



# TEST REPORT IEC 60601-1 Medical Electrical Equipment

## Part 1: General requirements for basic safety and essential performance

Report Number.....: 220201762SHA-001

Date of issue....: 2022-04-20

Total number of pages .....: 237

Name of Testing Laboratory Intertek Testing Services Shanghai

preparing the Report ...... Building No. 86, 1198 Qinzhou Road (North) Shanghai 200233

China

Applicant's name .....: GlobTek, Inc.

Address .....: 186 Veterans Dr. Northvale, NJ 07647 USA

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 1T

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

Master TRF .....: 2021-01-22

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Test item description::	cal Power Supply					
Trade Mark(s):	G Glo	bTek, Inc.				
Manufacturer:	10	as applicant				
		134-0606-W2-TA	B GT*	4113 <i>4</i> ′	***** GT*06	060*****
Model/Type reference:		to General produ				000
Ratings::		100-240V $\sim$ , 50-6				
		060*****;120V~,	60Hz,	0.3A fc	or GT-41134-	-0606-W2-TAB
	Output	t:				
	Mode	el .	volta	ge	Max. current	Max. power
	GT*4	1134**03***	3.3V		1.8A	6W
		6060**03***	0.01		11071	
		1134**03.3***				
		6060**03.3***				
	11	1134**04***	3.4-4	V	1.76A	6W
	6060**04***					
	_	1134**06***	4.1-6	V	1.46A	6W
		6060**06*** 1134**12***	6.1-1	2\/	0.98A	6W
	11	6060**12***	0.1-1	<b>Z</b> V	0.96A	OVV
		1134**15***	12.1-	15V	0.50A	6W
	GT*9	6060**15***				
		1134**18***	15.1-	18V	0.40A	6W
		6060**18***				
	11 -	1134**24*** 6060**24***	18.1-	24V	0.33A	6W
		1134**36***	24.1-	36V	0.25A	6W
		6060**36***				
		1134**48*** 6060**48***	36.1-	48V	0.16A	6W
		1134-0606-W2-	6V		1A	6W
	TAB	1104 0000 WZ	0			000
	11				L	1
Responsible Testing Laboratory (as a	applical	ole), testing proc	edure	and te	sting location	on(s):
		Intertek Testing S	Service	s Shan	ghai	
Testing location/ address	:	Building No. 86, 200233 China	1198 C	inzhou	ı Road (Nort	h) Shanghai
Tested by (name, function, signature	):	Vivian Xu(Engine	eer)	Vi 1690	. Xv.	
Approved by (name, function, signate	ure):	Jack Cheng		Vi Fran Janke	1 .	
		(Mandated review	wer)	Janker	neg	
Testing procedure: CTF Stage 1	:					
Testing location/ address	:					
Tested by (name, function, signature	):					



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Арр	roved by (name, function, signature):	
	Testing procedure: CTF Stage 2:	
Test	ing location/ address:	
Test	ed by (name, function, signature):	
Witn	essed by (name, function, signature) .:	
Арр	roved by (name, function, signature):	
	Testing procedure: CTF Stage 3:	
	Testing procedure: CTF Stage 4:	
Test	ing location/ address:	
Test	ed by (name, function, signature):	
Witn	essed by (name, function, signature) .:	
Арр	roved by (name, function, signature):	
Sup	ervised by (name, function, signature) :	



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#### List of Attachments (including a total number of pages in each attachment):

Attachment 1, Photo of EUT, total 9 pages

Attachment 2, USA National difference, total 4 pages;

Attachment 3, Canadian National difference, total 8 pages;

Attachment 4, Korea National difference, total 1 page;

Attachment 5, Japan National difference, total 14 page

Attachment 6, Evaluation sheet for interchangeable plug portion, total 33 pages

#### Summary of testing:

### Tests performed (name of test and test clause):

4.11 Power input

5.7 Humidity preconditioning treatment

5.9.2 Determination of applied part and accessible parts

7.1.2 Legibility of marking

7.1.3 Durability of marking test

8.4.3 Plug discharge test

8.5.4 Working voltage measurement

8.7 Leakage current test

8.8.3 Dielectric strength test

8.8.4.1 Ball pressure test

8.9.4 Creepage and clearance measurements

11.1 Excessive temperatures in ME EQUIPMENT

13.2 Single fault conditions

15.3.2 Push Test

15.3.3 Impact Test

15.3.4 Drop Test

15.3.6 Molding Stress Relief

15.5.1.2 Transformer short-circuit test

15.5.1.3 Transformer overload test

15.5.2 Transformer dielectric

#### **Testing location:**

Intertek Testing Services Shanghai Building No. 86, 1198 Qinzhou Road (North) 200233 Shanghai China

