	
Body	**> 500**		**> 500**		
Head	**> 300 or < 120**		**> 300 or < 60**		
Leg	**> 180**		**> 180**		
Foot	**> 120 or < 35**		**> 120 or < 25**		
Toes	**> 50**		**> 50**		
Arm	**> 120**		**> 120**		
Hand, wrist, fist	**> 100**		**> 100**		
Finger	**> 25 or < 8**		**> 25 or < 4**		
Supplementary information: [1)] In general, gaps for adults used, except when the device is specifically designed for use with children, values for children applied.					

9.2.3.2	TABLE: Over-travel End Stop Test	N/A
ME EQUIPMENT end stop	**Test Condition (cycles, load, speed)**	**Remarks**
Supplementary information:		

9.4.2.1	TABLE: Instability—overbalance in transport position	N/A
ME EQUIPMENT preparation	**Test Condition (transport position)**	**Remarks**
Supplementary information:		

9.4.2.2	TABLE: Instability—overbalance excluding transport position	N/A
ME EQUIPMENT preparation	**Test Condition (excluding transport position) Test either 5 ° incline and verify Warning marking or 10 ° incline)**	**Remarks**
Supplementary information:		

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

9.4.2.3	TABLE: Instability—overbalance from horizontal and vertical forces	N/A
ME EQUIPMENT preparation	**Test Condition (force used, direction of force, weight of equipment, location of force)**	**Remarks**
Supplementary information:		

9.4.2.4.2	TABLE: Castors and wheels – Force for propulsion	N/A
ME EQUIPMENT preparation	**Test Condition (force location and height)**	**Remarks**
Supplementary information:		

9.4.2.4.3	TABLE: Castors and wheels – Movement over a threshold	N/A
ME EQUIPMENT preparation	**Test Condition (speed of movement)**	**Remarks**
Supplementary information:		

9.4.3.1	TABLE: Instability from unwanted lateral movement (including sliding) in transport position	N/A
ME EQUIPMENT Preparation	**Test Condition (transport position, working load, locking device(s), caster position)**	**Remarks**
Supplementary information:		

9.4.3.2	TABLE: Instability from unwanted lateral movement (including sliding) excluding transport position	N/A
ME EQUIPMENT Preparation	**Test Condition (working load, locking device(s), caster position, force, force location, force direction)**	**Remarks**

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

Supplementary information:		

9.4.4	TABLE: Grips and other handling devices	N/A
Clause and Name of Test	**Test Condition**	**Remarks**
Supplementary information:		

9.7.5	TABLE: Pressure vessels				N/A
Hydraulic, Pneumatic or Suitable Media and Test Pressure	**Vessel Burst**	**Permanent Deformation**	**Leaks**	**Vessel fluid substance**	**Remarks**
Supplementary Information:					

9.8.3.2	TABLE: PATIENT support/suspension system - Static forces			N/A
ME EQUIPMENT part or area	Position	**Load**	**Area**	**Remarks**
Supplementary Information:				

9.8.3.3	TABLE: Support/Suspension System – Dynamic forces due to loading from persons			N/A
ME EQUIPMENT part or area	**Position**	**Safe Working Load**	**Area**	**Remarks**
Supplementary Information:				

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

10.1.1	**TABLE: Measurement of X - radiation**		N/A
Maximum allowable radiation pA/kg (µSv/h) (mR/h)		**36 (5 µSv/h) (0.5 mR/h)**	
Surface area under test Surface no./ Description[1)]		**Measured Radiation, pA/kg (µSv/h) (mR/h)**	Remarks
1/ /			
2/ /			
3/ /			
4/ /			
5/ /			
6/ /			
7/ /			
8/ /			
9/ /			
10/ /			

Supplementary information:

[1)] Measurements made at 5 cm from any surface to which OPERATOR (other than SERVICE PERSONNEL) can gain access without a TOOL, is deliberately provided with means of access, or is instructed to enter regardless of whether or not a TOOL is needed to gain access

11.1.1	**TABLE: Excessive temperatures in ME EQUIPMENT**					Pass
Model No. .....:	--	See Below	--	--	--	
Test ambient (°C) .....:	--	See Below	--	--	--	
Test supply voltage/frequency (V/Hz)[4)] ..:	--	See Below	--	--	--	

Model No.	**Thermo-couple No.**	**Thermocouple location[3)]**	**Max allowable temperature[1)] from Table 22, 23 or 24 or RM file for AP[5)] (°C)**	**Max measured temperature[2)], (°C)**	**Remarks**
1	--	--	--	--	90Vac, 60Hz
		Ambient	40	40.1	
		F1 body	100	49.0	
		T1 Pri Wind	120	68.6	
		T1 Sec wind	120	69.1	

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

		T1 Core	120	60.1	
		CX1	100	57.6	
		LF1	130	58.7	
		CYP1	125	47.5	
		CYP4	125	60.5	
		QP1	125	70.3	
		QS1	125	57.9	
		CE1	105	55.9	
		CE6	105	55.3	
		PWB under TH1	130	73.9	
		PWB under T1	130	66.6	
		PWB under LF1	130	55.8	
		PWB near QP1	130	66.3	
		PWB near QS1	130	49.8	
		IC1 body	125	51.3	
		IC2 body	125	47.5	
1	--	--	--	--	120Vac, 60Hz
		Ambient	40	40.3	
		F1 body	100	46.6	
		T1 Pri Wind	120	65.3	
		T1 Sec wind	120	65.9	
		T1 Core	120	57.6	
		CX1	100	53	
		LF1	130	52.9	
		CYP1	125	45.4	
		CYP4	125	56.1	
		QP1	125	61.4	
		QS1	125	56.0	
		CE1	105	52.3	
		CE6	105	54.1	
		PWB under TH1	130	67.0	
		PWB under T1	130	62.9	

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

		PWB under LF1	130	51.5	
		PWB near QP1	130	58.5	
		PWB near QS1	130	49.1	
		IC1 body	125	49.9	
		IC2 body	125	46.5	
1	--	--	--	--	264Vac, 60Hz
		Ambient	40	40.1	
		F1 body	100	44.2	
		T1 Pri Wind	120	64.1	
		T1 Sec wind	120	65.1	
		T1 Core	120	57.2	
		CX1	100	48.0	
		LF1	130	46.2	
		CYP1	125	43.8	
		CYP4	125	55.2	
		QP1	125	59.5	
		QS1	125	56.3	
		CE1	105	49.2	
		CE6	105	54.0	
		PWB under TH1	130	55.0	
		PWB under T1	130	61.9	
		PWB under LF1	130	47.0	
		PWB near QP1	130	56.8	
		PWB near QS1	130	49.8	
		IC1 body	125	49.9	
		IC2 body	125	46.6	
1	--	--	--	--	90Vac, 50Hz
		Ambient	40	40.1	
		F1 body	100	50.0	
		T1 Pri Wind	120	69.3	
		T1 Sec wind	120	69.5	
		T1 Core	120	60.4	

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

		CX1	100	57.7	
		LF1	130	58.3	
		CYP1	125	48.4	
		CYP4	125	60.7	
		QP1	125	71.9	
		QS1	125	57.8	
		CE1	105	56.3	
		CE6	105	55.2	
		PWB under TH1	130	73.9	
		PWB under T1	130	67.0	
		PWB under LF1	130	55.5	
		PWB near QP1	130	67.4	
		PWB near QS1	130	49.7	
		IC1 body	125	51.4	
		IC2 body	125	47.4	
1	--	--	--	--	120Vac, 50Hz
		Ambient	40	40.1	
		F1 body	100	47.2	
		T1 Pri Wind	120	65.4	
		T1 Sec wind	120	65.9	
		T1 Core	120	58.0	
		CX1	100	53.1	
		LF1	130	52.4	
		CYP1	125	46.1	
		CYP4	125	56.4	
		QP1	125	62.2	
		QS1	125	55.9	
		CE1	105	52.5	
		CE6	105	53.9	
		PWB under TH1	130	66.9	
		PWB under T1	130	62.9	
		PWB under LF1	130	51.2	

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

		PWB near QP1	130	59.0	
		PWB near QS1	130	48.7	
		IC1 body	125	49.7	
		IC2 body	125	46.3	
1	--	--	--	--	264Vac, 50Hz
		Ambient	40	40.2	
		F1 body	100	44.5	
		T1 Pri Wind	120	64.4	
		T1 Sec wind	120	65.2	
		T1 Core	120	57.5	
		CX1	100	48.2	
		LF1	130	46.3	
		CYP1	125	43.9	
		CYP4	125	55.2	
		QP1	125	59.6	
		QS1	125	56.3	
		CE1	105	49.3	
		CE6	105	54.1	
		PWB under TH1	130	55.1	
		PWB under T1	130	62.1	
		PWB under LF1	130	47.3	
		PWB near QP1	130	56.8	
		PWB near QS1	130	49.9	
		IC1 body	125	50.1	
		IC2 body	125	46.7	
2	--	--	--	--	90Vac, 60Hz
		Ambient	40	40.0	
		F1 body	100	47.5	
		T1 Pri Wind	120	71.0	
		T1 Sec wind	120	61.1	
		T1 Core	120	65.9	
		CX1	100	54.2	

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

		LF1	130	61.2	
		CYP1	125	47.4	
		CYP4	125	55.3	
		QP1	125	67.9	
		QS1	125	56.7	
		CE1	105	56.5	
		CE6	105	47.0	
		PWB under TH1	130	70.7	
		PWB under T1	130	64.9	
		PWB under LF1	130	58.4	
		PWB near QP1	130	51.4	
		PWB near QS1	130	51.5	
		IC1 body	125	60.9	
		IC2 body	125	55.2	
2	--	--	--	--	120Vac, 60Hz
		Ambient	40	40.0	
		F1 body	100	45.3	
		T1 Pri Wind	120	66.5	
		T1 Sec wind	120	58.4	
		T1 Core	120	62.,6	
		CX1	100	50.0	
		LF1	130	54.4	
		CYP1	125	45.2	
		CYP4	125	51.9	
		QP1	125	58.6	
		QS1	125	56.3	
		CE1	105	52.0	
		CE6	105	46.5	
		PWB under TH1	130	64.4	
		PWB under T1	130	61.3	
		PWB under LF1	130	53.0	
		PWB near QP1	130	49.0	

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

		PWB near QS1	130	51.1	
		IC1 body	125	57.6	
		IC2 body	125	52.6	
2	--	--	--	--	264Vac, 60Hz
		Ambient	40	40.0	
		F1 body	100	43.4	
		T1 Pri Wind	120	66.0	
		T1 Sec wind	120	58.6	
		T1 Core	120	62.8	
		CX1	100	46.9	
		LF1	130	48.0	
		CYP1	125	43.8	
		CYP4	125	51.1	
		QP1	125	56.5	
		QS1	125	59.3	
		CE1	105	48.9	
		CE6	105	47.0	
		PWB under TH1	130	53.4	
		PWB under T1	130	61.3	
		PWB under LF1	130	48.1	
		PWB near QP1	130	48.7	
		PWB near QS1	130	53.6	
		IC1 body	125	57.6	
		IC2 body	125	52.3	
2	--	--	--	--	90Vac, 50Hz
		Ambient	40	40.1	
		F1 body	100	47.4	
		T1 Pri Wind	120	71.1	
		T1 Sec wind	120	61.1	
		T1 Core	120	66.0	
		CX1	100	54.3	
		LF1	130	61.0	

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

		CYP1	125	47.5	
		CYP4	125	55.3	
		QP1	125	68.7	
		QS1	125	56.8	
		CE1	105	56.7	
		CE6	105	46.8	
		PWB under TH1	130	70.4	
		PWB under T1	130	65.2	
		PWB under LF1	130	58.2	
		PWB near QP1	130	51.4	
		PWB near QS1	130	51.6	
		IC1 body	125	61.1	
		IC2 body	125	55.5	
2	--	--	--	--	120Vac, 50Hz
		Ambient	40	40.0	
		F1 body	100	45.1	
		T1 Pri Wind	120	66.2	
		T1 Sec wind	120	58.1	
		T1 Core	120	62.5	
		CX1	100	49.9	
		LF1	130	54.1	
		CYP1	125	45.0	
		CYP4	125	51.3	
		QP1	125	58.5	
		QS1	125	56.1	
		CE1	105	52.0	
		CE6	105	46.3	
		PWB under TH1	130	63.7	
		PWB under T1	130	61.1	
		PWB under LF1	130	52.7	
		PWB near QP1	130	48.7	
		PWB near QS1	130	51.0	

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

		IC1 body	125	57.5	
		IC2 body	125	52.6	
2	--	--	--	--	264Vac, 50Hz
		Ambient	40	40.1	
		F1 body	100	43.5	
		T1 Pri Wind	120	66.3	
		T1 Sec wind	120	58.6	
		T1 Core	120	63.1	
		CX1	100	47.2	
		LF1	130	48.3	
		CYP1	125	43.9	
		CYP4	125	51.3	
		QP1	125	56.9	
		QS1	125	59.4	
		CE1	105	49.0	
		CE6	105	47.1	
		PWB under TH1	130	53.6	
		PWB under T1	130	61.5	
		PWB under LF1	130	48.4	
		PWB near QP1	130	48.8	
		PWB near QS1	130	54.0	
		IC1 body	125	57.7	
		IC2 body	125	52.4	

Supplementary information:

[1] Maximum allowable temperature on surfaces of test corner is 90 °C

[2] Max temperature determined in accordance with 11.1.3e)

[3] When thermocouples used to determine temperature of windings, limits of Table 22 reduced by 10 °C.

[4] Supply voltage:

- ME EQUIPMENT with heating elements - 110 % of the maximum RATED voltage;
- Motor operated ME EQUIPMENT - least favourable voltage between 90 % of the minimum RATED and 110 % of the maximum RATED voltage. ME EQUIPMENT operated under normal load and normal DUTY CYCLE.
- Combined heating and motor operated and other ME EQUIPMENT - tested both at 110 % of the maximum RATED voltage and at 90 % of the minimum RATED voltage.

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

[5] **APPLIED PARTS** intended to supply heat to a **PATIENT - S**ee RISK MANAGEMENT FILE containing temperatures and clinical effects. Also, see instructions for use. Information from Risk Management, as applicable**:** 1 – Model MINT1065A1275C01 2 – Model MINT1065D4875K01

11.1.3d	**TABLE: Temperature of windings by change-of-resistance method**						N/A
Temperature T of winding:	**t_1 (°C)**	**R_1 (Ω)**	**t_2 (°C)**	**R_2 (Ω)**	**T (°C)**	**Allowed T_{max} (°C)**	**Insulation class**
Supplementary information:							

11.2.2.1	**TABLE: Alternative method to 11.2.2.1 a) 5) to determine existence of an ignition source**	N/A
Areas where sparking might cause ignition:		**Remarks**
1.		
2.		
3.		
4.		
5.		
6.		
Materials of the parts between which sparks could occur (Composition, Grade Designation, Manufacturer):		**Remarks**
1.		
2.		
3.		
4.		
5.		
6.		
Test parameters selected representing worst case conditions for ME EQUIPMENT:		**Remarks**
Oxygen concentration (%)..... :		
Fuel ..... :		
Current (A) ..... :		

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

Voltage (V)..... :		
Capacitance (µF) ..... :		
Inductance or resistance (h or Ω).... :		
No. of trials (300 Min)..... :		
Sparks resulted in ignition (Yes/No) :		
Supplementary information: Test procedure of 11.2.2.1 a) 5) & Figs 35-37 used for tests. For circuits not in Figs 35-37, test voltage or current set at 3 times the worst-case values with other parameters set at worst case values to determine if ignition can occur. Information from Risk Management, as applicable:		

11.6.1	**TABLE: overflow, spillage, leakage, ingress of water, cleaning, disinfection, sterilization, compatibility with substances**	N/A

Clause / Test Name	**Test Condition**	**Part under test**	**Remarks**
Supplementary information: Information from Risk Management, as applicable:			

13.1.2	**TABLE: measurement of power or energy dissipation in parts & components to waive SINGLE FAULT CONDITIONS in 4.7, 8.1 b), 8.7.2, and 13.2.2 relative to emission of flames, molten metal, or ignitable substances**	N/A

Power dissipated less than (W) ..... :	15
Energy dissipated less than (J) .....:	900

Part or component tested	**Measured power dissipated (W)**	**Calculated energy dissipated (J)**	**SINGLE FAULT CONDITIONS waived (Yes/No)**	**Remarks**
Supplementary information:				

13.2	**TABLE: SINGLE FAULT CONDITIONS in accordance with 13.2.2 to 13.2.13, inclusive**	Pass

Clause No.	**Description of SINGLE FAULT CONDITION**	**Results observed**	**HAZARDOUS SITUATION (Yes/No)**
13.2.2	**Electrical SINGLE FAULT CONDITIONS per Cl. 8.1:**	**—**	**—**

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

13.2	**TABLE: SINGLE FAULT CONDITIONS in accordance with 13.2.2 to 13.2.13, inclusive**		Pass
Clause No.	**Description of SINGLE FAULT CONDITION**	**Results observed**	**HAZARDOUS SITUATION (Yes/No)**
	IC2-A Short Circuit (MINT1065D2475K01)	When the fault was applied, the input current drop to 0 amps. Also, the output current and voltage dropped to 0. The temperature on the transformer and IC1 and IC2 was rising until the fault was applied and then decreased in temp over time. Test setup: 90 Vac, 50 Hz, loaded to 2.7 amps. Applied power to the sample for 25 minutes before applying the fault. Test Time:1:04:21 Dielectric Test was repeated in accordance with 8.8.3 – Dielectric Voltage Withstand Test, and the result was PASS. Leakage Current was repeated in accordance with 8.7 Leakage Current Test and the results was PASS	No
	IC2-B Short Circuit (MINT1065D2475K01)	When the fault was applied the input current remained at 1.44 amps and the output was 24 VDC and 2.7 amps. The max temperatures: T1 Pri - 95.8	No

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

13.2	**TABLE: SINGLE FAULT CONDITIONS in accordance with 13.2.2 to 13.2.13, inclusive**		Pass
Clause No.	**Description of SINGLE FAULT CONDITION**	**Results observed**	**HAZARDOUS SITUATION (Yes/No)**
		T1 Sec – 96.4 T1 Core – 97.8 IC1 Body - 70.2 IC2 Body – 49.4 Ambient – 23.7 tm–ta+ 40 °C T1 Pri – 112.1 T1 Sec – 112.7 T1 Core – 114.1 IC1 Body – 86.5 IC2 Body – 65.7 Test setup: 90 Vac, 50 Hz, loaded to 2.7 amps. Applied power to the sample for 25 minutes before applying the fault. Test time: 2:23:22 Dielectric Test was repeated in accordance with 8.8.3 – Dielectric Voltage Withstand test, and the result was PASS. Leakage Current was repeated in accordance with 8.7 Leakage Current Test and the results was PASS	
13.2.3	**Overheating of transformers per Clause 15.5:**	**—**	**—**
	SEE 15.5	SEE 15.5	--
13.2.4	**Failure of THERMOSTATS according to 13.2.13 & 15.4.2, overloading - THERMOSTATS short circuited or interrupted, the less favourable of the two:**	**—**	**—**

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

13.2	**TABLE: SINGLE FAULT CONDITIONS in accordance with 13.2.2 to 13.2.13, inclusive**		Pass
Clause No.	**Description of SINGLE FAULT CONDITION**	**Results observed**	**HAZARDOUS SITUATION (Yes/No)**
13.2.5	**Failure of temperature limiting devices according to 13.2.13 & 15.4.2, overloading, THERMOSTATS short circuited or interrupted, the less favourable of the two:**	**—**	**—**
13.2.6	**Leakage of liquid - RISK MANAGEMENT FILE examined to determine the appropriate test conditions (sealed rechargeable batteries exempted)**	**—**	**—**
13.2.7	**Impairment of cooling that could result in a HAZARD using test method of 11.1:**	**—**	**—**
	Single ventilation fans locked consecutively		
	Ventilation openings on top and sides impaired by covering openings on top of ENCLOSURE or positioning of ME EQUIPMENT against walls		
	Simulated blocking of filters		
	Flow of a cooling agent interrupted		
13.2.8	**Locking of moving parts – Only one part locked at a time – Also see 13.2.10 below:**	**—**	**—**
13.2.9	**Interruption and short circuiting of motor capacitors – Motor capacitors short & open circuited [1)] – Also see 13.10**	**—**	**—**
		V measured =	
		V measured =	
13.2.10	**Additional test criteria for motor operated ME EQUIPMENT in 13.2.8 &13.2.9:**	**—**	**—**
	For every test in SINGLE FAULT CONDITION of 13.2.8 and 13.2.9, motor-operated EQUIPMENT stared from COLD CONDITION at RATED voltage		

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

13.2	**TABLE: SINGLE FAULT CONDITIONS in accordance with 13.2.2 to 13.2.13, inclusive**		Pass
Clause No.	**Description of SINGLE FAULT CONDITION**	**Results observed**	**HAZARDOUS SITUATION (Yes/No)**
	or upper limit of RATED voltage range for specified time:		
	Temperatures of windings determined at the end of specified test periods or at the instant of operation of fuses, THERMAL CUT-OUTS, motor protective devices		
	Temperatures measured as specified in 11.1.3 d)		
	Temperatures did not exceed limits of Table 26		
13.2.11	**Failures of components in ME EQUIPMENT used in conjunction with OXYGEN RICH ENVIRONMENTS:**	**—**	**—**
13.2.12	Failure of parts that might result in a MECHANICAL HAZARD (See 9 & 15.3):	**—**	**—**
Supplementary information: 1) Test with short-circuited capacitor not performed when motor provided with a capacitor complying with IEC 60252-1 and the ME EQUIPMENT not intended for unattended use including automatic or remote control. See Attachment # and appended Table 8.10. Information from Risk Management, as applicable:			

15.3	**TABLE: Mechanical Strength tests 1)**		N/A
Clause	**Name of Test**	**Test conditions**	**Observed results/Remarks**
15.3.2	**Push Test**	Force = 250 N ± 10 N for 5 s	
15.3.3	**Impact Test**	Steel ball (50 mm in dia., 500 g ± 25 g) falling from a 1.3 m	
15.3.4.1	**Drop Test (hand-held)**	Free fall height (m) =	
15.3.4.2	**Drop Test (portable)**	Drop height (cm) =	
15.3.5	**Rough handling test**	Travel speed (m/s) =	
15.3.6	**Mould Stress Relief**	7 h in oven at temperature (°C) =	

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

Supplementary information: 1) As applicable, Push, Impact, Drop, Mould Stress Relief and Rough Handling Tests (delete not applicable rows or state N/A in Remarks field).

15.4.6	TABLE: actuating parts of controls of ME EQUIPMENT – torque & axial pull tests				N/A
Rotating control under test	**Gripping diameter "d" of control knob (mm)1)**	**Torque from Table 30 (Nm)**	**Axial force applied (N)**	**Unacceptable RISK occurred Yes/No**	**Remarks**

Supplementary information: 1) Gripping diameter (d) is the maximum width of a control knob regardless of its shape (e.g. control knob with pointer)

15.5.1.2	TABLE: transformer short circuit test short-circuit applied at end of windings or at the first point that could be short circuited under SINGLE FAULT CONDITION							Pass
Primary voltage (most adverse value from 90 % to 110 % of RATED voltage)(V)1) ... :						90 Vac		—
RATED input frequency (Hz) ... :						60 Hz		—
Winding tested	**Class of insulation (A, B, E, F, or H)**	**Type of protective device (fuse, circuit breaker) /Ratings**	**Protective device operated Yes/No**	**Time to THERMAL STABILITY (when protective device did not operate)(Min)**	**Maximum allowed temp from Table 31 (ºC)**	**Maximum winding temp measured (ºC)**		**Ambient (ºC)**
T1 (MINT1065 D2475K01) (B2-A2 Short Circuit)	B	Fuse 20 amp	No	1:28:22	165	T1 Primary Winding: 32.1 T1 Secondary Winding: 29.8 T1 Core: 30.9		24.5

Supplementary information:

1) Loads on other windings between no load and their NORMAL USE load. Short-circuit applied at end of windings or at the first point that could be short circuited under SINGLE FAULT CONDITION.

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

Test setup: 90 Vac 60 Hz, loaded to 24 VDC 2.7 amps based on the Temperature Test (which resulted in highest overall temperatures).

Observation: When the short was applied the protective device (20 Amp fuse) did not operate. The sample stayed powered on and reached thermal stability at 1hr. 28min. and 22sec. The max temperatures on the transformer were T1 Pri = 32.1, T1 Sec = 29.8 and T1 Core = 30.9. After the test was completed, Dielectric test was performed and passed in accordance with 8.8.3 Dielectric Voltage Withstand test. No Charring, Glowing, or Flaming of the Cheese Cloth or Tissue paper.

15.5.1.3	**TABLE: transformer overload test – conducted only when protective device under short-circuit test operated**	Pass
Primary voltage, most adverse value between 90 % to 110 % of RATED voltage (V)[1)] ..... :		90
RATED input frequency (Hz) ..... :		60
Test current just below minimum current that would activate protective device and achieve THERMAL STABILITY under method a) (A) ..... :		4.85
Test current based on Table 32 when protective device that operated under method a) is external to transformer, and it was shunted (A) ..... :		4.95

Winding tested	**Class of insulation (A, B, E, F, H)**	**Type of protective device used (fuse, circuit breaker)/Ratings**	**Maximum allowed temp from Table 31 (ºC)**	**Maximum winding temp measured (ºC)**	**Ambient (ºC)**
T1 (MINT1065D2475K01) (B2-A2 O/load)	B	Fuse	165	T1 Prin 83.8 T1 Sec 103.9 T1 Core 97.1	23.8

Supplementary information:

[1)] Loads on other windings between no load and their NORMAL USE load.

Time durations: - IEC 60127-1 fuse: 30 min at current from Table 32.

Non IEC 60127-1 fuse: 30 min at the current based on characteristics supplied by fuse manufacturer, specifically, 30 min clearing-time current. When no 30 min clearing-time current data available, test current from Table 32 used until THERMAL STABILITY achieved.

- Other types of protective devices: until THERMAL STABILITY achieved at a current just below minimum current operating the protective device in a). This portion concluded at specified time or when a second protective device opened.

No Charring, Glowing, or Flaming of the Cheese Cloth or Tissue paper.

After the test, there was no dielectric breakdown.

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

15.5.2	TABLE: Transformer dielectric strength after humidity preconditioning of 5.7				N/A
Transformer Model/Type/ Part No	**Test voltage applied between**	**Test voltage, (V)**	**Test frequency (Hz)**	**Breakdown Yes/No**	**Deterioration Yes/No**
	Primary & secondary windings				
	Primary winding & frame				
	Secondary winding & frame				
Supplementary information**:** Tests conducted under the conditions of 11.1, in ME EQUIPMENT or under simulated conditions on the bench. See Clause 15.5.2 for test parameters & other details					

16.6.1	TABLE: LEAKAGE CURRENTS in ME SYSTEM _ TOUCH CURRENT MEASUREMENTS				N/A
Specific area where TOUCH CURRENT measured (i.e., from or between parts of ME SYSTEM within PATIENT ENVIRONMENT)	**Allowable TOUCH CURRENT in NORMAL CONDITION (µA)**	**Measured TOUCH CURRENT in NORMAL CONDITION (µA)**	**Allowable TOUCH CURRENT in event of interruption of PROTECTIVE EARTH CONDUCTOR, (µA)**	**Measured TOUCH CURRENT in event of interruption of PROTECTIVE EARTH CONDUCTOR, (µA)**	
	100		500		
	100		500		
	100		500		
	100		500		
	100		500		
Supplementary information:					

SP	TABLE: Additional or special tests conducted		N/A
Clause and Name of Test	**Test type and condition**	**Observed results**	
Supplementary information:			

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

	Attachment - Software – IEC 62304:2006+AMD1:2015		—
4.3	**[A, B, C] Software safety classification**		—
	a) The MANUFACTURER assigns to each SOFTWARE SYSTEM a software safety class according to the RISK of HARM to the patient, operator, or other people resulting from a HAZARDOUS SITUATION to which the SOFTWARE SYSTEM can contribute in a worst-case-scenario		N/A
	The SOFTWARE SYSTEM is software safety class A if:		—
	– the SOFTWARE SYSTEM not contribute to a HAZARDOUS SITUATION; or		N/A
	– the SOFTWARE SYSTEM contribute to a HAZARDOUS SITUATION which does not result in unacceptable RISK after consideration of RISK CONTROL measures external to the SOFTWARE SYSTEM		N/A
	The SOFTWARE SYSTEM is software safety class B if:		—
	– the SOFTWARE SYSTEM contribute to a HAZARDOUS SITUATION which results in unacceptable RISK after consideration of RISK CONTROL measures external to the SOFTWARE SYSTEM and the resulting possible HARM is non-SERIOUS INJURY		N/A
	The SOFTWARE SYSTEM is software safety class C if:		—
	– the SOFTWARE SYSTEM contribute to a HAZARDOUS SITUATION which results in unacceptable RISK after consideration of RISK CONTROL measures external to the SOFTWARE SYSTEM and the resulting possible HARM is death or SERIOUS INJURY		N/A
	For a SOFTWARE SYSTEM initially classified as software safety class B or C, the MANUFACTURER has implemented additional RISK CONTROL measures external to the SOFTWARE SYSTEM and subsequently has assigned a new software safety classification to the SOFTWARE SYSTEM		N/A
	c) The MANUFACTURER documents the software safety class assigned to each SOFTWARE SYSTEM in the RISK MANAGEMENT FILE		N/A

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

	Attachment - Software – IEC 62304:2006+AMD1:2015		—
	d) When a SOFTWARE SYSTEM is decomposed into SOFTWARE ITEMS, and when a SOFTWARE ITEM is decomposed into further SOFTWARE ITEMS, such SOFTWARE ITEMS inherit the software safety classification of the original SOFTWARE ITEM (or SOFTWARE SYSTEM) unless the MANUFACTURER documents a rationale for classification into a different software safety class		N/A
	A rationale explains how the new SOFTWARE ITEMS are segregated so that they may be classified separately		N/A
	e) The MANUFACTURER documents the software safety class of each SOFTWARE ITEM if that class is different from the class of the SOFTWARE ITEM from which it was created by decomposition		N/A
	f) When applied to a group of SOFTWARE ITEMS, the MANUFACTURER uses the PROCESSES and TASKS which are required by the classification of the highest-classified SOFTWARE ITEM in the group unless the MANUFACTURER documents in the RISK MANAGEMENT FILE a rationale for using a lower classification		N/A
	g) Class C requirements apply for each SOFTWARE SYSTEM, until a software safety class is assigned		N/A
4.4	**[A, B, C] LEGACY SOFTWARE**		—
	Clauses 5 through 9 have applied to demonstrate the compliance of LEGACY SOFTWARE		N/A
	As alternative, clauses 4.4.2 through 4.4.5 have applied to demonstrate the compliance of LEGACY SOFTWARE		N/A
4.4.2	[A, B, C] RISK MANAGEMENT ACTIVITIES		—
	The MANUFACTURER:		N/A
	a) assesses any feedback, including post-production information, on LEGACY SOFTWARE regarding incidents and / or near incidents, both from inside its own organization and / or from users		N/A

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

	Attachment - Software – IEC 62304:2006+AMD1:2015		—
	b) performs RISK MANAGEMENT ACTIVITIES associated with continued use of the LEGACY SOFTWARE		N/A
	Considering the following aspects:		N/A
	– integration of the LEGACY SOFTWARE in the overall MEDICAL DEVICE architecture		N/A
	– continuing validity of RISK CONTROL measures, implemented as part of the LEGACY SOFTWARE		N/A
	– identification of HAZARDOUS SITUATIONS associated with the continued use of the LEGACY SOFTWARE		N/A
	– identification of potential causes of the LEGACY SOFTWARE contributing to a HAZARDOUS SITUATIONS		N/A
	– definition of RISK CONTROL measures for each potential cause of the LEGACY SOFTWARE contributing to a HAZARDOUS SITUATIONS		N/A
4.4.3	[A, B, C] Gap analysis		N/A
	Based on the software safety class of the LEGACY SOFTWARE, the MANUFACTURER performs a gap analysis of available DELIVERABLES against those required according to 5.2, 5.3, 5.7, and Clause 7		N/A
	a) The MANUFACTURER assesses the continuing validity of available DELIVERABLES		N/A
	b) Where gaps are identified, the MANUFACTURER EVALUATES the potential reduction in RISK resulting from the generation of the missing DELIVERABLES and associated ACTIVITIES		N/A
	c) Based on this evaluation, the MANUFACTURER determines the DELIVERABLES to be created and associated ACTIVITIES to be performed		N/A
	SOFTWARE SYSTEM test records are the minimum DELIVERABLES to be created		N/A
4.4.4	[A, B, C] Gap closure activities		N/A
	a) The MANUFACTURER establishes and executes a plan to generate the identified DELIVERABLES		N/A

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict
	Attachment - Software – IEC 62304:2006+AMD1:2015		—
	Objective evidences have used to generate required DELIVERABLES without performing ACTIVITIES required by 5.2, 5.3, 5.7 and Clause 7		N/A
	b) The plan addresses the use of the problem resolution PROCESS for handling problems detected in the LEGACY SOFTWARE and DELIVERABLES in accordance with Clause 9		N/A
	c) Changes to the LEGACY SOFTWARE have performed in accordance with Clause 6.		N/A
4.4.5	[A, B, C] Rationale for use of LEGACY SOFTWARE		N/A
	The MANUFACTURER documents the VERSION of the LEGACY SOFTWARE together with a rationale for the continued use of the LEGACY SOFTWARE		N/A
5	**SOFTWARE DEVELOPMENT PROCESS**		**—**
5.1	**Software development planning**		—
5.1.1	[A, B, C] The MANUFACTURER establishes a software development plan (or plans) for conducting the ACTIVITIES of the software development PROCESS appropriate to the scope, magnitude, and software safety classifications of the SOFTWARE SYSTEM to be developed.		N/A
	The SOFTWARE DEVELOPMENT LIFE CYCLE MODEL is either fully defined or be referenced in the plan (or plans).		N/A
	The plan addresses the following:		N/A
	a) the PROCESSES to be used in the development of the SOFTWARE SYSTEM		N/A
	b) the DELIVERABLES (includes documentation) of the ACTIVITIES and TASKS		N/A
	c) TRACEABILITY between SYSTEM requirements, software requirements, SOFTWARE SYSTEM test, and RISK CONTROL measures implemented in software		N/A
	d) software configuration and change management, including SOUP CONFIGURATION ITEMS and software used to support development		N/A

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

	Attachment - Software – IEC 62304:2006+AMD1:2015		—
	e) software problem resolution for handling problems detected in the MEDICAL DEVICE SOFTWARE, DELIVERABLES and ACTIVITIES at each stage of the life cycle		N/A
5.1.2	[A, B, C] The MANUFACTURER updates the plan, as appropriate, as development proceeds		N/A
5.1.3	[A, B, C] Software development plan reference to SYSTEM design and development		N/A
	a) As inputs for software development, SYSTEM requirements are referenced in the software development plan by the MANUFACTURER		N/A
	b) In the software development plan, the MANUFACTURER includes or references procedures for coordinating the software development with the system development necessary to satisfy 4.1 (such as system integration, verification, and validation)		N/A
5.1.4	[C] Associated with the development of SOFTWARE ITEMS of class C, in the software development plan are included or referenced:		N/A
	a) standards		N/A
	b) methods		N/A
	c) tools		N/A
5.1.5	[B, C] The MANUFACTURER includes or references in the software development plan, a plan to integrate the SOFTWARE ITEMS (including SOUP) and performs testing during integration		N/A
5.1.6	[A, B, C] In the software development plan, the following VERIFICATION information are included or referenced:		N/A
	a) DELIVERABLES requiring VERIFICATION		N/A
	b) the required VERIFICATION TASKS for each life cycle ACTIVITY		N/A
	c) milestones at which the DELIVERABLES are VERIFIED		N/A
	d) the acceptance criteria for VERIFICATION of the DELIVERABLES		N/A
5.1.7	[A, B, C] In the software development plan the MANUFACTURER includes or references a plan to conduct the ACTIVITIES and TASKS of the software RISK MANAGEMENT PROCESS, including the management of RISKS relating to SOUP		N/A

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

	Attachment - Software – IEC 62304:2006+AMD1:2015		—
5.1.8	[A, B, C] In the software development plan the MANUFACTURER includes or references information about the documents to be produced during the software development life cycle		N/A
	For each identified document or type of document the following information has included or referenced:		N/A
	a) title, name or naming convention		N/A
	b) purpose		N/A
	c) procedures and responsibilities for development, review, approval and modification		N/A
5.1.9	[A, B, C] The MANUFACTURER includes or references software configuration management information in the software development plan		N/A
	The software configuration management information includes or references:		N/A
	a) the classes, types, categories or lists of items to be controlled		N/A
	b) the software configuration management ACTIVITIES and TASKS		N/A
	c) the organization(s) responsible for performing software configuration management and ACTIVITIES		N/A
	d) their relationship with other organizations, such as software development or maintenance		N/A
	e) when the items are to be placed under configuration control		N/A
	f) when the problem resolution PROCESS is to be used		N/A
5.1.10	[B, C] The items to be controlled include tools, items or settings, used to develop the MEDICAL DEVICE SOFTWARE, which could impact the MEDICAL DEVICE SOFTWARE		N/A
5.1.11	[B, C] The MANUFACTURER plans to place CONFIGURATION ITEMS under documented configuration management control before they are VERIFIED		N/A
5.1.12	[B, C] In the software development plan the MANUFACTURER includes or references a procedure for:		N/A