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

The national difference of USA, Canada, Switzerland, Korea have been checked, and found no national differences or deviations from the IEC 60601-1:2005/AMD2:2020 standard.

The group and national differences for the CENELEC countries have been also checked and found no national differences or deviations from the IEC 60601-1:2005/AMD2:2020 standard.

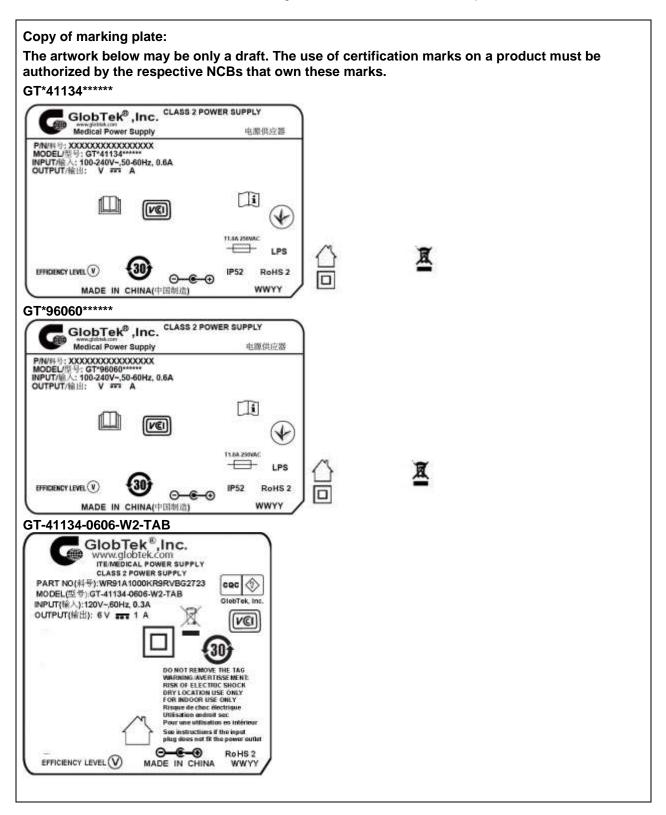
☑ The product fulfils the requirements of IEC 60601-1:2005/AMD2:2020



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Statement concerning the uncertainty of the measurement systems used for the tests
☑ Internal procedure used for type testing through which traceability of the measuring uncertainty has been established:
Procedure number, issue date and title:
GMS-QC-12 Estimation of Measurement Uncertainty, 1-July-2012 Initial Release.
Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.
☐ Statement not required by the standard used for type testing







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Test item particulars	
Classification of installation and use:	Direct plug-in for power adapter model.
	Appliance coupler for one type of open frame model series.
	Final evaluation in end product.
Supply Connection	Direct plug-in for power adapter model.
Device type (component/sub-assembly/	
equipment/ system):	Component
Intended use (Including type of patient, application location)	PSU (external power adapter or internal power supply board)
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:	2022-03-02
Date (s) of performance of tests:	2022-03-02 to 2022-04-10
General remarks:	
"(See Enclosure #)" refers to additional information ap "(See appended table)" refers to a table appended to the	
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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	<ul><li>✓ Yes</li><li>☐ Not applicable</li></ul>
When differences exist; they shall be identified in the	he General product information section.
Name and address of factory (ies):	Factory 1 GlobTek, Inc. 186 Veterans Dr. Northvale, NJ 07647 USA
	Factory 2 GlobTek (Suzhou) Co., Ltd Building 4, No. 76, Jin Ling East Rd., Suzhou Industrial Park, Suzhou, JiangSu 215021, China



#### General product information and other remarks:

Product covered by this report is medical power supply module, which can be used as a part of medical equipment. The different models are corresponding to four structure types respectively. First structure is direct plug-in power adapter with interchangeable plug portion, which is Class II apparatus. It can be used with different plug types. The evaluation reports of the different plug types are also attached with this report. Two pieces of outer enclosure are enclosed with ultrasonic welding without screw.