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

	Attachment - Software – IEC 62304:2006+AMD1:2015		—
	a) identifying categories of defects that may be introduced based on the selected programming technology that are relevant to their SOFTWARE SYSTEM		N/A
	b) documenting evidence that demonstrates that these defects do not contribute to unacceptable RISK		N/A
5.2	**Software requirements analysis**		—
5.2.1	[A, B, C] For each SOFTWARE SYSTEM of the MEDICAL DEVICE, the MANUFACTURER defines and documents SOFTWARE SYSTEM requirements from the SYSTEM level requirements		N/A
5.2.2	[A, B, C] As appropriate to the MEDICAL DEVICE SOFTWARE, the MANUFACTURER includes in the software requirements:		N/A
	a) functional and capability requirements		N/A
	b) SOFTWARE SYSTEM inputs and outputs		N/A
	c) interfaces between the SOFTWARE SYSTEM and other SYSTEMS		N/A
	d) software-driven alarms, warnings, and operator messages		N/A
	e) SECURITY requirements		N/A
	f) user interface requirements implemented by software		N/A
	g) data definition and database requirements		N/A
	h) installation and acceptance requirements of the delivered MEDICAL DEVICE SOFTWARE at the operation and maintenance site or sites		N/A
	i) requirements related to methods of operation and maintenance		N/A
	j) requirements related to IT-network aspects		N/A
	k) user maintenance requirements		N/A
	l) regulatory requirements		N/A
5.2.3	[B, C] The MANUFACTURER includes RISK CONTROL measures implemented in software in the requirements as appropriate to the MEDICAL DEVICE SOFTWARE		N/A

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

	Attachment - Software – IEC 62304:2006+AMD1:2015		—
5.2.4	[A, B, C] The MANUFACTURER re-EVALUATES the MEDICAL DEVICE RISK ANALYSIS when software requirements are established and update it as appropriate		N/A
5.2.5	[A, B, C] The MANUFACTURER ensures that existing requirements, including SYSTEM requirements, are re-EVALUATED and updated as appropriate as a result of the software requirements analysis ACTIVITY		N/A
5.2.6	[A, B, C] The MANUFACTURER verifies and documents that the software requirements:		N/A
	a) implement SYSTEM requirements including those relating to RISK CONTROL		N/A
	b) do not contradict one another		N/A
	c) are expressed in terms that avoid ambiguity		N/A
	d) are stated in terms that permit establishment of test criteria and performance of tests		N/A
	e) can be uniquely identified		N/A
	f) are traceable to SYSTEM requirements or other source		N/A
5.3	**Software ARCHITECTURAL design**		N/A
5.3.1	[B, C] The MANUFACTURER transforms the requirements for the MEDICAL DEVICE SOFTWARE into a documented ARCHITECTURE that describes the software's structure and identifies the SOFTWARE ITEMS		N/A
5.3.2	[B, C] The MANUFACTURER develops and documents an ARCHITECTURE for the interfaces between the SOFTWARE ITEMS and the components external to the SOFTWARE ITEMS (both software and hardware), and between the SOFTWARE ITEMS		N/A
5.3.3	[B, C] If a SOFTWARE ITEM is identified as SOUP, the MANUFACTURER specifies functional and performance requirements for the SOUP item that are necessary for its intended use		N/A
5.3.4	[B, C] If a SOFTWARE ITEM is identified as SOUP, the MANUFACTURER specifies the SYSTEM hardware and software necessary to support the proper operation of the SOUP item		N/A

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

	Attachment - Software – IEC 62304:2006+AMD1:2015		—
5.3.5	[C] The MANUFACTURER identifies any segregation between SOFTWARE ITEMS that is necessary for RISK CONTROl, and states how to ensure that such segregation is effective		N/A
5.3.6	[B, C] The MANUFACTURER verifies and documents that:		N/A
	a) the ARCHITECTURE of the software implements SYSTEM and software requirements including those relating to RISK CONTROL		N/A
	b) the software ARCHITECTURE is able to support interfaces between SOFTWARE ITEMS and between SOFTWARE ITEMS and hardware		N/A
	c) the MEDICAL DEVICE ARCHITECTURE supports proper operation of any SOUP items		N/A
5.4	**Software detailed design**		N/A
5.4.1	[B, C] The MANUFACTURER subdivides the software until it is represented by SOFTWARE UNITS		N/A
5.4.2	[C] The MANUFACTURER documents a design with enough detail to allow correct implementation of each SOFTWARE UNIT		N/A
5.4.3	[C] The MANUFACTURER documents a design for any interfaces between the SOFTWARE UNIT and external components (hardware or software), as well as any interfaces between SOFTWARE UNITS, detailed enough to implement each SOFTWARE UNIT and its interfaces correctly		N/A
5.4.4	[C] The MANUFACTURER verifies and documents that the software detailed design:		N/A
	a) implements the software ARCHITECTURE		N/A
	b) is free from contradiction with the software ARCHITECTURE		N/A
5.5	**SOFTWARE UNIT implementation**		N/A
5.5.1	[A, B, C] The MANUFACTURER implements each SOFTWARE UNIT		N/A
5.5.2	[B, C] The MANUFACTURER establishes strategies, methods and procedures for verifying the SOFTWARE UNITS		N/A
	Where VERIFICATION is done by testing, the test procedures are EVALUATED for adequacy		N/A

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

	Attachment - Software – IEC 62304:2006+AMD1:2015		—
5.5.3	[B, C] The MANUFACTURER establishes acceptance criteria for SOFTWARE UNITS prior to integration into larger SOFTWARE ITEMS as appropriate, and ensures that SOFTWARE UNITS meet acceptance criteria		N/A
5.5.4	[C] When present in the design, the MANUFACTURER includes additional acceptance criteria as appropriate for:		N/A
	a) proper event sequence		N/A
	b) data and control flow		N/A
	c) planned resource allocation		N/A
	d) fault handling (error definition, isolation, and recovery)		N/A
	e) initialisation of variables		N/A
	f) self-diagnostics		N/A
	g) memory management and memory overflows		N/A
	h) boundary conditions		N/A
5.5.5	[B, C] The MANUFACTURER performs the SOFTWARE UNIT VERIFICATION and documents the results		N/A
5.6	**Software integration and integration testing**		N/A
5.6.1	[B, C] The MANUFACTURER integrates the SOFTWARE UNITS in accordance with the integration plan		N/A
5.6.2	[B, C] The MANUFACTURER verifies that the SOFTWARE UNITS have been integrated into SOFTWARE ITEMS and/or the SOFTWARE SYSTEM in accordance with the integration plan and retains records of the evidence of such verification		N/A
5.6.3	[B, C] The MANUFACTURER tests the integrated SOFTWARE ITEMS in accordance with the integration plan and documents the results		N/A
5.6.4	[B, C] For software integration testing, the MANUFACTURER addresses whether the integrated SOFTWARE ITEM performs as intended		N/A
5.6.5	[B, C] The MANUFACTURER EVALUATES the integration test procedures for adequacy		N/A

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

	Attachment - Software – IEC 62304:2006+AMD1:2015		—
5.6.6	[B, C] When software items are integrated, the MANUFACTURER conducts REGRESSION TESTING appropriate to demonstrate that defects have not been introduced into previously integrated software		N/A
5.6.7	[B, C] The MANUFACTURER:		N/A
	a) documents the test result (pass/fail and a list of ANOMALIES)		N/A
	b) retains sufficient records to permit the test to be repeated		N/A
	c) identifies the tester		N/A
5.6.8	[B, C] The MANUFACTURER enters ANOMALIES found during software integration and integration testing into a software problem resolution PROCESS		N/A
5.7	**SOFTWARE SYSTEM testing**		N/A
5.7.1	[A, B, C] Establish tests for software requirements		—
	a) The MANUFACTURER establishes and performs a set of tests, expressed as input stimuli, expected outcomes, pass/fail criteria and procedures, for conducting SOFTWARE SYSTEM testing, such that all software requirements are covered		N/A
	b) The MANUFACTURER EVALUATES the adequacy of VERIFICATION strategies and test procedures.		N/A
5.7.2	[A, B, C] The MANUFACTURER enters ANOMALIES found during software system testing into a software problem resolution PROCESS		N/A
5.7.3	[A, B, C] When changes are made during SOFTWARE SYSTEM testing, the MANUFACTURER:		N/A
	a) repeats tests, performs modified tests or performs additional tests, as appropriate, to verify the effectiveness of the change in correcting the problem		N/A
	b) conducts testing appropriate to demonstrate that unintended side effects have not been introduced		N/A
	c) performs relevant RISK MANAGEMENT ACTIVITIES as defined in 7.4		N/A

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

	Attachment - Software – IEC 62304:2006+AMD1:2015		—
5.7.4	[A, B, C] Evaluate SOFTWARE SYSTEM testing		N/A
	The MANUFACTURER EVALUATES the appropriateness of VERIFICATION strategies and test procedures		N/A
	The MANUFACTURER verifies that:		N/A
	a) all software requirements have been tested or otherwise VERIFIED		N/A
	b) the TRACEABILITY between software requirements and tests or other VERIFICATION is recorded		N/A
	c) test results meet the required pass/fail criteria		N/A
5.7.5.	[A, B, C] In order to support the repeatability of tests, the MANUFACTURER documents:		N/A
	a) a reference to test case procedures showing required actions and expected results		N/A
	b) the test result (pass/fail and a list of ANOMALIES)		N/A
	c) the version of software tested		N/A
	d) relevant hardware and software test configurations		N/A
	e) relevant test tools		N/A
	f) date tested		N/A
	g) the identity of the person responsible for executing the test and recording the test results		N/A
5.8	**Software RELEASE for utilization at a SYSTEM level**		N/A
5.8.1	[A, B, C] The MANUFACTURER ensures that all software VERIFICATION ACTIVITIES has been completed and the results EVALUATED before the software is released		N/A
5.8.2	[A, B, C] The MANUFACTURER documents all known residual ANOMALIES		N/A
5.8.3	[B, C] The MANUFACTURER ensured that all known residual ANOMALIES have been EVALUATED to ensure that they do not contribute to an unacceptable RISK		N/A
5.8.4	[A, B, C] The MANUFACTURER documented the VERSION of the MEDICAL DEVICE SOFTWARE that is being released		N/A

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

	Attachment - Software – IEC 62304:2006+AMD1:2015		—
5.8.5	[B, C] The MANUFACTURER documents the procedure and environment used to create the released software		N/A
5.8.6	[B, C] The MANUFACTURER ensures that all software development plan (or maintenance plan) ACTIVITIES and TASKS are complete along with the associated documentation		N/A
5.8.7	[A, B, C] For at least a period of time determined as the longer of: the life time of the MEDICAL DEVICE SOFTWARE as defined by the MANUFACTURER or a time specified by relevant regulatory requirements, the MANUFACTURER archives:		N/A
	a) the MEDICAL DEVICE SOFTWARE and CONFIGURATION ITEMS		N/A
	b) the documentation		N/A
5.8.8	[A, B, C] The MANUFACTURER establishes procedures to ensure that the released MEDICAL DEVICE SOFTWARE can be reliably delivered to the point of use without corruption or unauthorised change		N/A
	These procedures address the production and handling of media containing the MEDICAL DEVICE SOFTWARE including as appropriate:		N/A
	– replication		N/A
	– media labelling		N/A
	– packaging		N/A
	– protection		N/A
	– storage		N/A
	– delivery		N/A
7	**SOFTWARE RISK MANAGEMENT PROCESS**		**—**
7.1	**Analysis of software contributing to hazardous situations**		—
7.1.1	[B, C] The MANUFACTURER identifies SOFTWARE ITEMS that could contribute to a hazardous situation identified in the MEDICAL DEVICE RISK ANALYSIS ACTIVITY of ISO 14971		N/A
7.1.2	[B, C] The MANUFACTURER identifies potential causes of the SOFTWARE ITEM identified above contributing to a hazardous situation		N/A
	The MANUFACTURER considers potential causes including, as appropriate:		N/A
	a) incorrect or incomplete specification of functionality		N/A

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

	Attachment - Software – IEC 62304:2006+AMD1:2015		—
	b) software defects in the identified SOFTWARE ITEM functionality		N/A
	c) failure or unexpected results from SOUP		N/A
	d) hardware failures or other software defects that could result in unpredictable software operation		N/A
	e) reasonably foreseeable misuse		N/A
7.1.3	[B, C] If failure or unexpected results from SOUP is a potential cause of the SOFTWARE ITEM contributing to a hazardous situation, the MANUFACTURER EVALUATES as a minimum any ANOMALY list published by the supplier of the SOUP item relevant to the VERSION of the SOUP item used in the MEDICAL DEVICE to determine if any of the known ANOMALIES result in a sequence of events that could result in a hazardous situation		N/A
7.1.4	[B, C] The MANUFACTURER documents in the RISK MANAGEMENT FILE potential causes of the SOFTWARE ITEM contributing to a hazardous situation		N/A
7.2	**RISK CONTROL measures**		—
7.2.1	[B, C] For each case documented in the RISK MANAGEMENT FILE where a SOFTWARE ITEM could contribute to a HAZARDOUS SITUATION, the MANUFACTURER defines and documents RISK CONTROL measures in accordance with ISO 14971		N/A
7.2.2	[B, C] If a RISK CONTROL measure is implemented as part of the functions of a SOFTWARE ITEM, the MANUFACTURER:		N/A
	a) includes the RISK CONTROL measure in the software requirements		N/A
	b) assigns to each SOFTWARE ITEM that contributes to the implementation of a RISK CONTROL measure a software safety class based on the RISK that the RISK CONTROL measure is controlling		N/A
	c) develops the SOFTWARE ITEM in accordance with Clause 5		N/A
7.3	**VERIFICATION of RISK CONTROL measures**		—

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

	Attachment - Software – IEC 62304:2006+AMD1:2015		—
7.3.1	[B, C] The implementation of each RISK CONTROL measure documented in 7.2 is VERIFIED, and this VERIFICATION is documented		N/A
	The MANUFACTURER reviewers the RISK CONTROL measure and determines if it could result in a new HAZARDOUS SITUATION		N/A
7.3.3	[B, C] The MANUFACTURER documents TRACEABILITY of software HAZARDS as appropriate:		N/A
	a) from the hazardous situation to the SOFTWARE ITEM		N/A
	b) from the SOFTWARE ITEM to the specific software cause		N/A
	c) from the software cause to the RISK CONTROL measure		N/A
	d) from the RISK CONTROL measure to the VERIFICATION of the RISK CONTROL measure		N/A
7.4	**RISK MANAGEMENT of software changes**		—
7.4.1	[A, B, C] The MANUFACTURER analyses changes to the MEDICAL DEVICE SOFTWARE (including SOUP) to determine whether:		N/A
	a) additional potential causes are introduced contributing to a hazardous situation		N/A
	b) additional software RISK CONTROL measures are required		N/A
7.4.2	[B, C] The MANUFACTURER analyses changes to the software, including changes to SOUP, to determine whether the software modification could interfere with existing RISK CONTROL measures		N/A
7.4.3	[B, C] The MANUFACTURER performs relevant RISK MANAGEMENT ACTIVITIES defined in 7.1, 7.2 and 7.3 based on these analyses		N/A
8	**SOFTWARE CONFIGURATION MANAGEMENT PROCESS**		**—**
8.1	**Configuration identification**		—
8.1.1	[A, B, C] The MANUFACTURER establishes a scheme for the unique identification of CONFIGURATION ITEMS and their VERSIONS to be controlled according to the development and configuration planning specified in 5.1		N/A

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

	Attachment - Software – IEC 62304:2006+AMD1:2015		—
8.1.2	[A, B, C] For each SOUP CONFIGURATION ITEM being used, including standard libraries, the MANUFACTURER documents:		N/A
	a) the title		N/A
	b) the MANUFACTURER		N/A
	c) the unique SOUP designator		N/A
8.1.3	[A, B, C] The MANUFACTURER documents the set of CONFIGURATION ITEMS and their VERSIONS that comprise the SOFTWARE SYSTEM configuration		N/A
8.2	**Change control**		—
8.2.1	[A, B, C] The MANUFACTURER changes CONFIGURATION ITEMS identified to be controlled according to 8.1 only in response to an approved CHANGE REQUEST		N/A
8.2.2	[A, B, C] The MANUFACTURER implements the change as specified in the CHANGE REQUEST		N/A
	The MANUFACTURER identifies and performs any ACTIVITY that needs to be repeated as a result of the change, including changes to the software safety classification of SOFTWARE SYSTEMS and SOFTWARE ITEMS		N/A
8.2.3	[A, B, C] The MANUFACTURER verifies the change, including repeating any VERIFICATION that has been invalidated by the change and taking into account 5.7.3 and 9.7		N/A
8.2.4	[A, B, C] The MANUFACTURER maintains records of the relationships and dependencies between:		N/A
	a) CHANGE REQUEST		N/A
	b) relevant PROBLEM REPORT		N/A
	c) approval of the CHANGE REQUEST		N/A
8.3	[A, B, C] The MANUFACTURER retains retrievable records of the history of controlled CONFIGURATION ITEMS including SYSTEM configuration		N/A
9	**SOFTWARE PROBLEM RESOLUTION PROCESS**		**—**
9.1	[A, B, C] The MANUFACTURER prepares a PROBLEM REPORT for each problem detected in the MEDICAL DEVICE SOFTWARE		N/A

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

	Attachment - Software – IEC 62304:2006+AMD1:2015		—
	PROBLEM REPORTS include a statement of criticality (for example, effect on performance, SAFETY, or SECURITY) as well as other information that may aid in the resolution of the problem (for example, devices affected, supported accessories affected)		N/A
9.2	[A, B, C] The MANUFACTURER:		N/A
	a) investigates the problem and if possible identify the causes		N/A
	b) EVALUATES the problem's relevance to SAFETY using the software RISK MANAGEMENT PROCESS		N/A
	c) documents the outcome of the investigation and evaluation		N/A
	d) creates a CHANGE REQUEST(S) for actions needed to correct the problem, or document the rationale for taking no action		N/A
9.3	[A, B, C] The MANUFACTURER advises relevant parties of the existence of the problem, as appropriate		N/A
9.4	[A, B, C] The MANUFACTURER approves and implements all CHANGE REQUESTS, observing the requirements of the change control PROCESS		N/A
9.5	[A, B, C] The MANUFACTURER maintains records of PROBLEM REPORTS and their resolution including their VERIFICATION		N/A
	The MANUFACTURER updates the RISK MANAGEMENT FILE as appropriate		N/A
9.6	[A, B, C] The MANUFACTURER performs analysis to detect trends in PROBLEM REPORTS		N/A
9.7	[A, B, C] The MANUFACTURER verifies resolutions to determine whether:		N/A
	a) problem has been resolved and the PROBLEM REPORT has been closed		N/A
	b) adverse trends have been reversed		N/A
	c) CHANGE REQUESTS have been implemented in the appropriate MEDICAL DEVICE SOFTWARE and ACTIVITIES		N/A
	d) additional problems have been introduced		N/A
9.8	[A, B, C] When testing, retesting or REGRESSION TESTING SOFTWARE ITEMS and SYSTEMS following a change, the MANUFACTURER includes in the test documentation:		N/A