Second structure is open frame type which also provides a protective earth bonding terminal on the PCB. Interchangeable appliance inlets can be mounted on the device, which can provide earthing connection or not. The installation and use for the insulation construction shall be finally determined in the end product.

Third structure Model GT-41134-0606-W2-TAB is special direct plug-in type for North America market, with particular housing, varistor and fixed NEMA 1-15P plug.

Fourth structure is used in model series GT\*41134\*\*\*\*\* and GT\*96060\*\*\*\*\*\*, it use F1 fuse in primary circuit and a LED indicator (optional) used in secondary circuit.

GT\*96060\*\*\*\*\*\* is identify with GT\*41134\*\*\*\*\* except for model name.

GT\*96060\*\*\*\*\*\* and GT\*41134\*\*\*\*\* were evaluated for maximum manufacturer's recommended ambient

of 50 °C.

GT-41134-0606-W2-TAB was evaluated for maximum manufacturer's recommended ambient of 50 °C. All the types are designed for continuous operation and no applied part is defined.

The insulation construction of EUT is evaluated as 2MOPP in this report as customer's request. Model similarity:

GT\*41134\*\*\*\*\*\*, GT\*96060\*\*\*\*\*\*

The 1st "\*" part can be 'M' or '-' or 'H' for market identification and not related to safety.

The 2nd "\*" part can be "-" or "CC","-" = Constant Voltage Model, CC = Constant Current Model.

The 3rd "\*" denotes the rated output wattage designation, which can be "01" to "06", with interval of 1

The 4th "\*" denotes the standard rated output voltage designation, which can be "03", "03.3", "04", "06",

"12", "15", "18", "24", "36" or "48".

The 5th "\*" is optional deviation, subtracted from standard output voltage, which can be "-0.1" to "-11.9" with interval of 0.01, or blank to indicate no voltage different.

The 4th "\*" and 5th "\*" together denote the output voltage, with a range of 3.3 - 48 volts.

The 6th "\*" =Blank means directly plug in model series,

- = "-F" means Class I open frame model with connector which is fixing on the PCB.
- = "-FW" means Class II open frame model with connector which is fixing on the PCB.
- = "-FWT2" means open frame model with appliance inlet with Class II inlet C8 respectively,
- = "-FT3A" means open frame model with appliance inlet with Class I inlet C6 respectively,
- = "-FT3" means open frame model with appliance inlet with Class I inlet C14 respectively,

The last \* denote any six character = 0-9 or A-Z or ()[] or - or blank for marketing purposes. Test performed on 3.3V, 5V, 9V and 48V output model as worst condition, and also performed on model GT-41134-0606-W2-TAB for reference. For open frame model, temperature rise, leakage current, protective earthing construction and mechanical strength shall be revaluated on this component when installed in the end product..



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

#### **Technical Considerations:**

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.

Determination of the test conclusion is based on IEC Guide 115 in consideration of measurement uncertainty.

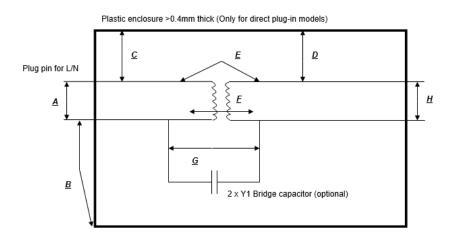


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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict

#### **INSULATION DIAGRAM**



Only for open frame

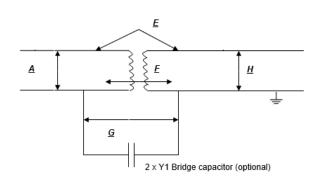


TABLE: INSULATION DIAGRAM								Р		
Pollu	ution degree			2	2					_
Overvoltage category				: I	II					_
Altitude 5000m, use multiple factor 1.29 for MOPP, multiple factor 1.48 for MOOP						_				
	Additional details on parts considered as applied parts						_			
Are a Number and type of Means of Protection:  MOOP, MOPP  Number and type of Vrms Vpk  Number and type of Vrms Vpk  Norking voltage creepage (mm)  Neguired creepage (mm)  Required creepage (mm)  Required creepage (mm)  Required creepage (mm)  Remarks							(S			
Α	МООР	IIIb	240	-	2.4	3.0	3.1**	3.1**	Mains o	pposite