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

	Attachment - Software – IEC 62304:2006+AMD1:2015		—
	a) test results		N/A
	b) ANOMALIES found		N/A
	c) the VERSION of software tested		N/A
	d) relevant hardware and software test configurations		N/A
	e) relevant test tools		N/A
	f) date tested		N/A
	g) identification of the tester		N/A

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

Attachment	**Software - Mapping of required evidence and manufacturer documents**			N/A
Standard Clause	Deliverables	Title	Revision #	Date
4.3	Software safety classification document			
4.3	Specification of risk control measures external to software system			
4.3	Rationale of classification for decomposed software system			
4.4.2	Risk management activities for legacy software			
4.4.3	Gap analysis for legacy software			
4.4.4	Gap closure plan for legacy software			
4.4.5	Rationale for use of legacy software			
5.1.1	Software development plan			
5.1.3	Software requirements reference to software design and development document			
5.1.4	Development standards, methods and tools records for class C software			
5.1.5	Software integration and integration testing plan			
5.1.6	Software verification plan			
5.1.7	Software risk management plan			
5.1.8	Document management procedures			
5.1.9	Software configuration management procedures			
5.2	Software system requirements specification			
5.2.3	Specification of risk control measure implemented in software			
5.3	Software system architecture design specification			
5.3	Software item architecture design specification			

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

Attachment	**Software - Mapping of required evidence and manufacturer documents**			N/A
Standard Clause	Deliverables	Title	Revision #	Date
5.4	Software item detailed design specification			
5.4	Software unit detailed design specification			
5.5.1	Software unit implementation records			
5.5.2	Software unit verification process			
5.5.3	Software unit acceptance criteria			
5.5.5	Software unit verification records			
5.6.1	Software unit integration process			
5.6.2	Software unit integration records			
5.6.4	Software unit integration testing records			
5.6.5	Evaluation of software unit integration test			
5.6.6	Software unit regression testing process			
5.6.7	Software unit regression testing records			
5.6.8	Software problem resolution process			
5.7	Software system testing process			
5.7	Software system testing records			
5.8	Software system release process			
5.8	Software system release record			
5.8	Statement of known residual anomalies			
7.1	Software hazard analysis process			
7.1	SOUP anomaly lists			
7.2	Risk control process			
7.3	Risk control verification process			

IEC 60601-1			
Clause	Requirement + Test	Result — Remark	Verdict

Attachment	**Software - Mapping of required evidence and manufacturer documents**			N/A
Standard Clause	Deliverables	Title	Revision #	Date
7.4	Risk management of software change process			
8.1	Configuration identification record			
8.2	Change control process			
8.2	Records for traceability of change			
9	Software problem resolution process			
9	Software problem resolution records			
Supplementary information:				

Enclosure
National Differences

Canada - CA

Japan - JP

United States of America - US

IEC60601_1U ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT

IEC 60601-1

CANADA NATIONAL DIFFERENCES

Medical electrical equipment — Part 1: General requirements for basic safety and essential performance

Differences according to .....:	Canadian National standard: CAN/CSA-C22.2 No. 60601-1:08, CAN/CSA-C22.2 No. 60601-1:14 (including amendment 1) and Amendment 2:2022 (MOD) to CAN/CSA-C22.2 No. 60601-1:14
TRF template used: ..... :	IECEE OD-2020-F3, Ed. 1.1
Attachment Form No.....:	CA_ND_IEC60601_1U
Attachment Originator .....:	CSA Group
Master Attachment.....:	Dated 2022-08-12

Note *: IEC CANADIAN NATIONAL DIFFERENCES in Canada are called CANADIAN DEVIATIONS.

	Canadian National Differences		
1	**Scope, object and related standards**		Pass
1.1	**Scope**		Pass
	[Replace the first paragraph with the following] This Standard applies to the BASIC SAFETY and ESSENTIAL PERFORMANCE of MEDICAL ELECTRICAL EQUIPMENT and MEDICAL ELECTRICAL SYSTEMS designed to be used in accordance with CSA C22.1 (Canadian Electrical Code, Part I) and CSA Z32.	Component only, Canada Bilingual Requirements shall be the subject of end product investigation	Pass
	[Add the following note] Note 1A: In the IEC 60601 Standards series adopted for use in Canada, the Canadian standards may modify, replace, or delete requirements contained in the IEC standard as appropriate to the ME EQUIPMENT and ME SYSTEMS under evaluation, and they may add other BASIC SAFETY and ESSENTIAL PERFORMANCE requirements		---
1.3	**Collateral standards**		N/A
	[Replace this clause with the following] Applicable Canadian 60601 collateral standards become normative at the date of their publication and apply together with this Standard.		N/A

IEC60601_1U ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.4	**Particular standards**		N/A
	[Replace this clause with the following] Applicable Canadian 60601/80601 particular standards may modify, replace, or delete requirements contained in this Standard. The requirement of a Canadian 60601/80601 particular safety standard takes priority over this Standard.		N/A
2	**Normative references**		Pass
	In this CSA Group adoption, any reference to International Standards shall be replaced by the relevant National Standard of Canada. **Note 1DV:** *For additional information about normative Standards in Canada, refer to the* Canadian Electrical Code, Part I, *Appendix A.* Where reference is made to CSA Group Standards, such reference are considered to refer to the latest edition and all amendments published to that edition. This Standard refers to the following Standards, and the years shown indicate the latest editions available at the time of printing: **CSA Group** B51-09 Boiler, pressure vessel, and pressure piping code C22.1-21 Canadian Electrical Code, Part I C22.2 No. 0:20 General requirements — Canadian Electrical Code, Part II C22.2 No. 0.4-17 *Bonding of electrical equipment* C22.2 No. 21-95 (R2009) Cord sets and power supply cords C22.2 No. 42-10 General use receptacles, attachment plugs, and similar wiring devices C22.2 No. 49-10 Flexible cords and cables C22.2 No. 100:14 (R2019) *Motors and generators*		Pass

IEC60601_1U ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	C22.2 No. 248 series of Standards Low-voltage fuses C22.2 No. 308-18 Cord reels and multi-outlet assemblies CAN/CSA-E61558-2-1-03 (R2012) Safety of power transformers, power supply units and similar — Part 2: Particular requirements for separating transformers for general use CSA C22.2 No. 62368-1:19 Audio/video, information and communication technology equipment — Part 1: Safety requirements Z32-09 Electrical safety and essential electrical systems in health care facilities CAN/CSA-Z305.8-03 (R2013) Medical supply units Z305.12-06 (R2012) Safe storage, handling, and use of portable oxygen systems in residential buildings and health care facilities Z305.13-09 Plume scavenging in surgical, diagnostic, therapeutic, and aesthetic settings CAN/CSA-Z5359-10 Low-pressure hose assemblies for use with medical gases CAN/CSA-Z9170-1-11 Terminal units for medical gas pipeline systems — Part 1: Terminal units for use with compressed medical gases, vacuum, and anaesthetic gas scavenging systems CAN/CSA-Z10524-1:12 Pressure regulators for use with medical gases — Part 1: Pressure regulators and pressure regulators with flow-metering devices CAN/CSA-Z15002:12 Flow-metering devices for connection to terminal units of medical gas pipeline systems		

IEC60601_1U ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	ASME (American Society of Mechanical Engineers) PTC 25-2008 Pressure Relief Devices **CGA (Compressed Gas Association)** V-1-2013 Standard for Compressed Gas Cylinder Valve Outlet and Inlet Connections V-5-2008 (reaffirmed 2013) Diameter Index Safety System (Noninterchangeable Low Pressure Connections for Medical Gas Applications) **ISO (International Organization for Standardization)** 32:1977 Gas cylinders for medical use — Marking for identification of content 407:2004 Small medical gas cylinders — Pin-index yoke-type valve connections 9170-2:2008 Terminal units for medical gas pipeline systems — Part 2: Terminal units for anaesthetic gas scavenging systems		
3	**Terminology and definitions**		Pass
3.41	**HIGH VOLTAGE**		Pass
	[Replace this Clause in the Canadian deviations in the adopted Standard with the following] voltage above 1000 V ac for ac circuits or voltage above 1060 V dc for dc circuits, as defined in the *Canadian Electrical Code, Part I*		Pass
4.	**General requirements**		Pass
4.1A	*[Add the following clause]* General requirements applicable to ME EQUIPMENT and ME SYSTEMS are provided in CAN/CSA-C22.2 No. 0.		Pass
4.8	**Components of ME EQUIPMENT**		Pass
	[Replace Items a) and b) and Note 2 with the following]		Pass

IEC60601_1U ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	a) The applicable safety requirements of a relevant CSA Group, IEC, or ISO Standard; or		Pass
	b) where there is no relevant CSA Group, IEC, or ISO Standard, the requirements of this Standard shall be applied		Pass
	Note 2: If there are neither requirements in this Standard nor in a CSA Group, IEC, or ISO Standard, any other applicable source (e.g., standards for other types of devices, national standards) could be used to demonstrate compliance with the RISK MANAGEMENT PROCESS.		---
4.10.2	**SUPPLY MAINS for ME EQUIPMENT and ME SYSTEMS**		Pass
	[Replace the first sentence with the following] ME EQUIPMENT intended to be connected to SUPPLY MAINS shall be in accordance with the Canadian Electrical Code, Part I, and the following RATED voltages shall not be exceeded:		Pass
7.	**ME EQUIPMENT identification, marking and documents**		Pass
7.5	**Safety signs**		N/A
	[Replace the paragraph starting with "When supplementary text" in IEC Amendment 1 with the following] When supplementary text is placed together with safety signs, the supplementary text shall be in English and French for the intended OPERATOR.		N/A
7.7	**Colours of the insulation of conductors**		N/A
7.7.1	**PROTECTIVE EARTH CONDUCTOR**		N/A
	[Replace Clause 7.7.1 in the adopted Standard with the following] A PROTECTIVE EARTH CONDUCTOR shall be identified throughout its length by green or green and yellow coloured insulation.	Component, to be determined as part of the end product investigation	N/A
7.7.2	**PROTECTIVE EARTH CONNECTIONS**		N/A
	[Replace Clause 7.7.2 in the adopted Standard with the following] A PROTECTIVE EARTH CONDUCTOR or a PROTECTIVE EARTH CONNECTION of any insulation on conductors shall be identified by either green or green and yellow colours at least at the termination of the conductors.		N/A
7.7.3	**Green or green and yellow insulation**		N/A
	[Replace Clause 7.7.3 in the adopted Standard, as modified by IEC Amendment 1, with the following]		N/A

IEC60601_1U ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Identification by green or green and yellow insulation shall only be used for:		N/A
	- PROTECTIVE EARTH CONDUCTORS (see Clause 8.6.2);		N/A
	- conductors as specified in Clause 7.7.2; **Note:** In other safety Standards such as CSA C22.2 No. 62368-1, internal connections between conductive parts and the main protective earth are called "protective bonding conductors".		N/A
	- POTENTIAL EQUALIZATION CONDUCTORS (see Clause 8.6.7);		N/A
	- FUNCTIONAL EARTH CONDUCTORS (see Clause 8.6.9).		N/A
7.7.4	**Neutral conductor**		N/A
	[Replace Clause 7.7.4 in the adopted Standard with the following] Colours of neutral conductors and POWER SUPPLY CORD conductors shall be in accordance with the *Canadian Electrical Code, Part I*, CSA C22.2 No. 21, and CSA C22.2 No. 49.	Component, to be determined as part of the end product investigation	N/A
7.7.5	**POWER SUPPLY CORD conductors**		N/A
	[Replace Clause 7.7.5 in the adopted Standard with the following] Colours of conductors in POWER SUPPLY CORDS shall be in accordance with the Canadian Electrical Code, Part I, CSA C22.2 No. 21, and CSA C22.2 No. 49.		N/A
	Compliance with the requirements of Clause 7.7 is checked by inspection.		N/A
7.9	**ACCOMPANYING DOCUMENTS**		N/A
7.9.2.1	**General**		N/A
	[Replace the last paragraph in the adopted Standard with the following] The instructions for use shall be in English and French for the intended OPERATOR.		N/A
8	**Protection against electrical HAZARDS from ME EQUIPMENT**		Pass
8.6	**Protective earthing, functional earthing and potential equalization of ME EQUIPMENT**		N/A
8.6.4	**Impedance and current-carrying capability**		N/A
	[Replace Clause 8.6.4 in the adopted Standard, as modified by IEC Amendments 1 and 2, with the following]		N/A
	PROTECTIVE EARTH CONNECTIONS shall be able to carry fault currents reliably and without excessive voltage drop.		N/A

IEC60601_1U ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Impedance and current-carrying capability shall comply with CSA C22.2 No. 0.4.		N/A
	For PERMANENTLY INSTALLED ME EQUIPMENT and ME EQUIPMENT with a non-DETACHABLE POWER SUPPLY CORD, the impedance between the PROTECTIVE EARTH TERMINAL (inside the ME EQUIPMENT) and any part that is PROTECTIVELY EARTHED shall not exceed 100 mΩ. For ME EQUIPMENT with an APPLIANCE INLET, the impedance between the earth pin of the APPLIANCE INLET and any part that is PROTECTIVELY EARTHED shall not exceed 100 mΩ……..:		N/A
	In addition to the test above, for ME EQUIPMENT with a non-DETACHABLE POWER SUPPLY CORD or any DETACHABLE POWER SUPPLY CORD (supplied or specified by the MANUFACTURER), the impedance between the protective earth pin of the MAINS PLUG and the PROTECTIVE EARTH TERMINAL (inside the ME EQUIPMENT) shall not exceed 100 mΩ…….:		N/A
	Where an APPLIANCE INLET forms the supply connection to ME EQUIPMENT, the earth pin of the APPLIANCE INLET is regarded as the PROTECTIVE EARTH TERMINAL. The combined testing requirements above are equivalent to 200 mΩ impedance testing requirements as described in IEC 60601-1. Separate testing is required to comply with CSA C22.2 No. 0.4.		N/A
	Testing shall be carried out using a DETACHABLE POWER SUPPLY CORD as provided or specified (length and cross-sectional area as per the Canadian Electrical Code, Part I) by the MANUFACTURER.		N/A
	The test current shall have the following characteristics: — for cord-connected equipment, twice the rating of the attachment plug cap, but not less than 40 A; — for equipment for permanent connection to the supply, twice the rating of the fuse that is required by the *Canadian Electrical Code*, *Part I* for the branch circuit to which the equipment is connected, up to 250 A; and — 500 A for equipment for permanent connection to the supply when a branch circuit fused at over 250 A is required.		N/A
	Compliance is checked by the following test: — for test currents up to 500 A, the measured potential drop shall not exceed 4 V; — for equipment that requires branch circuit fusing over 250 A, the measured potential drop		N/A

IEC60601_1U ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	multiplied by the required fusing and divided by 250 shall not exceed 4 V; — there shall be no melting of any metal in the bond and no heating or burning that is likely to create a fire hazard; and — the time duration— the time duration for testing is indicated in Table 8.6.4A:		
	Table 8.6.4A **Time duration of impedance test current** **Fusing of branch circuit required for equipment (A)** / **Time (min)** 0–30 / 2 31–60 / 4 61–100 / 6 101–200 / 8 201 and over / 10 **Note:** *Additional information can be found in CSA C22.2 No. 0.4.*		N/A
	Alternatively, dc may be used for this test, if the ME EQUIPMENT is rated dc.		N/A
	Note: When protective earth is relied on as a MEANS OF PROTECTION, the test current is determined based on the location where a fault could occur. If the prospective fault is in the mains supply circuit prior to the overcurrent protection included in the ME EQUIPMENT, the test current for that part of the protective earth circuit is based on the rating of the external overcurrent protection included in the building infrastructure or specified in the ACCOMPANYING DOCUMENTS (two times the interrupt rating of the external overcurrent protection). If the prospective fault is in the mains supply circuit after the overcurrent protection included in the ME EQUIPMENT, the test current is based on the rating of the overcurrent protection included in the ME EQUIPMENT (two times the interrupt rating of the ME EQUIPMENT overcurrent protection). In either case, the minimum test current is 40 A. The voltage drop between the parts described is measured and the impedance determined from the current and voltage drop. If the measured impedance is within the permitted limit, either the impedance measurement is then repeated using a current source with a no-load voltage sufficient to deliver the specified current into the total impedance, or the current-carrying ability of the relevant protective earth conductor and protective earth connection is confirmed by checking that their cross-sectional area is at least equal to that of the relevant current-carrying conductors.		N/A
8.7	**LEAKAGE CURRENTS and PATIENT AUXILIARY CURRENTS**		Pass
8.7.3	**Allowable values**		Pass
	[Add the following paragraph]		Pass

IEC60601_1U ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Allowable values shall be in accordance with the Canadian Electrical Code, Part I.		
8.11	**MAINS PARTS, components and layout**		Pass
8.11.3.2	**Types**		N/A
	[Replace this clause with the following]		N/A
	The following requirements for POWER SUPPLY CORDS shall apply:		N/A
	a) The MAINS PLUG of non-PERMANENTLY INSTALLED EQUIPMENt shall be:		N/A
	i) if moulded-on type, a hospital-grade mains plug complying with CSA C22.2 No. 21;		N/A
	ii) a hospital-grade disassembly attachment plug type complying with CSA C22.2 No. 42; or		N/A
	iii) Class II equipment having fuses on the line side(s), and the neutral may use a non-polarized attachment plug or a polarized attachment plug. CSA configuration type 1-15P shall be required and meets all applicable requirements in CSA C22.2 No. 21 and CSA C22.2 No. 42. Where a polarized attachment plug is used, the POWER SUPPLY CORD is connected to the wiring of the EQUIPMENT on the ungrounded side of the line when any of the following devices are used in the primary circuit:		N/A
	1) the centre contact of an Edison base lampholder;		N/A
	2) a single pole switch;		N/A
	3) an automatic control with a marked off position;		N/A
	4) a solitary fuse/fuse holder; or		N/A
	5) any other single pole overcurrent protective device.		N/A
	b) A detachable POWER SUPPLY CORD for non-PERMANENTLY INSTALLED EQUIPMENT (cord-connected equipment) shall be of a type:		N/A
	i) that can be shown to be unlikely to become detached accidentally, unless it can be shown that detachment will not constitute a safety HAZARD to a PATIENT or OPERATOR;		N/A
	ii) for which it can be shown that the impedance of the earth (ground) circuit contacts will not constitute a safety HAZARD to a PATIENT or OPERATOR; and		N/A
	iii) that has a terminal configuration or other constructional feature that will minimize the possibility of its replacement by a detachable POWER SUPPLY CORD which could create a HAZARDOUS SITUATION.		N/A
	c) The detachable POWER SUPPLY CORD shall:		N/A
	i) comply with the applicable requirements of CSA C22.2 No. 21; and		N/A
	ii) not be smaller than No. 18 AWG, and the mechanical serviceability is not less than:		N/A