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	IEC 60601-1										
Cla	use	Requi	rement +	Test				Result - Remark			Verdict
										polarity	
В	2MOPF	)	IIIb	240	-	8	6.5	10.4	10.4	Mains to	enclosure
С	2MOPF	•	IIIb	240	-	-	-	-	-	Mains to of enclos (>0.4mm plastic en solid insu	sure thick nclosure,
D	2MOPF	•	IIIb	-	Max. 48	-	-	-	-	Seconda external enclosur (>0.4mm plastic en solid insu	of e I thick nclosure,
E	2MOPF	0	IIIb	250*	-	8	6.5	8.1	8.1	Mains to seconda	ry on PCB
F	2MOPF	·	IIIb	250*	-	-	-	-	-	Mains to seconda transforn approved used	ry on ner,
G	2MOPF	D.	IIIb	250*	-	8	6.5	8.2	8.2	Mains to seconda bridge ca see 8.5.7 8.8.3	ry on apacitors,
Н	2MOPF	)	IIIb	-	Max. 48	-	-	-	-	Accessib per 8.4.2	

#### **Supplementary Information:**

#### **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.

<sup>\*</sup> Working voltage measured for all models, the maximum value is less than 250Vrms.

<sup>\*\*</sup> For all types of model, the minimum value is recorded.



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	IEC 6060	1-1	
Clause	Requirement + Test	Result - Remark	Verdict

4	GENERAL REQUIREMENTS						
4.1	Requirements of this standard applied in NORMAL USE and reasonably foreseeable misuse	Risk management procedure GTQPR05000 A2 5.0	Р				
4.2	RISK MANAGEMENT PROCESS FOR ME EQUIPMENT OR	ME SYSTEMS	Р				
4.2.2	General requirement for RISK MANAGEMENT - PROCESS complies with ISO14971 (2019)	See Appended RM Results Table 4.2.2.	Р				
4.2.3	Evaluating RISK		Р				
4.2.3.1	a) Compliance with the standard reduces residual risk to an acceptable level	Risk management procedure GTQPR05000	Р				
	b) Manufacturer has defined risk acceptability criteria in the RISK MANAGEMENT PLAN	Risk management plan GT-RMPLAN2014-001	Р				
	c) When no specific technical requirements provided manufacturer has determined HAZARDS or HAZARDOUS SITUATIONS exists.		P				
	- HAZARDS or HAZARDOUS SITUATIONS have been evaluated using the RISK MANAGEMENT PROCESS.		Р				
4.2.3.2	MANUFACTURER has addressed HAZARDS or HAZARDOUS SITUATIONS not specifically addressed in the IEC 60601-1 series.		Р				
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.	No essential performance	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	Risk Management Report 6.1.19 5years	Р				
4.5	Alternative RISK CONTROL methods utilized:		N/A				



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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	RESIDUAL RISK resulting from the alternative RISK CONTROL measures or tests is acceptable and comparable to RESIDUAL RISK resulting from application of this standard	No alternative risk control method.	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	No such parts.	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		P
	MANUFACTURER RISK ANALYSIS was used to determine failures to be tested	risk analysis reference: (ISO 14971 Cl4.2-4.4_)	P
	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 for simulated physical test.	P
4.8	All components and wiring whose failure could result in a HAZARDOUS SITUATION used according to their applicable ratings, unless specified:	All components and wiring used according to applicable rating.	Р
	Components and wiring exception in the standard or by RISK MANAGEMENT PROCESS		Р
	RISK MANAGEMENT PROCESS assesses components to identify components where the failure results in a HAZARDOUS SITUATION for components used outside their ratings	No components used outside their ratings.	N/A
	MANUFACTURER identified components where the failure results in a HAZARDOUS SITUATION:	See Table 8.10 b.	Р



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Clause		Result - Remark	Verdict
	Components determined to be acceptable where used as a MEANS OF PROTECTION	RMF Reference to specific isks: Risk Management Report	Р
	Reliability of components used as MEANS OF PROTECTION assessed for conditions of use in ME EQUIPMENT, and they complied with one of the following		P
	a) Applicable safety requirements of a relevant IEC or ISO standard		Р
	b) Requirements of this standard applied in the absence of a relevant IEC or ISO standard		Р
4.9		No component with high- ntegrity characteristics	N/A
	RISK MANAGEMENT FILE includes an assessment to determine if the failure of components results in unacceptable RISK		N/A
	Components identified and required to be COMPONENTS WITH HIGH INTEGRITY CHARACTERISTIC:		N/A
4.10	Power supply		Р
4.10.1		Suitable for connection to a SUPPLY MAINS.	Р
4.10.2	Maximum rated voltage for ME EQUIPMENT intended to be connected to SUPPLY MAINS:	Not hand-held equipment.	N/A
		00-240Vac, single phase, ess than 4KVA	Р
		00-240Vac, single phase, ess than 4KVA	N/A
	- 500 V for all other ME EQUIPMENT and ME SYSTEMS		N/A
4.11	Power input		Р
	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	Р



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IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
5	GENERAL REQUIREMENTS FOR TESTING ME	EQUIPMENT	Р
5.1	Test not performed when analysis indicated condition being tested was adequately evaluated by other tests or methods	RM not provided: All the applicable tests were conducted.	Р
	RISK MANAGEMENT FILE identifies combinations of simultaneous independent faults that could result in a HAZARDOUS SITUATION.  (ISO 14971 CI. 5.2-5.5)		N/A
5.3	Tests conducted within the environmental conditions specified in technical description		Р
	Temperature (°C), Relative Humidity (%)	0-40℃, 20%-80%RH	
	Atmospheric Pressure (kPa):	700-1060hPa	
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)	85/264V or 102/132V considered	Р
	b) ME EQUIPMENT marked with a RATED frequency range tested at the least favourable frequency within the range (Hz)	60Hz considered	Р
	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	85/264V, 60Hz; 102/132V, 60 Hz considered	P
	d) ME EQUIPMENT intended for only d.c. supply connection tested with d.c. and influence of polarity considered	Not for d.c. supply connection.	N/A
	e)ME EQUIPMENT tested with alternative ACCESSORIES and components specified in ACCOMPANYING DOCUMENTS to result in the least favourable conditions	No alternative accessory	N/A
	f) ME EQUIPMENT connected to a separate power supply as specified in instructions for use	No separate power supply used	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	No additional testing should be considered.	N/A
	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 +32°C for indicated time	Pre-condition performed: 26°C, 93%RH for 168 h according to client's request.	_



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		IEC 60601-1	Report No. 2202017623	
Clause	Re	equirement + Test	Result - Remark	Verdict
5.9		Determination of APPLIED PARTS and ACCESSIBLE	IBLE PARTS	
5.9.1 APPLIED PARTS identified by inspection and reference to ACCOMPANYING DOCUMENTS		See clause 4.6 Remark	Р	
5.9.2		ACCESSIBLE PARTS		Р
5.9.2.1		Accessibility determined using standard test finger of Fig. 6	See Appended Table 5.9.2	Р
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	No enter opening.	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	No such part.	N/A
		Conductive parts of actuating mechanisms not considered ACCESSIBLE PARTS when removal of handles, knobs, required use of a TOOL:	No such part.	N/A
6		CLASSIFICATION OF ME EQUIPMENT AND ME	SYSTEMS	Р
6.2		CLASS I ME EQUIPMENT, externally powered	Class I without open frame structure	Р
		CLASS II ME EQUIPMENT, externally powered	Class II only for open frame structure	Р
		INTERNALLY POWERED ME EQUIPMENT	Not internally powered	N/A
		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 part.	N/A
		TYPE BF APPLIED PART	No applied part.	N/A
		TYPE CF APPLIED PART	No applied part.	N/A
		DEFIBRILLATION-PROOF APPLIED PARTS	No applied part.	N/A
6.3		ENCLOSURES classified according to degree of protection against ingress of water and particulate matter as per IEC 60529	Final determination in the end product for open frame model.	N/A
6.4		ME EQUIPMENT or its parts intended to be sterilized classified according to method(s) of sterilization in instructions for use	No sterilization required	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	Power supply not investigated for oxygen rich environment	N/A