IEC60601_1U ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	1) Type SJ or equivalent for ME EQUIPMENT that is mobile or exposed to abuse; and		N/A
	2) Type SV or equivalent for ME EQUIPMENT that is not exposed to abuse (or Type HPN if required because of temperature). **Note:** See CSA C22.2 No. 49 for requirements for the cord types mentioned in Sub-item 2).		N/A
	d) Installation of POWER SUPPLY CORDS shall meet the requirements of the Canadian Electrical Code, Part I, as applicable.		N/A
	[Add the following to this Canadian deviation in the adopted Standard] The POWER SUPPLY CORD used with the ME EQUIPMENT shall be in accordance with the temperature rating to which it has been RATED. **Note 1DV:** Refer to the Canadian Electrical Code, Part I, Tables 11 and 12 for additional information.		N/A
	Compliance is checked by inspection and measurement……..:		N/A
8.11.3.3	**Cross-sectional area of POWER SUPPLY CORD conductors**		N/A
	[Replace Clause 8.11.3.3 in the adopted Standard, as modified by Amendment 2, with the following] The NOMINAL cross-sectional area of conductors of any POWER SUPPLY CORD of ME EQUIPMENT shall be not less than the requirements of the Canadian Electrical Code, Part I, and CSA C22.2 No. 21. **Note:** Table 17 can be used for European countries or other countries where the nominal cross-sectional area is measured in mm2 (HAR); American Wire Gauge (AWG) is the nominal cross-sectional area used in Canada as per the Canadian Electrical Code, Part I.		N/A
	Compliance is checked by inspection……..:		N/A
8.11.5	**Mains fuses and OVER-CURRENT RELEASES**		Pass
	[Replace Clause 8.11.5 in the Canadian deviations in the adopted Standard with the following] Installation of overcurrent protective devices shall be in accordance with the Canadian Electrical Code, Part I		Pass
9	**Protection against MECHANICAL HAZARDS of ME EQUIPMENT and ME SYSTEMS**		N/A
9.7	**Pressure vessels and parts subject to pneumatic and hydraulic pressure**		N/A
9.7.5	**Pressure vessels**		N/A

IEC60601_1U ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
9.7.5	*[Replace this clause with the following]* Pressure vessels shall comply with the requirements of CSA B51, as applicable		N/A
9.7.7	**Pressure-relief device**		N/A
	[Add the following as the first paragraph of this Clause] A pressure-relief device shall comply, as applicable, with the requirements of ASME PTC 25 or equivalent Canadian requirements.		N/A
13	**HAZARDOUS SITUATIONS and fault conditions**		N/A
13.2	**SINGLE FAULT CONDITIONS**		N/A
13.2.9	**Interruption and short circuiting of motor capacitors**		N/A
	[Replace the second paragraph of the compliance statement in the adopted Standard with the following] The test with a short-circuited capacitor is not performed if the motor is provided with a capacitor that complies with IEC 60252-1 or is included as part of the evaluation of the motor in accordance with CSA C22.2 No. 100, and the ME EQUIPMENT is not intended for unattended use (including automatic or remote control).		N/A
	For additional test criteria, see Clause 13.2.10.		N/A
15	**Construction of ME EQUIPMENT**		Pass
15.4	**ME EQUIPMENT components and general assembly**		N/A
15.4.1	**Construction of connectors**		N/A
	[Add the following item]		N/A
	bA) The point of connection of gas cylinders to ME EQUIPMENT is gas-specific and clearly identified so that errors are avoided when a replacement is made. Medical gas inlet connectors on ME EQUIPMENT shall be:		N/A
	i) gas-specific, yoke type, or nut and nipple type valve connections complying with CGA V-1 for pressures over 1380 kPa (200 psi); or		N/A
	ii) DISS type complying with CGA V-5 for pressures 1380 kPa (200 psi) or less and configured to permit the supply of medical gases from low-pressure connecting assemblies complying with CAN/CSA-Z5359		N/A

IEC60601_1U ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Note: Users of this Standard should consult the CSA Z305 series of Standards, CAN/CSA-Z9170-1, ISO 9170-2, CAN/CSA-Z10524, and CAN/CSA-Z15002 for further information regarding inlet connectors; ISO 407 for requirements addressing yoke type valve connections; and ISO 32 for colour coding.		---
15.4.8	**Internal wiring of ME EQUIPMENT**		N/A
	[Replace this Clause with the following]		N/A
	Internal wiring of ME EQUIPMENT shall be in accordance with the Canadian Electrical Code, Part I.		N/A
	Except for flexible cord, equipment wire, control circuit insulated conductors, and cable, insulated conductors shall be not smaller than No. 14 AWG when made of copper and not smaller than No. 12 AWG when made of aluminium. **Note 1:** See the Canadian Electrical Code, Part I, Rule 4-002.		N/A
	The maximum current that an equipment wire of a given size may carry shall be as specified in Table 12 of the Canadian Electrical Code, Part I. **Note 2:** For additional information refer to the Canadian Electrical Code, Part I, Rule 4-014.		N/A
15.5	**MAINS SUPPLY TRANSFORMERS of ME EQUIPMENT and transformers providing separation in accordance with 8.5**		Pass
15.5.1.3	**Overload test**		Pass
	[Replace the second and third dashed items of Item b) of Clause 15.5.1.3 in the adopted Standard with the following]		Pass
	- Fuses not in accordance with IEC 60127-1 but in accordance with the CSA C22.2 No. 248 series of Standards: 30 min at the current according to the characteristics supplied by the fuse manufacturer, specifically the 30 min clearing-time current. If no 30 min clearing-time current data is available, the test current from Table 32 is used until THERMAL STABILITY is achieved.		N/A
	- Other protective device as per the Canadian Electrical Code, Part I: until THERMAL STABILITY at a current just below that which caused the device to operate in Item a).		Pass
	This portion of the overload test is concluded at the specified time or when a second protective device opens.		Pass

IEC60601_1U ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
16	**ME SYSTEMS**		N/A
16.1	**General requirements for the ME SYSTEMS**		N/A
	*[Replace the paragraph that starts with "*An ME SYSTEM shall provide:*" with the following]*		N/A
	An ME SYSTEM shall be provided:		N/A
	- within the PATIENT ENVIRONMENT, the level of safety equivalent to ME EQUIPMENT complying with this CSA Group Standard; and		N/A
	- outside the PATIENT ENVIRONMENT, the level of safety equivalent to equipment complying with their respective CSA Group, IEC, or ISO safety Standards.		N/A
	[Replace the third-last paragraph with the following] Non-ME EQUIPMENT, when used in an ME SYSTEM, shall comply with the CSA Group, IEC, or ISO safety Standards that are relevant to that equipment.		N/A
16.9	**ME SYSTEM connections and wiring**		N/A
16.9.2.1	**MULTIPLE SOCKET-OUTLET**		N/A
	[Replace the first sentence of Item c) of Clause 16.9.2.1 in the adopted Standard with the following]		N/A
	c) The MULTIPLE SOCKET-OUTLET shall comply with CSA C22.2 No. 308 as applicable and the following requirements.		N/A
	[Add the following note to Item d) in the Canadian deviations in the adopted Standard]		N/A
	d) If the MULTIPLE SOCKET OUTLET is combined with a separating transformer, the following additional requirements shall apply:		N/A
	The separating transformer complies with this Standard.		N/A
	Alternatively, the separating transformer may comply with the requirements of CAN/CSA-E61558-2-1, except that the requirements of maximum RATED output power of 1 kVA and degree of protection IPX4 do not apply.		N/A
	Note 1: As a separating transformer is not a MAINS SUPPLY TRANSFORMER, it does not require more than BASIC INSULATION. Note 2: Limitation of output power is not explained in CAN/CSA-E61558-2-1 and the RATED output power is defined by the fuse in the installation and by the allowable power supply cable used. However, the characteristics of the separating transformer need to be		N/A

IEC60601_1U ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	carefully selected, taking into account the variations in the load current of the ME SYSTEM to ensure that the voltage supplied to the various items of the ME SYSTEM remains within the limits specified for the equipment. Note 3: For additional details refer to the Canadian Electrical Code, Part I, Diagrams 1 and 2.		
	The separating transformer assembly shall be a CLASS I construction.		N/A
	The degree of protection against ingress of water as given in IEC 60529 is specified.		N/A
	The separating transformer assembly shall be marked according to the requirements of 7.2 and 7.3.		N/A
	The MULTIPLE SOCKET OUTLET is permanently connected to the separating transformer or,		N/A
	The socket-outlet of the separating transformer assembly shall be of a type that cannot accept MAINS PLUGS of any of the kinds identified in Canadian Electrical Code, Part I (see Figure I.1 and Figure I.2 of this Standard)		N/A
	[Add the following item] dA) The MULTIPLE SOCKET OUTLET complies with the requirements of CSA C22.2 No. 42, CSA C22.2 No. 49, and Item d) of this Standard, as applicable.		N/A

ATTACHMENT to TRF IEC60601_1U			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT

IEC 60601-1

IEC 60601-1:2005, IEC 60601-1:2005/AMD1:2012, IEC 60601-1:2005/AMD2:2020
JAPAN NATIONAL DIFFERENCES

Medical electrical equipment — Part 1: General requirements for basic safety and essential performance

Differences according to .....:	National standard JIS T 0601-1:2023
TRF template used.....:	IECEE OD-2020-F3:2022, Ed. 1.2
Attachment Form No.....:	JP_ND_IEC60601_1U
Attachment Originator .....:	TÜV Rheinland Japan Ltd.
Master Attachment.....:	Dated 2023-08-22

1	**Scope, object and related standards**		N/A
1.3	In NOTE 3, add the following: In Japan, to check the corresponding Japanese Industrial Standard(s) is required.		N/A
1.4	At the end of NOTE, add the following: In Japan, to check the corresponding Japanese Industrial Standard(s) is required.		N/A
2	**Normative references**		Pass
2	Replace the listed standards with the followings: JIS B 7761-3, Hand-transmitted vibration - Part 3: General requirements for measurement and evaluation NOTE: ISO 5349-1, Mechanical vibration - Measurement and evaluation of human exposure to hand-transmitted vibration - Part 1: General requirements JIS B 9718:2013, Safety of machinery - Safety distances to prevent hazard zone being reached by upper and lower limbs NOTE: ISO 13857:2008, Safety of machinery -- Safety distances to prevent hazard zones being reached by upper and lower limbs JIS C 0920:2003, Degrees of protection provided by enclosures (IP Code) NOTE 1: IEC 60529: 1989+AMD1:1999, Degrees of protection provided by enclosures (IP Code) NOTE 2: According to the corresponding international standard, IEC 60529:1989+AMD1:1999 are listed as Normative		Pass

ATTACHMENT to TRF IEC60601_1U			
Clause	Requirement + Test	Result - Remark	Verdict
	references, however, the latest edition is edition 2.1 issued in 2001 and the corresponding Japanese Industrial standard was listed as normative reference. JIS C 1509-1, Electroacoustitcs - Sound level meters (Noise meter) - Part 1: Specifications NOTE: IEC 61672-1, Electroacoustics - Sound level meters - Part 1: Specifications JIS C 1509-2, Electroacoustics - Sound level meters (Noise meter) - Part 2: Pattern evaluation tests NOTE: IEC 61672-2, Electroacoustics - Sound level meters - Part 2: Pattern evaluation tests		
2	JIS C 4003, Electrical insulation - Thermal evaluation and designation NOTE: IEC 60085, Electrical insulation - Thermal evaluation and designation JIS C 5101-14:2009, Fixed capacitors for use in electronic equipment - Part 14: Sectional specification - Fixed capacitors for electromagnetic interference suppression and connection to the supply mains NOTE: IEC 60384-14:2005, Fixed capacitors for use in electronic equipment - Part 14: Sectional specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains JIS C 6065:2013, Audio, video and similar electronic apparatus - Safety requirements NOTE: IEC 60065:2001+AMD1:2005+A2:2010, Audio, video and similar electronic apparatus - Safety requirements JIS C 6802:2018, Safety of laser products NOTE: IEC 60825-1:2014, Safety of laser products - Part 1: Equipment classification and requirements JIS C 6950-1:2016, Information technology equipment - Safety - Part 1: General requirements NOTE: IEC60950-1:2005+AMD1:2009+AMD2:2013, Information technology equipment - Safety - Part 1: General requirements JIS C 6965, Mechanical safety of cathode ray tubes NOTE: IEC 61965, Mechanical safety of cathode ray tubes JIS C 8282-1, Plugs and socket-outlets for household and similar purposes – Part 1: General requirements NOTE: IEC 60884-1, Plugs and socket-outlets for		Pass

ATTACHMENT to TRF IEC60601_1U			
Clause	Requirement + Test	Result - Remark	Verdict
	household and similar purposes - Part 1: General requirements JIS C 8303, Plugs and receptacles for domestic and similar general use NOTE: No corresponding International standard exists. This standard has been listed as normative reference corresponding to IEC/TR 60083, Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC,. Refer to JIS T 1021, too.		
2	JIS C 9335-1:2014 Household and similar electrical appliances – safety – Part 1: General requirements NOTE: IEC 60335-1:2010 Household and similar electrical appliances – safety – Part 1: General requirements JIS C 60068-2-2:2010, Environmental testing - Part 2-2: Tests - Test B: Dry heat NOTE: IEC 60068-2-2:2007, Environmental testing - Part 2-2: Tests - Tests B: Dry heat JIS C 60664-1:2009, Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests NOTE: IEC 60664-1:2007, Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests JIS C 60695-11-10, Fire hazard testing - Part 11-10: Test flames - 50 W horizontal and vertical flame test methods NOTE: IEC 60695-11-10, Fire hazard testing - Part 11-10: Test flames - 50 W horizontal and vertical flame test methods JIS C 62368-1:2021, Audio/video information and communication technology equipment – Part 1: Safety requirements NOTE: IEC 62368-1:2018, Audio/video information and communication technology equipment – Part 1: Safety requirements JIS T 0601-1-2:2023, Medical electrical equipment - Part 1-2: General requirements for basic safety and essential performance – collateral standard electromagnetic disturbances – requirements and tests NOTE: IEC 60601-1-2:2014+AMD1:2020, Medical electrical equipment - Part 1-2: General requirements for basic safety and essential performance – collateral standard electromagnetic disturbances – requirements and tests JIS T 0601-1-3:2015, Medical electrical equipment - Part 1-3: General requirements for		Pass

ATTACHMENT to TRF IEC60601_1U			
Clause	Requirement + Test	Result - Remark	Verdict
	basic safety and essential performance - Collateral Standard: Radiation protection in diagnostic X-ray equipment NOTE: IEC60601-1-3:2008+AMD1:2013, Medical electrical equipment - Part 1-3: General requirements for basic safety and essential performance - Collateral standard: Radiation protection in diagnostic X-ray equipment		
2	JIS T 0801:2016, Sterilization of health care products - Ethylene oxide - Requirements for the development, validation and routine control of a sterilization process for medical devices NOTE 1: ISO 11135-1:2014, Sterilization of health care products - Ethylene oxide - Part 1: Requirements for the development, validation and routine control of a sterilization process for medical devices NOTE 2: The cited standard ISO 11135-1:2007 and its corresponding JIS JIS T 0801-1:2010 in the corresponding international standard are both obsolete, so their successors have been added to the cited standards. JIS T 0801-1:2010, Sterilization of health care products - Ethylene oxide - Part 1: Requirements for development, validation and routine control of a sterilization process for medical devices NOTE 1: ISO 11135-1:2007, Sterilization of health care products - Ethylene oxide - Part 1: Requirements for development, validation and routine control of a sterilization process for medical devices NOTE 2: JIS T 0801-1:2010 and ISO11135-1:2007 are obsolete standards and have been replaced by JIS T 0801:2016 and ISO11135:2014, respectively. JIS T 0806-1:2010, Sterilization of health care products - Radiation - Part 1: Requirements for development, validation and routine control of a sterilization process for medical devices NOTE: ISO 11137-1:2006, Sterilization of health care products - Radiation - Part 1: Requirements for development, validation and routine control of a sterilization process for medical devices JIS T 0816-1:2010, Sterilization of health care products - Moist heat - Part 1: Requirements for the development, validation and routine control of a sterilization process for medical devices NOTE: ISO 17665-1:2006, Sterilization of health care products - Moist heat - Part 1: Requirements for the development, validation and routine control of a sterilization process for medical devices		N/A

ATTACHMENT to TRF IEC60601_1U			
Clause	Requirement + Test	Result - Remark	Verdict
	JIS T 2304:2017, Medical device software - Software life cycle processes IEC62304:2006+AMD1:2015, Medical device software - Software life cycle processes JIS T 14971:2020, Medical devices - Application of risk management to medical devices NOTE: ISO 14971:2019, Medical devices - Application of risk management to medical devices		
2	JIS T 60601-1-6:2023, Medical electrical equipment - Part 1-6: General requirements for basic safety and essential performance - Collateral standard: Usability NOTE: IEC60601-1-6:2010+AMD1:2013+AMD2:2020, Medical electrical equipment - Part 1-6: General requirements for basic safety and essential performance - Collateral standard: Usability JIS T 60601-1-8:2023, Medical electrical equipment - Part 1-8: General requirements for basic safety and essential performance - Collateral standard: General requirements, tests and guidance for alarm systems in medical electrical equipment and medical electrical systems NOTE: IEC 60601-1-8:2006+AMD1:2012+AMD2:2020, Medical electrical equipment - Part 1-8: General requirements for basic safety and essential performance - Collateral standard: General requirements, tests and guidance for alarm systems in medical electrical equipment and medical electrical systems JIS Z 8000-1:2014, Quantities and units- Part 1: General NOTE: ISO 80000-1:2009, Quantities and units - Part 1: General JIS Z 8736-1, Acoustics - Determination of sound power levels of noise sources using sound intensity - Part 1: Measurement at discrete points NOTE: ISO 9614-1, Acoustics - Determination of sound power levels of noise sources using sound intensity - Part 1: Measurement at discrete points IEC 60079-0, Explosive atmospheres — Part 0: Equipment – General requirements” IEC 60079-2, Explosive atmospheres — Part 2: Equipment protection by pressurized enclosure “p” IEC 60079-5, Explosive atmospheres — Part 5: Equipment protection by powder filling “q”		N/A

ATTACHMENT to TRF IEC60601_1U			
Clause	Requirement + Test	Result - Remark	Verdict
	IEC 60079-6, Explosive atmospheres — Part 6: Equipment protection by liquid immersion “o” IEC 60086-4, Primary batteries - Part 4: Safety of lithium batteries NOTE: JIS C 8513 Safety of primary lithium batteries IEC 60112, Methods for the determination of the proof and the comparative tracking indices of solid insulating materials		
2	IEC 60127-1, Miniature fuses - Part 1: Definitions for miniature fuses and general requirements for miniature fuse-links NOTE: JIS C 6575-1 Miniature fuses - Part 1: Definitions of miniature fuses and general requirements for miniature fuse-links IEC 60227-1:2007, Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 1: General requirements NOTE: JIS C 3662-1:2009 Polyvinyl chloride insulated cables of rated voltages up to and including 450/750V - Part 1: General requirements IEC 60245-1:2003+AMD1:2007, Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 1: General requirements IEC 60252-1, AC motor capacitors - Part 1: General - Performance, testing and rating - Safety requirements - Guidance for installation and operation IEC 60320-1, Appliance couplers for household and similar general purposes - Part 1: General requirements IEC 60364-4-41, Low-voltage electrical installations – Part4-41: Protection for safety – Protection against electric shock IEC 60445, Basic and safety principles for man-machine interface markings and identification – Identification of equipment terminals, conductor terminations and conductors IEC 60447, Basic and safety principles for man-machine interface markings and identification – Actuating principles IEC 60730-1:2010, Automatic electrical controls for household and similar use – Part 1:Genral requirements IEC 60747-5-5:2007, Semiconductor devices – Discrete devices – Part 5-5: Optoelectronic devices – Photocouplers		N/A

ATTACHMENT to TRF IEC60601_1U			
Clause	Requirement + Test	Result - Remark	Verdict
	IEC 60851-3:2009, Winding wires - Test methods - Part 3: Mechanical properties		
2	IEC 60851-5:2008, Winding wires - Test methods - Part 5: Electrical properties IEC 60851-6:1996+AMD1:1997, Methods of test for winding wires - Part 6: Thermal properties IEC 61058-1:2000+AMD1:2001+AMD2:2007, Switches for appliances - Part 1: General requirements IEC 62133:2012, Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications NOTE: Although a withdrawn standard, it is cited in 15.4.3.4 of this standard IEC 62133-2, Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications – Part 2: Lithium systems ISO 1853, Conducting and dissipative rubbers, vulcanized or thermoplastic - Measurement of resistivity ISO 2878, Rubber, vulcanized or thermoplastic - Antistatic and conductive products - Determination of electrical resistance ISO 2882:1979, Rubber, vulcanized - Antistatic and conductive products for hospital use - Electrical resistance limits NOTE: Although it is a withdrawn standard, it is referenced in Annex G of this standard. ISO 3746, Acoustics - Determination of sound power levels and sound energy levels of noise sources using sound pressure – Survey method using an enveloping measurement surface over a reflecting plane ISO 7010:2019, Graphical symbols - Safety colours and safety signs - Registered safety signs		N/A
2	ISO 10993 (all parts), Biological evaluation of medical devices NOTE: JIS T 0993-1 Biological evaluation of medical devices - Part 1: Evaluation and testing within a risk management process. However, other Parts than Part 1 and Part 7 have still not been published as JIS.		N/A

ATTACHMENT to TRF IEC60601_1U			
Clause	Requirement + Test	Result - Remark	Verdict
	ISO 23529, Rubber -- General procedures for preparing and conditioning test pieces for physical test methods		
3	**Terminology and definitions**		Pass
3.70	Replace the existing text with: condition in which all means provided for protection against HAZARDOUS SITUATIONS or HARM are intact	Noted	Pass
7	**ME EQUIPMENT identification, marking and documents**		Pass
7.3	**Marking on the inside of ME EQUIPMENT or ME EQUIPMENT parts**		N/A
7.3.4	Add the following NOTE NOTE Corresponding Japanese Industrial Standard for IEC 60127-1: JIS C 6575-1		N/A
7.4	**Marking of controls and instruments**		N/A
7.4.3	Replace the existing first paragraph with the following: Numeric indications of parameters on ME EQUIPMENT shall be expressed in SI units according to JIS Z 8000-1:2014 except the base quantities listed in Table 1 may be expressed in the indicated units, which are used in conjunction with the SI units system or as the approved combination. Replace the title of Table 1 with the following: Units which are used in conjunction with the SI units system or as the approved combination Replace “a” of Table 1 with the following note: NOTE: For consistency, in international standards only the symbol “l” is used for litre, although the symbol “L” is also given in JIS Z 8000-1:2014.		N/A
7.6	**Symbols**		N/A
7.6.2	Replace the existing text with the following: Symbols require by this standard shall conform to the requirements in the referenced JIS, IEC or ISO publication. Annex D provides the symbol graphic and description for these symbols as a quick references.		N/A
7.6.3	Replace the existing text with the following: Symbols used for controls and performance shall confirm to the requirements of the JIS, IEC or ISO publication where the symbol is defined, when applicable. See also 7.2.13.		N/A
7.7	**Colours of the insulation of conductors**		N/A
7.7.4	Under the existing text, add the following: If polyvinyl chloride insulated flexible cord of JIS C 3306:2000 or rubber insulated flexible cord of		N/A

ATTACHMENT to TRF IEC60601_1U			
Clause	Requirement + Test	Result - Remark	Verdict
	JIS C 3301:2000 is used, the conductor may be coloured "white".		
7.7.5	Under the existing text, add the following: If polyvinyl chloride insulated flexible cord of JIS C 3306:2000 or rubber insulated flexible cord of JIS C 3301:2000 is used, conductors may be of the colour specified in these standards.		N/A
7.8	**Indicator lights and controls**		N/A
7.8.1	Replace the description of “Accompanied by sound” column of “HIGH PRIORITY ALARM CONDITION” with the following: Typically, combine Replace the description of “Accompanied by sound” column of “MEDIUM PRIORITY ALARM CONDITION” with the following: Typically, combine Add “e” of Table 2 with the following note: Note: “Cyan” is a common colour name for “bright greenish blue” (see Appendix 1 of JIS Z 8102: 2001).		N/A
7.9	**ACCOMPANYING DOCUMENTS**		N/A
7.9.3.2	Replace the fourth dash with the following: －where replacement of a component could result in an unacceptable RISK, appropriate warnings that identify the nature of the HAZARDOUS SITUATION and, if the MANUFACTURER specifies the component as replaceable by SERVICE PERSONNEL, all information necessary to safely replace the component.		N/A
8	**Protection against electrical hazards from me equipment**		Pass
8.4	**Limitation of voltage, current or energy**		N/A
8.4.4	Replace the non-automatic discharging device with the means of manual discharge of the non-automatic discharging device in the 2nd paragraph. Replace a non-automatic discharging device with a means of manual discharge of the non-automatic discharging device in the last paragraph.		N/A
8.8	**Insulation**		Pass
8.8.3	Between the third dash and the paragraph of “Initially, not more than --”, add the following new paragraph. During the above-mentioned tests, the state of the power switch shall be kept closed.		N/A

ATTACHMENT to TRF IEC60601_1U			
Clause	Requirement + Test	Result - Remark	Verdict
8.11	**Mains parts, components and layout**		N/A
8.11.3.2	Add the following between the first paragraph and the second paragraph: And, rubber insulated flexible cords of JIS C 3301:2000, polyvinyl chloride insulated flexible cords of JIS C 3306:2000 or cords of which the robustness is equal to or more than those may be used Add the following between the second paragraph and the last paragraph: And, in the case of cords of JIS C 3306:2000, shall not use; Polyvinyl chloride insulated flexible cords shall not be used if the temperature of the above-mentioned external metal part exceeds 60 °C, and; Heat-resistant polyvinyl chloride insulated flexible cords shall not be used if the temperature of the above-mentioned external metal part exceeds 75 °C.		N/A
9	**Protection against mechanical hazards of me equipment and me systems**		N/A
9.2	**Hazards associated with moving parts**		N/A
9.2.4	In e), replace a further “MECHANICAL HAZARD” and the original “HAZARD” with a further “HAZARDOUS SITUATION” and the original “HAZARDOUS SITUATION”, respectively.		N/A
9.4	**Instability HAZARDS**		N/A
9.4.4	Add "(four times the weight of the equipment)" to the last sentence of 7th paragraph.		N/A
10	**Protection against unwanted and excessive radiation hazards**		N/A
10.4	Replace the last paragraph with the following: Compliance is checked by following the relevant PROCEDURES of JIS C 6802:2018.		N/A
11	**Protection against excessive temperatures and other hazards**		N/A
11.6	**Overflow, spillage, leakage, ingress of water or particulate matter, cleaning, disinfection, sterilization and compatibility with substances used with the me equipment**		N/A
11.6.7	Replace “ISO 11135-1, ISO 11137-1 or ISO 17665-1” with “JIS T 0801-1:2010, JIS T 0801:2016, JIS T 0806-1:2010 or JIS T 0816-1:2010”		N/A
11.6.8	Replace “the application of appropriate ISO or IEC standards” with “the application of appropriate JIS, ISO or IEC standards”		N/A
16	**ME systems**		N/A

ATTACHMENT to TRF IEC60601_1U			
Clause	Requirement + Test	Result - Remark	Verdict
16.1	Replace in paragraph 3; 2nd dash: “IEC or ISO standards” by “JIS, IEC or ISO standards” Replace the last two paragraphs with the following: Otherwise, non-ME EQUIPMENT shall be those which are in compliance with relevant JIS standards or the Technical Requirements of the Electrical Appliances and Materials Safety Act or which ensure safety equivalent to the said standards/technical requirements. Equipment in which protection against electric shock relies only on BASIC INSULATION shall not be used in an ME SYSTEM. For the measures for ensuring safety, e.g. in the case combined with a separating transformer having DOUBLE INSULATION or REINFORCED INSULATION, equipment only with BASIC INSULATION may be used. *Compliance is checked by inspection of appropriate documents or certificates.*		N/A
16.9	**ME system connections and wiring**		N/A
16.9.2	**Mains parts, components and layout**		N/A
16.9.2.1	In the text of a) replace “IEC/TR 60083” with “JIS C 8303” In the text of c), replace “IEC 60884-1” with “IEC 60884-1 or JIS C 8282-1”. In the text of d) replace “IEC/TR 60083” with “JIS C 8303”		N/A

ATTACHMENT to TRF IEC60601_1U			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT

IEC 60601-1:2005, IEC60601-1:2005/AMD1:2012, IEC60601-1:2005/AMD2:2020
US NATIONAL DIFFERENCES
Medical electrical equipment - Part 1: General requirements for basic safety and essential performance

Differences according to .....:	National standard AAMI ES60601-1:2005, AAMI ES60601-1:2005/AMD1:2012, AAMI ES60601-1:2005/AMD2:2021
TRF template used:.....:	IECEE OD-2020-F3:2022, Ed. 1.2
Attachment Form No.....:	US_ND_IEC60601_1U
Attachment Originator.....:	UL Solutions (US)
Master Attachment.....:	2024-05-17

	National Differences		
4.8	Components of ME EQUIPMENT		Pass
	b) where there is no relevant IEC/ISO standard, the relevant ANSI standard applied; if no relevant ANSI standard exists, the requirements of this standard were applied. (*Replacement of clause 4.8 b*)		Pass
4.10.2	SUPPLY MAINS FOR ME EQUIPMENT AND ME SYSTEMS		Pass
	(Replacement to reflect agreement with the National Electrical Code (NEC): The reference to "500 V" replaced with "600 V" in the second and third dashes.		Pass
	(Addition to reflect agreement with the NEC) In the text of the second-to-last dash of this sub-clause, "and the NEC" added after reference to "IEC 60364-4-41"		Pass
6.0	**Classification of ME EQUIPMENT and ME SYSTEMS**		N/A
6.6	Mode of operation	For Continuous Operation	Pass
	(Addition to reflect agreement with NFPA 70) X-Ray systems are classified as long time operation (> 5 min) or momentary operation (< 5 sec).	Component, to be determined in the end product investigation	N/A
7.0	**ME EQUIPMENT identification, marking and documents**		Pass
7.2.11	Mode of operation	Continuous Operation	Pass

ATTACHMENT to TRF IEC60601_1U			
Clause	Requirement + Test	Result - Remark	Verdict
	(Addition to reflect agreement with NFPA 70) X-Ray systems are marked as long time operation or momentary operation.	No X-Ray system, to be determined in the end use application	N/A
7.2.22	(*Addition of new item*) Colours of medical gas cylinders		N/A
	To reflect agreement with NFPA 99: Cylinders containing medical gases and their connection points are coloured in accordance with the requirements of NFPA 99.		N/A
8.0	**Protection against electrical hazards from ME EQUIPMENT**		Pass
8.2	Requirements related to power sources		N/A
	(Addition to reflect agreement with the NEC) All FIXED ME EQUIPMENT and PERMANENTLY INSTALLED ME EQUIPMENT are CLASS I ME EQUIPMENT.	Component, to be determined in the end product investigation	N/A
8.6.1	Application of requirements		N/A
	(Addition to reflect agreement with NFPA 99) The enclosure of X-ray ME EQUIPMENT operating over 600 Vac, 850 Vdc MAINS VOLTAGE, or containing voltages up to 50 V peak and enclosed in protectively earthed enclosure as well as connections to X-ray tubes and other high voltage components that include high voltage shielded cables are PROTECTIVELY EARTHED.		N/A
	(Addition to reflect agreement with NFPA 99) Non-current carrying conductive parts of X-Ray ME EQUIPMENT likely to become energized are PROTECTIVELY EARTHED		N/A
8.7.3	Allowable values		Pass
	(Deletion to reflect agreement with NFPA 99 which does not allow for allowance greater than the stated values) Delete the second sentence and note to sub-clause 8.7.3 d) so that it reads: d) The allowable values of the EARTH LEAKAGE CURRENT are 5 mA in NORMAL CONDITION and 10 mA in SINGLE FAULT CONDITION	See Table 8.7 in the IEC 60601-1 Test Report.	Pass
8.11	MAINS PARTS, components and layout		N/A
	(Addition to reflect agreement with the NEC) Permanently connected ME EQUIPMENT has provision for the connection of one of the wiring systems that is in accordance with the NEC.	Component, to be determined as part of end product investigation	N/A

ATTACHMENT to TRF IEC60601_1U			
Clause	Requirement + Test	Result - Remark	Verdict
	Exception: Fixed and stationary X-ray ME EQUIPMENT supplied from a branch circuit rated at 30 A or less, and ME EQUIPMENT that is not strictly portable but obviously is intended to be stationary, may be acceptable if provided with a length of attached hard service flexible cord - such as Type S, or the equivalent, for supply connection.		N/A
	The installation of connecting cords between EQUIPMENT parts meets the requirements of the NEC, as applicable. Cable used as external interconnection between units are as follows:		N/A
	1) If exposed to abuse, the cables are Type SJT, SJTO, SJO, ST, SO, STO, or equivalent flexible cord or similar multiple-conductor appliance-wiring material such as computer cable		N/A
	2) If not exposed to abuse, the cables are as indicated in item 1) above or are: i) Type SPT-2, SP-2, or SPE-2, or equivalent, ii) Type SVr, SVRO, SVE, or equivalent flexible cord or similar multiple-conductor appliance wiring material, or iii) An assembly of insulated wires each with a nominal insulation thickness of 0.8 mm (1/32 inch) or more, enclosed in acceptable insulating tubing having a nominal wall thickness of 0.8 mm (1/32 inch) or more.		N/A
	Receptacles provided as part of ME EQUIPMENT or ME SYSTEMS for use in the patient care areas of paediatric wards, rooms, or areas are listed tamper resistant or employ a listed tamper resistant cover in accordance with the NEC.		N/A
	b) For ME EQUIPMENT provided with NEMA configuration non-locking plug types 120 V/15 A, 125 V/20 A, 250 V/15 A, 250 V/20 A “Hospital Grade” mains plug is provided and the POWER SUPPLY CORD is marked.		N/A
8.11.3.2	*(Addition to reflect agreement with the NEC)* The flexible cord is of a type that is acceptable for the particular application. It is acceptable for use at a voltage not less than the rated voltage of the appliance and has an ampacity, as given in the NEC, not less than the current rating of the appliance.....:		N/A
8.11.3.3	Cross-sectional area of POWER SUPPLY CORDS		N/A
	(Addition to reflect agreement with NFPA 99) For X-Ray ME EQUIPMENT with an attachment plug, the current rating on a hospital grade plug should be 2X the maximum input current of the equipment.		N/A