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	IEC 60601-1	
Clause	Requirement + Test Result - Remark	Verdict
6.6	CONTINUOUS or Non-CONTINUOUS OPERATION: Continuous operation	Р
7	ME EQUIPMENT IDENTIFICATION, MARKING, AND DOCUMENTS	Р
7.1.2	Legibility of Markings Test for Markings specified in Clause 7.2-7.6	Р
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	Р
7.2	Marking on the outside of ME EQUIPMENT or ME EQUIPMENT parts	Р
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	Р
	Remaining markings fully recorded in ACCOMPANYING DOCUMENTS	N/A
	Markings applied to individual packaging when impractical to apply to ME EQUIPMENT  No such condition	N/A
	Single use item marked	N/A
7.2.2	ME EQUIPMENT marked with:	Р
	- the name or trademark and contact information of the MANUFACTURER  See attached copy of Marking Plate	Р
	- a MODEL OR TYPE REFERENCE	Р
	- a serial number or lot or batch identifier; and	Р
	- the date of manufacture or use by date	Р
	Detachable components of the ME EQUIPMENT not marked; misidentification does not present an unacceptable risk, or	N/A
	RISK MANAGEMENT FILE includes an assessment of the RISKS relating to misidentification of all detachable parts	N/A
	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



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Clause	Requirement + Test Result	- Remark Verdict
7.2.3	Symbol 11 on Table D.1 used, optionally, advice to OPERATOR to consult ACCOMPANYING DOCUMENTS	ch safety sign used. 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	ch accessories. 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	ceive power from other nent.
	- 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
	<ul> <li>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</li> </ul>	N/A
	<ul> <li>Special connector style used that is not commonly available on the market and listing of the required details in the instructions for use.</li> </ul>	N/A
7.2.6	Connection to the Supply Mains	Р
	Marking appearing on the outside of part containing SUPPLY MAINS connection and, adjacent to connection point	Р
	For PERMANENTLY INSTALLED ME EQUIPMENT, NOMINAL supply voltage or range marked inside or outside of ME EQUIPMENT	permanently installed. N/A
	- RATED supply voltage(s) or RATED voltage range(s) with a hyphen (-) between minimum and maximum voltages (V, V-V)	OV or 120V <b>P</b>
	Multiple RATED supply voltages or multiple RATED supply voltage ranges are separated by (V/V)	marked. N/A
	- Nature of supply and type of current Single	phase, AC.
	Symbols 1-5, Table D.1 (used for same '~' is use parameters	sed. P



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Clause	Requirement + Test	Result - Remark	Verdict
	RATED supply frequency or RATED frequency range in hertz	50-60Hz or 60Hz	Р
	- Symbol 9 of Table D.1 used for CLASS II ME EQUIPMENT	Symbol 9 is used for Class II adapter model.	Р
7.2.7	RATED input in amps or volt-amps, (A, VA):	0.6A or 0.3A	Р
	RATED input in amps or volt-amps, or in watts when power factor exceeds 0.9 (A, VA, W)	0.6A or 0.3A	Р
	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)	No such range provided.	N/A
	Input at mean value of range marked when range limits do not differ by more than 10 % from mean value (A, VA, W)	No such range provided.	N/A
	Marking includes long-time and most relevant momentary volt-ampere ratings when provided, each plainly identified and indicated in ACCOMPANYING DOCUMENTS (VA)	No such range provided.	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)	No such range provided.	N/A
7.2.8	Output connectors		Р
7.2.8.2	Output connectors are marked, except for MULTIPLE SOCKET-OUTLETS or connectors intended for specified ACCESSORIES or equipment		Р
	Rated Voltage (V), Rated Current (A)	See model similarity	_
	Rated Power (W), Output Frequency (Hz):	See model similarity	_
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:	Ordinary type.	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 in power supply	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