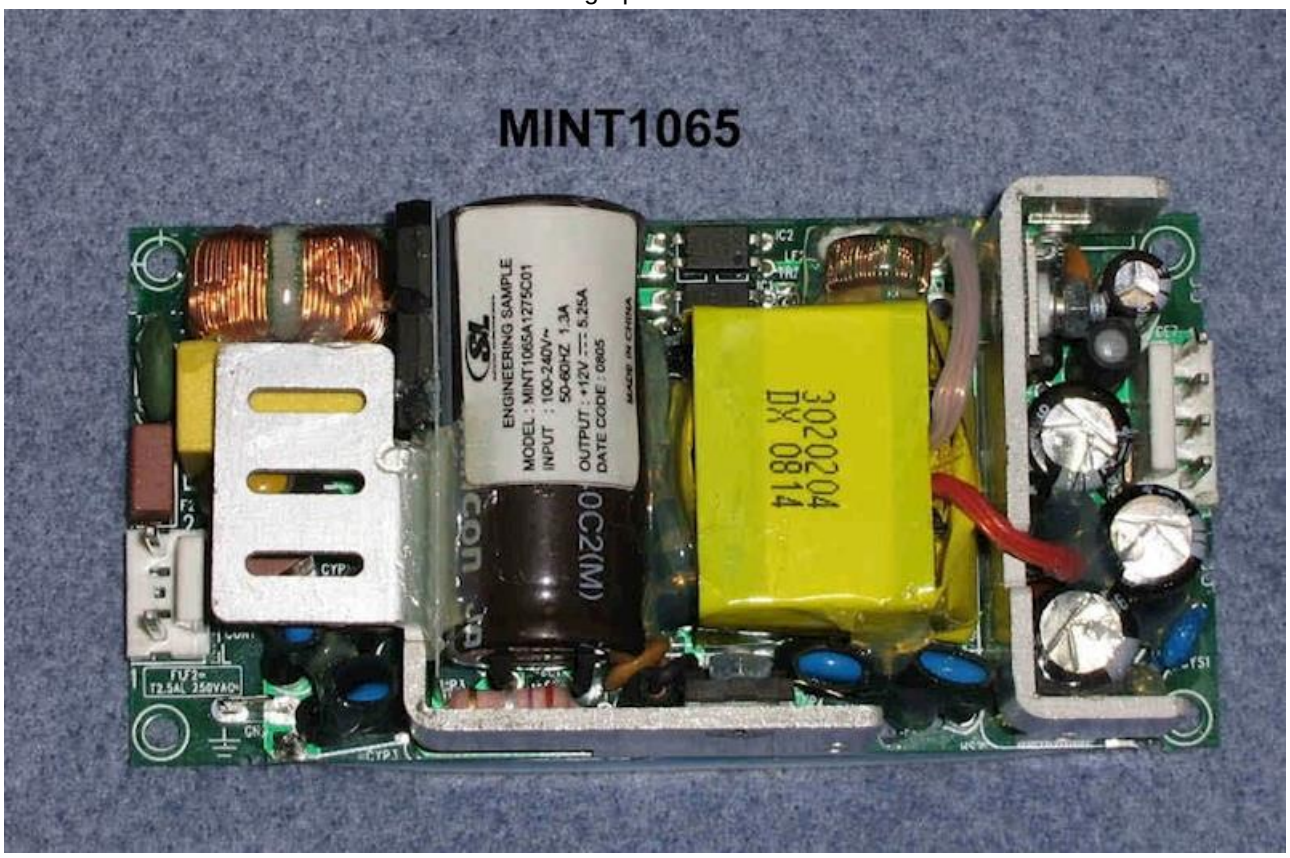
ATTACHMENT to TRF IEC60601_1U			
Clause	Requirement + Test	Result - Remark	Verdict
	1) If exposed to abuse, the cables are Type SJT, SJTO, SJO, ST, SO, STO, or equivalent flexible cord or similar multiple-conductor appliance-wiring material such as computer cable.		N/A
	2) If not exposed to abuse, the cables are as indicated in item 1) above or are: i) Type SPT-2, SP-2, or SPE-2, or equivalent, ii) Type SVr, SVRO, SVE, or equivalent flexible cord or similar multiple-conductor appliance wiring material, or iii) An assembly of insulated wires each with a nominal insulation thickness of 0.8 mm (1/32 inch) or more, enclosed in acceptable insulating tubing having a nominal wall thickness of 0.8 mm (1/32 inch) or more.		N/A
	Receptacles provided as part of ME EQUIPMENT or ME SYSTEMS for use in the patient care areas of paediatric wards, rooms, or areas are listed tamper resistant or employ a listed tamper resistant cover in accordance with the NEC.		N/A
	b) For ME EQUIPMENT provided with NEMA configuration non-locking plug types 120 V/15 A, 125 V/20 A, 250 V/15 A, 250 V/20 A “Hospital Grade” mains plug is provided and the POWER SUPPLY CORD is marked.		N/A

Enclosures

Type	Supplement Id	Description
Photographs	03-01	3-01 MINT1065DY75KZ Series - Top View
Photographs	03-02	3-02 MINT1065DY75KZ Series - Bottom View
Photographs	03-03	3-03 MINT1065DY75CZ Series - Top View - REPRESENTATIVE PHOTO
Photographs	03-04	3-04 MINT1065DY75CZ - Bottom View - REPRESENTATIVE PHOTO
Diagrams	04-01	T1 Transformer Constructional Drawing - Miscellaneous-03
Diagrams	04-02	Component Layout - TOP - 14-Schematics-01.ulb
Diagrams	04-03	Trace Layout - TOP - 15-Schematics-02.ulb
Diagrams	04-04	Component Layout - BOTTOM - 16-Schematics-03.ulb
Diagrams	04-05	Trace Layout - BOTTOM - 17-Schematics-04.ulb
Diagrams	04-06	HS1 2500110
Diagrams	04-07	HS2 2500109
Diagrams	04-08	LF1 3025501176 rev.C
Miscellaneous	07-02	Examples of Models Ratings & Classification Table
Miscellaneous	07-03	CB Letter of Assurance_FINAL
Miscellaneous	07-04	SL AE trade mark
Miscellaneous	07-05	SL trade mark
Miscellaneous	07-06	Date code - 6800006A_0-0

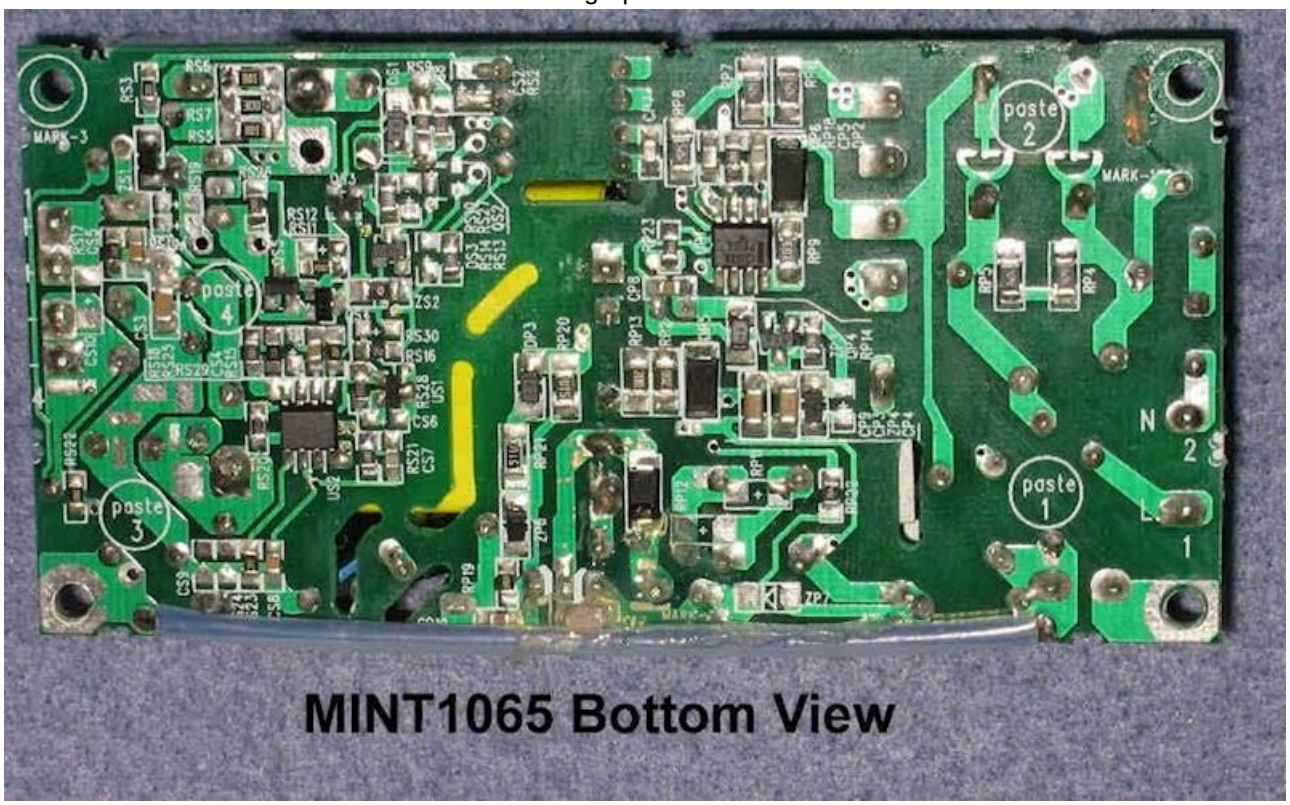
Enclosures

Photographs ID 03-01



Enclosures

Photographs ID 03-02

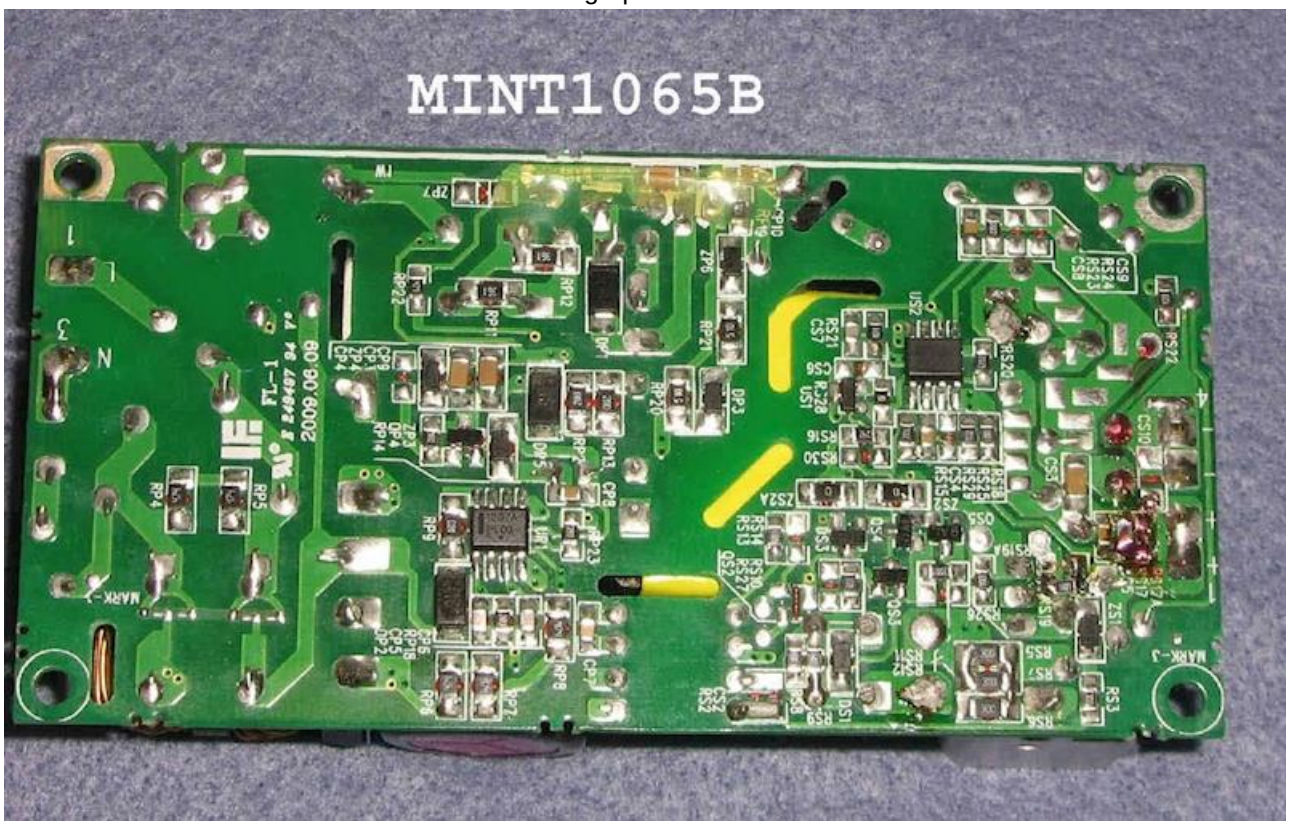


Enclosures

Photographs ID 03-03

Enclosures

Photographs ID 03-04



Enclosures

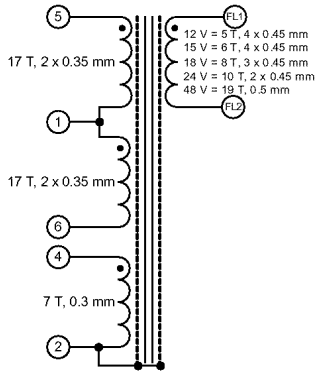
Diagrams ID 04-01

MINT1065A - TRANSFORMER INFORMATION

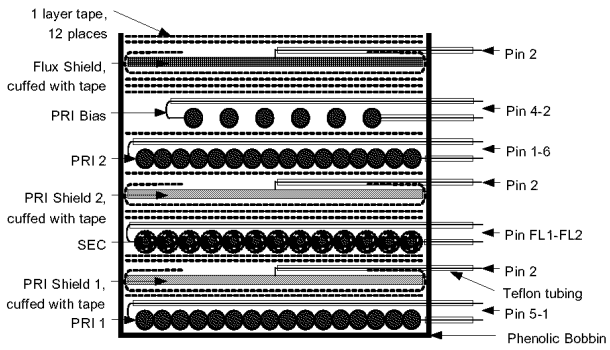
Output Transformer: (T1) Mfr: Dongxing Electronics Co., Ltd. or SL Power Electronics designated
P/N: 3020204 (12 V), 3020216 (15 V), 3020213 (18 V), 3020210 (24 V), 3020211 (48 V)
Construction: Open type
Core: Ferrite, dim 26 x 20 x 19 mm thick
Winding Material: Enamel coated copper magnet wires, and R/C (OBJT2) Furukawa Electric, Type TEX-E, triple insulated magnet wire (Used on SEC Windings only). Complies with the requirements of Annex U and Subclause 2.10.5.4 in IEC/EN/UL/CSA 60950-1.
Bobbin: R/C (QMFZ2), Sumitomo, Type PM-9820 or PM-9630, Phenolic, 0.3 mm min. thick.
Insulation: Class B (130), designated FIS-B1 (OBJY2, E230776)

Location	# Layers	Total Thickness	Material
Outerwrap	2	0.13 mm	3M 1350F-1 or Yahua CT
Cross-over	1	0.2 mm	Teflon tubing
Pri/Pri Shield	1	0.06 mm	3M 1350F-1 or Yahua CT
Pri/Pri Flux Band	3	0.2 mm	3M 1350F-1 or Yahua CT
Pri Shield/Sec	2	0.13 mm	3M 1350F-1 or Yahua CT +
	3	0.11 mm	Polyester insulation on TEX-E magnet wire
Pri/Core	1	0.3 mm	Bobbin
Sec/Core	1	0.3 mm	Bobbin +
	3	0.11 mm	Polyester insulation on TEX-E magnet wire
Fly Leads	1	0.2 mm	Teflon tubing

Winding Information:

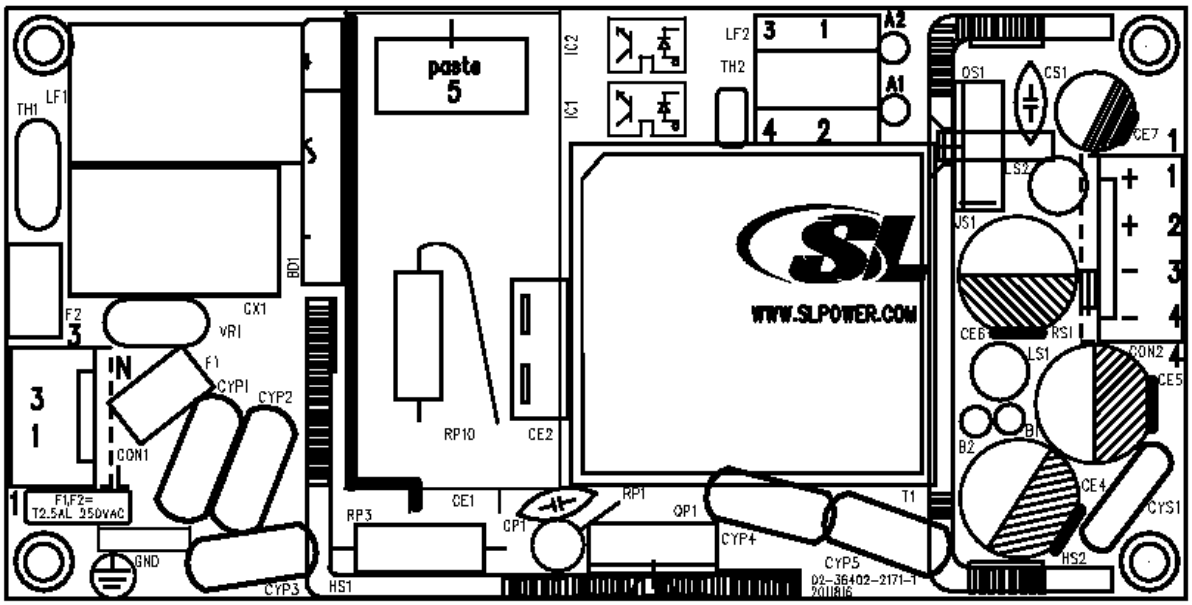


Construction Information:



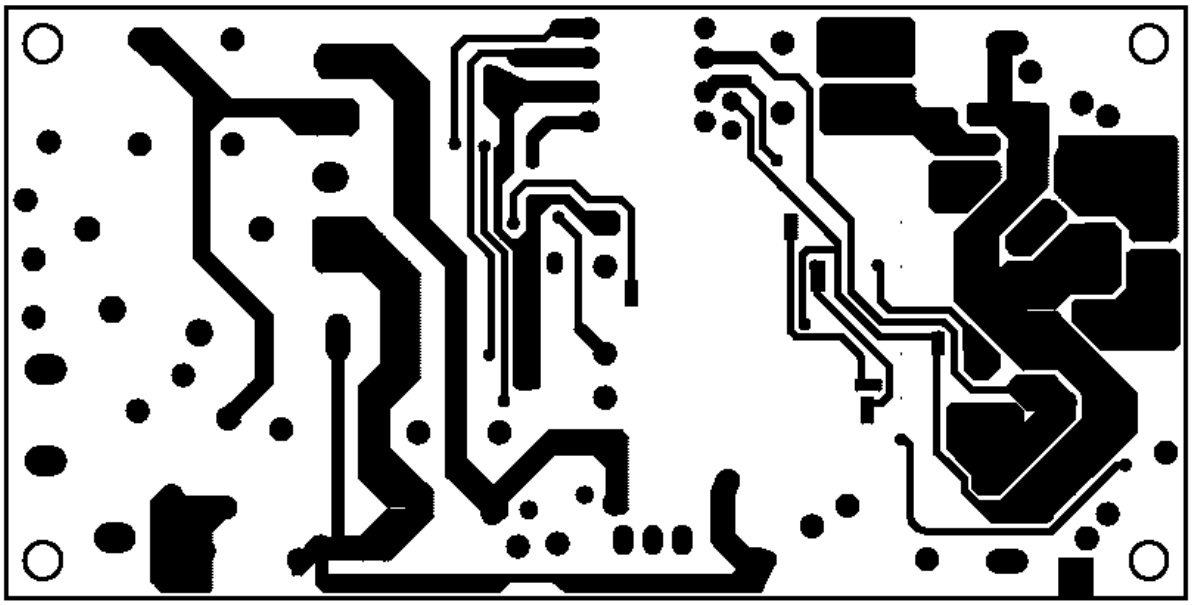
Enclosures

Diagrams ID 04-02



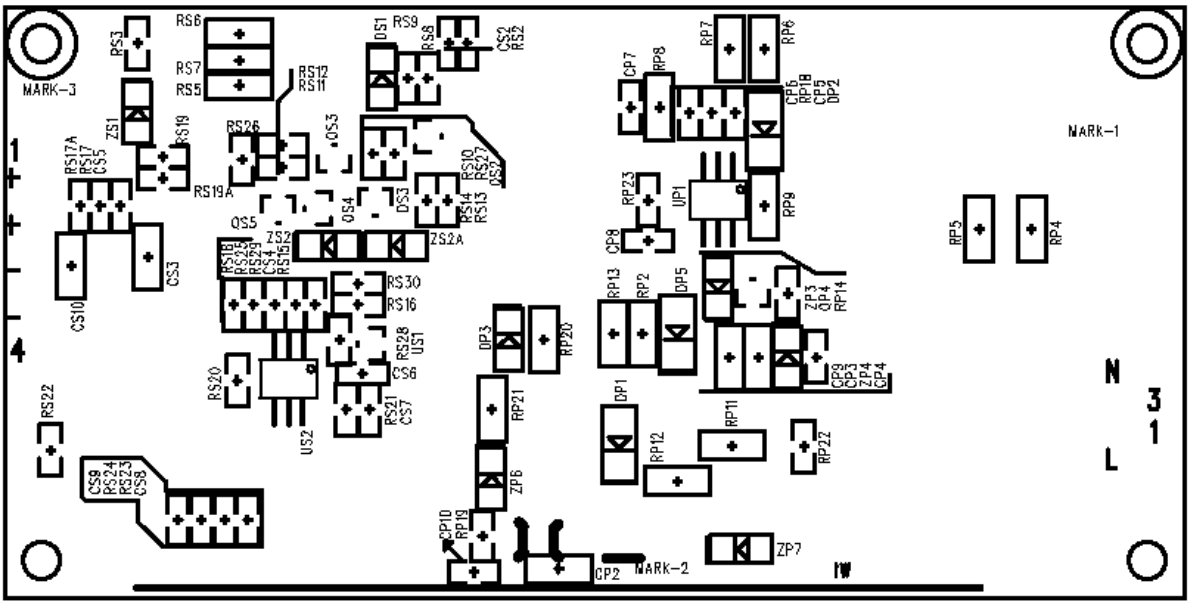
Enclosures

Diagrams ID 04-03



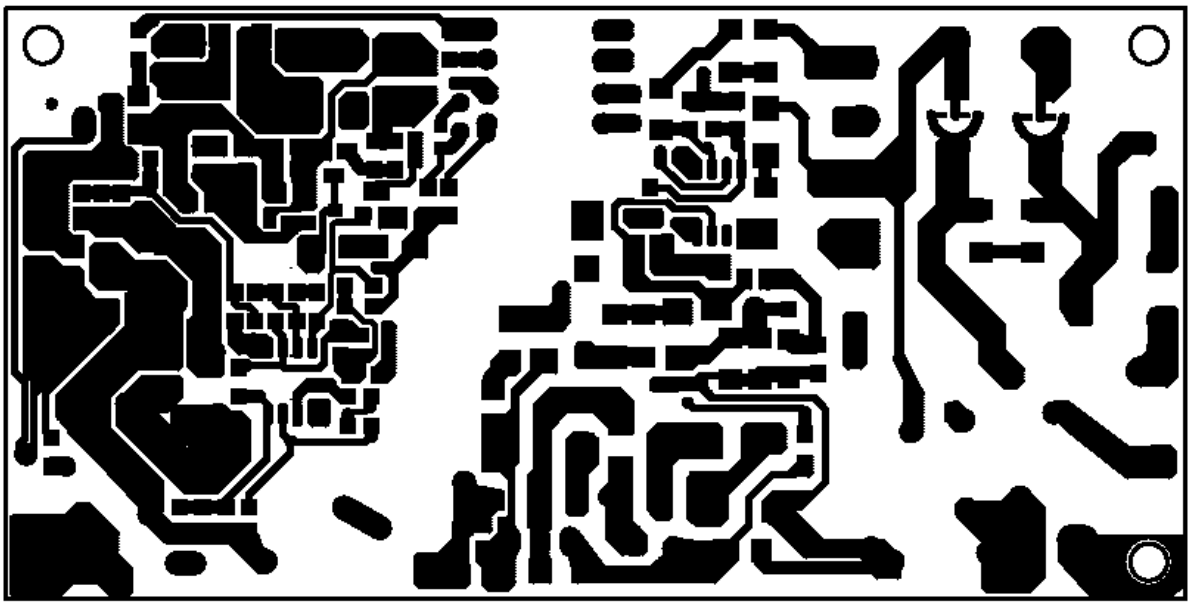
Enclosures

Diagrams ID 04-04



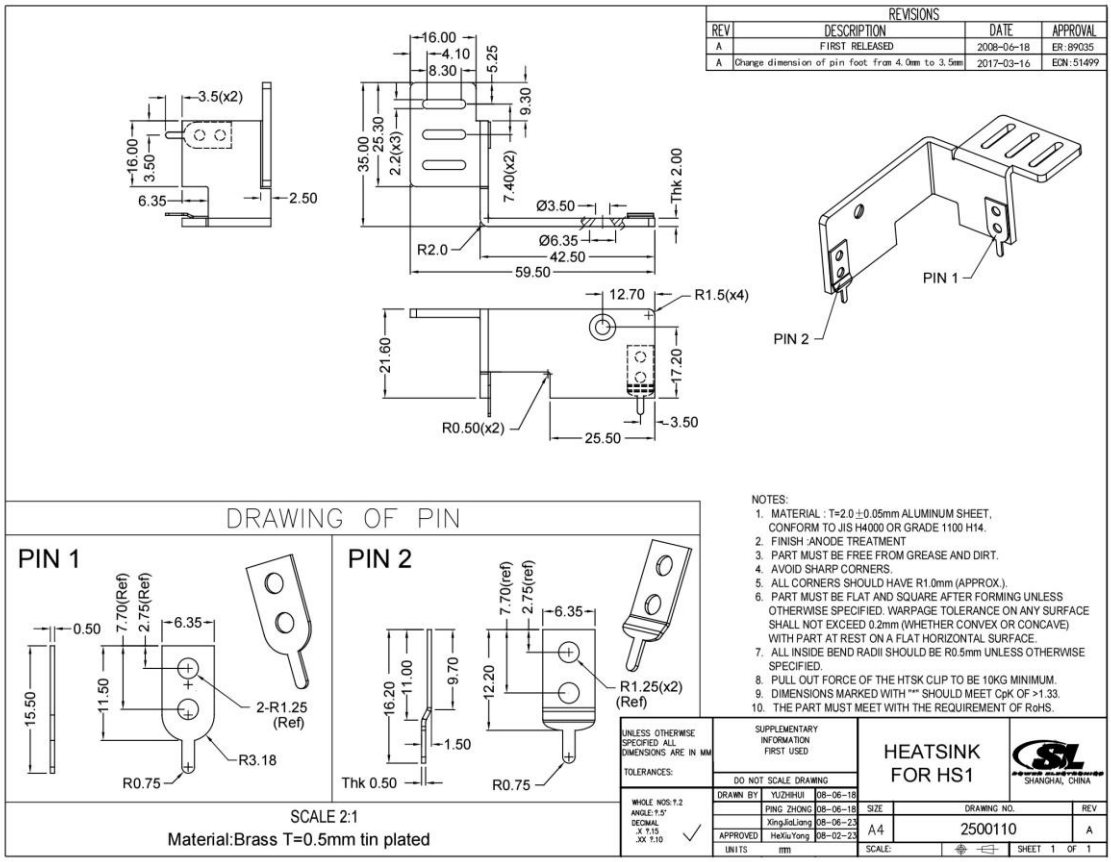
Enclosures

Diagrams ID 04-05



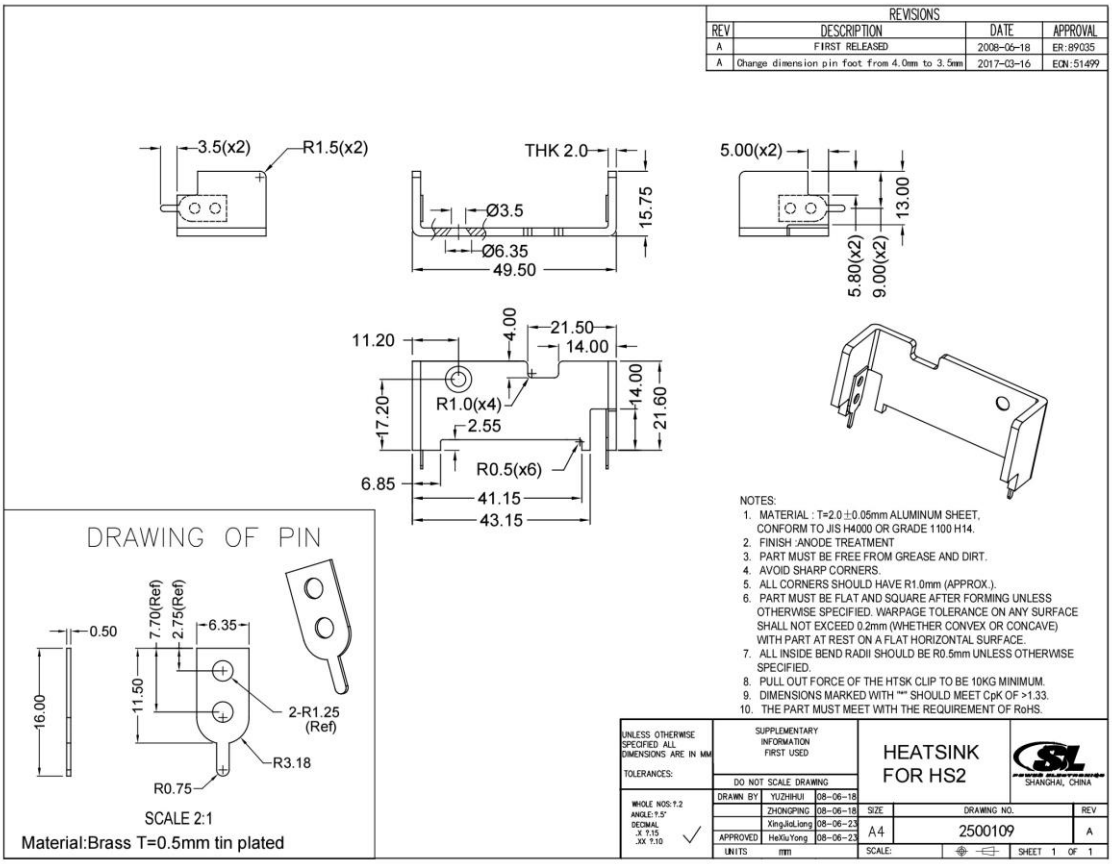
Enclosures

Diagrams ID 04-06



Enclosures

Diagrams ID 04-07



Enclosures

Diagrams ID 04-08

REVISIONS			
REV	DESCRIPTION	DATE	APPROVAL
A	First Released	2008-6-20	ER:89036
B	Change the distance of two windings to 1mm MIN barrier to 2 or 3mm	2008-11-11	ECO:86644
C	Add Pin, change dimension B to 20.5mm	2009-7-15	ECO:96531

Inductor

P/N:3025501176

SUPPLEMENTARY INFORMATION FIRST USED			Inductor		
DO NOT SCALE DRAWING					
DRAWN BY	Qi Feng	2009-7-15	SIZE	DRAWING NO.	REV
CHECK BY			A4	3025501176	C
APPROVED	Xiuyong He	2009-7-15			
	Fumin Teng	2009-7-15		SHEET 1 OF 5	

Enclosures

Diagrams ID 04-08

规格书 SPECIFICATION		页号 Page:	2/5
		日期 Date:	2009.7.15
品名 Part Name:	Common Choke	版本 Revision:	C
型号 Part Number:	3025501176	规格Description:	T16*12*8C

变更记录HISTORY OF CHANGED

版本REV	变更描述DESCRIPTION OF CHANGES	变更原因CHANGE REASON	日期DATE
A	New issue	/	2008.6.12
B	CHANGE THE DISTANCE OF TWO WINDINGS TO 1.0mmMIN,BARRIER TO 2 OR 3 mm,CHANGE THE VOLTAGE FROM 2KV/S TO2KV/MIN 5mA		2008.12.10
C	ADD PIN ,CHANGE DIMENSION B TO 20.5mmMAX,		2009.7.15

更改项目DEVIATION ITEM

ITEM项目	更改内容DEVIATION CONTENT	更改原因CHANGE REASON
材料Material		
其它Other		

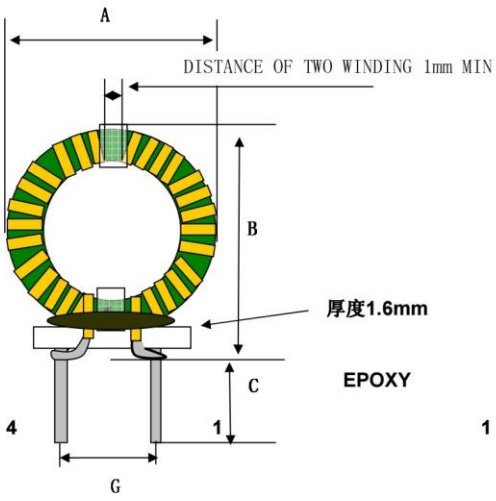
Enclosures

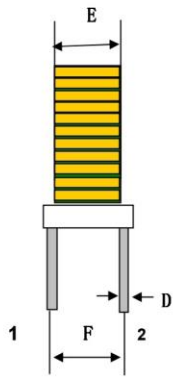
Diagrams ID 04-08

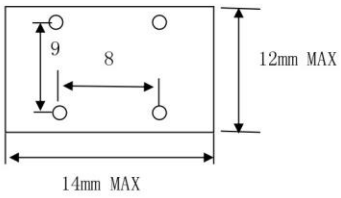
规格书 SPECIFICATION		页号 Page:	3/5
		日期 Date:	2009.7.15
品名 Part Name:	Common Choke	版本 Revision:	C
型号 Part Number:	3025501176	规格Description:	T16*12*8C

1. 外形尺寸(单位:mm)
SCHEMATIC DIAGRAM (UNIT:mm)

尺寸及公差dimension and tolerance		
A	19.5	MAX
B	20.5	MAX
C	5.0	±1.0
D	0.8	±0.1
E	12.5	MAX
F	9.0	±1.0
G	8.0	±1.0





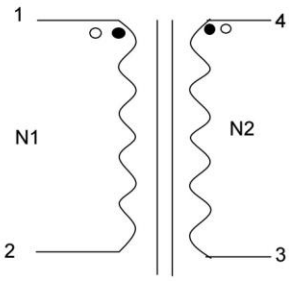


Enclosures

Diagrams ID 04-08

规格书 SPECIFICATION		页号 Page:	4/5
		日期 Date:	2009.7.15
品名 Part Name:	Common Choke	版本 Revision:	C
型号 Part Number:	3025501176	规格Description:	T16*12*8C

2.电路原理图CONSTRUCTION.



" ● " 相同起点Mean same start "▭" 套管Mean same tube
" ○ " 相位相同Mean same phase

3.绕线图WINDING TABLE

No	S:开始F:结束 S-F	铜线及其它 wire or other	圈数 turns	边带 margin	套管 tube	绕线方式 winding way	胶带及圈数 wind tape tuns		备注 remark
W1	1-2	0.50mm	70ref	L) R)		密绕close			
W2	4-3	0.50mm	70ref	L) R)		密绕close			

4.电气特性ELECTRICAL CHARACTERISTIC

NO.	项目ITEM	起始TERMINAL	范围SPEC.	其它REMARK
1	电感 Inductance	1-2;3-4	20mH min	1KHz,1V (LCR-3302)
2	偏差 Difference	| 1-2 ---- 3-4 |	0.5mH max	1KHz,1V (LCR-3302)
3	电阻 DCR	1-2;3-4	0.3Ω MAX	VR131
4	耐压 Electrical Strength	初级-次级 PCOII-SCOIL	AC2.0KV/MIN	AN9632W 50Hz 5mA

Enclosures

Diagrams ID 04-08

规格书 SPECIFICATION		页号 Page:	5/5
		日期 Date:	2009.7.15
品名 Part Name:	Common Choke	版本 Revision:	C
型号 Part Number:	3025501176	规格Description:	T16*12*8C

5.材料清单 MATERIALS LIST

NO.	材料COMPONENT	原料MATERIALS		制造商MANUFACTURES	其它REMARKS
1	铁氧体 CORE	T16*12*8C	R12K	HENGDIAN GROUP DMEGC MAGNETICS CO.,,LTD	
2	铜线 WIRE	UEW+NY 0.5mm -B		SHANGHAI ASIA PACIFIC ELECTRONIC CO LTD	E214423
3	胶EPOXY	9002A/B-34BLACK		WELLS ELECTRONIC MATERIALS (SHANGHAI)CO., LTD	
4	PCB	FR-4 mm		KINGBOARD LAMINATES LTD	E123995
5	边带 BARRIER	2 or 3mm WIDE		JINGJIANGYAHUA PRESSURE SENSITIVE CO.,LTD	E165111

Enclosures

Miscellaneous ID 07-02

Example Models	CLASS I or II	Output Ratings
MINT1065A2475C01	I	24Vdc, 2.7A
MINT1065A1275C01	I	12Vdc, 5.25A
MINT1065A1575C01	I	15Vdc, 4.33A
MINT1065D2475K01	I	24Vdc, 2.7A
MINT1065D4875K01	I	48Vdc, 1.35A
MINT1065D1575K01	I	15Vdc, 4.33A
MINT1065D1875K02	I	18Vdc, 3.5A
MINT1065D1875K01	I	18Vdc, 3.5A
MINT1065D1375C02	II	13Vdc, 5A
MINT1065D1875C02	II	18Vdc, 3.5A

Enclosures

Miscellaneous ID 07-03

SL Power Electronics Corp

UL LLC

Subject: National Differences

Dear UL,

This document confirms that [Company Name] will provide the following items needed to the accepting NCB along with the CB test report.

Markings and Safety Instructions - Safety instructions and markings in the language suitable for countries listed in the attached report will be provided at the time the CB test report is submitted to the accepting NCB.

EMC Test Report – Where detailed in the National Differences, an EMC Test report or Declaration of Conformity will accompany this product when sent to countries that require EMC test results as part of their certification process e.g. Korea.

We confirm that:

Power Supply Cords and Plugs - All power cords and plug assemblies provided with the unit will be certified and suitable for use in the countries listed in the attached CB test report.

Batteries – Upon shipment of products to Switzerland, the requirements of the most up-to-date Swiss Ordinance Annex 2.15, Batteries of SR 814.81 will be met including provision of the necessary markings, documents, and annual reports relative to the disposal of the batteries to the Swiss Authorities.

Restricted Substances – We declare, under our sole responsibility, that our products are in conformity with the requirements of Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS).

SL Power Electronics Corp. declares that the sample submitted for evaluation is representative of the products from each factory.

Richard Yue

(Client Signature)

Enclosures

Miscellaneous ID 07-04

Enclosures

Miscellaneous ID 07-05

Enclosures

Miscellaneous ID 07-06