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Clause	Requirement + Test	Result - Remark	Verdict
	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		Р
	DUTY CYCLE for ME EQUIPMENT intended for non- CONTINUOUS OPERATION appropriately marked to provide maximum "on" and "off" time	Continuous operation.	N/A
7.2.12	Type and full rating of a fuse marked adjacent to ACCESSIBLE fuse-holder	No accessible fuse-holder	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	EUT is component power supply only, no physiological effect	N/A
	Nature of HAZARD and precautions for avoiding or minimizing the associated RISK described in instructions for use	Component, to be determined as part of end product.	N/A
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	No such high voltage terminal device.	N/A
7.2.15	Requirements for cooling provisions marked:	Component, to be determined as part of end product.	N/A
7.2.17	Packaging marked with special handling instructions for transport and/or storage	No special protective packaging measures have to be taken.	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



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Clause	Requirement + Test Result - Remark	Verdict
	RISK MANAGEMENT FILE includes the assessment to determine premature unpacking of ME EQUIPMENT or its parts could result in an unacceptable RISK	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 RARTH 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	N/A
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)	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
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	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	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	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	Specification adjacent to component	Р
	Voltage (V) and Current (A) rating	See the table 8.10	_
	Operating speed(s), size & breaking capacity:	See the table 8.10	_
7.3.5	PROTECTIVE EARTH TERMINAL marked with symbol 6 of Table D.1		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		N/A
7.3.6	Symbol 7 of Table D.1 marked on FUNCTIONAL EARTH TERMINALS	No FE terminal.	N/A
7.3.7	117	No hazard if connections are interchanged.	Р
	Terminal markings included in ACCOMPANYING DOCUMENTS when ME EQUIPMENT too small to accommodate markings	Marked on EUT	N/A
	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	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		Р
7.3.8	"For supply connections, use wiring materials suitable for at least X °C" or equivalent, marked at the point of supply connections	No such high temperature	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	No power switch	N/A
	- indicated by an adjacent indicator light, or		N/A



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	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
7.4.2	Different positions of control devices/switches indicated by figures, letters, or other visual means	No such device.	N/A
	RISK MANAGEMENT FILE identifies controls where a change in setting during NORMAL USE results in an unacceptable RISK		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 numeric indications of parameters.	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



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Clause	Requirement + Test Result - Remark	Verdict	
	SAFETY SIGN with established meaning used No safety sign used.	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	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	Р	
7.6.1	Meanings of symbols used for marking described in instructions for use	Р	
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  No PE conductor is provided.	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"  No power supply cord.	N/A	
7.7.5	Colours of conductors in POWER SUPPLY CORDS in accordance with IEC 60227-1 or IEC 60245-1	N/A	



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Clause	Requirement + Test	Result - Remark	Verdict
7.8	Indicator lights and controls		Р
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		Р
	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
7.8.2	Red used only for emergency control	No such indicator light.	N/A
7.9	ACCOMPANYING DOCUMENTS		Р
7.9.1	ME EQUIPMENT accompanied by documents containing instructions for use, and a technical description		P
	ACCOMPANYING DOCUMENTS identify ME EQUIPMENT by the following, as applicable:		Р
	Name or trade-name of MANUFACTURER and contact information for the RESPONSIBLE ORGANIZATION can be referred to:	GlobTek, Inc.	P
	- MODEL or TYPE REFERENCE	GT*41134***** GT*96060***** GT-41134-0606-W2-TAB	Р
	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



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Clause	Requirement + Test	Result - Remark	Verdict
7.9.2	Instructions for use include the required informat	ion	Р
7.9.2.1	<ul> <li>use of ME EQUIPMENT as intended by the MANUFACTURER:</li> </ul>	Power adapter.	Р
	- frequently used functions,	Power supply only.	Р
	<ul><li>known contraindication(s) to use of ME EQUIPMENT</li></ul>	No contraindication.	Р
	- parts of the ME EQUIPMENT that are not serviced or maintained while in use with the patient		N/A
	<ul> <li>name or trademark and address of the MANUFACTURER</li> </ul>	GlobTek, Inc.	Р
	- MODEL OR TYPE REFERENCE	GT*41134***** GT*96060***** GT-41134-0606-W2-TAB	Р
	Instruction for use included the following when the PATIENT is an intended OPERATOR:		N/A
	- the PATIENT is an intended OPERATOR		N/A
	<ul> <li>warning against servicing and maintenance while the ME EQUIPMENT is in use</li> </ul>		N/A
	- 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		P
	Instructions for use are in a language acceptable to the intended operator		Р
7.9.2.2	Instructions for use include all warning and safety notices		Р
	Warning statement for CLASS I ME EQUIPMENT included	Checked on end product for open frame model	N/A
	Warnings regarding significant RISKS of reciprocal interference posed by ME EQUIPMENT during specific investigations or treatments		P
	Information on potential electromagnetic or other interference and advice on how to avoid or minimize such interference		Р
	Warning statement for ME EQUIPMENT supplied with an integral MULTIPLE SOCKET-OUTLET provided	No multiple socket-outlet.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict	
	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	No such connection.	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	No such additional power source.	N/A	
	RISK MANAGEMENT FILE assesses the RISK resulting from leakage of batteries		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:	No internal electrical power source.	N/A	
	Warning indicating ME EQUIPMENT must be connected to an appropriate power source when loss of power source would result in an unacceptable RISK:	Further evaluation is needed on end product level.	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		P	
	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	No SIP/SOP.	N/A	
	APPLIED PARTS specified	No applied parts	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	No need.	N/A	
7.9.2.7	Instructions provided indicating not to position ME EQUIPMENT to make it difficult to operate the disconnection device	Further evaluation is needed on end product level.	N/A	
7.9.2.8	Necessary information provided for OPERATOR to bring ME EQUIPMENT into operation	No need.	N/A	



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7.9.2.9	Information provided to operate ME EQUIPMENT	No detachable parts or ACCESSORIES.	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	No such message.	N/A
7.9.2.11	Information provided for the OPERATOR to safely terminate operation of ME EQUIPMENT	Appliance coupler or plug	Р
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	No need for cleaning, disinfection and sterilization.	N/A
	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	Further evaluation is needed on end product level.	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	No detachable parts or accessories.	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	No disposal of waste.	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)		Р



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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	Р
7.9.3	Technical description	Р
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	
	-information required in 7.2	Р
	-permissible environmental conditions of use including conditions for transport and storage:	Р
	-characteristics of the ME EQUIPMENT, including range(s), accuracy, and precision of the displayed values or an indication where they can be found	Р
	-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



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Clause	Requirement + Test Result - Remark	Verdict
	Technical description separable from instructions for use contains required information, as follows	Р
	-information required by 7.2	Р
	-applicable classifications in Clause 6, warning and safety notices, and explanation of SAFETY SIGNS marked on ME EQUIPMENT	Р
	brief description of the ME EQUIPMENT, how the ME EQUIPMENT functions and its significant physical and performance characteristics; and	Р
	a unique version identifier On page head	N/A
	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	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  Appliance coupler or plug	Р



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8	PROTECTION AGAINST ELECTRICAL HAZARDS F	ROM ME EQUIPMENT	Р
8.1	Limits specified in Clause 8.4 not exceeded for ACCESSIBLE PARTS and APPLIED PARTS in NORMAL or SINGLE FAULT CONDITIONS		Р
	RISK MANAGEMENT FILE identifies conductors and connectors where breaking free results in a HAZARDOUS SITUATION	RM2014-001 Cl.6 EL3	P
8.2	Requirements related to power sources		N/A
8.2.1	Connection to a separate power source		N/A
	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	nection to mains only	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	nnection to AC mains only	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	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		Р



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Clause	Requirement + Test	Result - Remark	Verdict
8.4.2	ACCESSIBLE PARTS and APPLIED PARTS		Р
	a) Currents from, to, or between PATIENT CONNECTIONS did not exceed limits for PATIENT LEAKAGE CURRENT & PATIENT AUXILIARY CURRENT	No patient connections.	P
	b) LEAKAGE CURRENTS from, to, or between ACCESSIBLE PARTS did not exceed limits for TOUCH CURRENT	See appended Table 8.7	Р
	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	The likelihood of the current flowing through body of operator to be determined in end-product evaluation	P
	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.)	See appended Table 8.4.2	P
	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):	See appended Table 8.4.2	Р
	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:	No such part.	N/A
	<ul> <li>internal parts touchable by test pin in Fig 8 inserted through an opening in an ENCLOSURE; and</li> </ul>	No internal part is touchable for adapter model. Open frame model shall be determined in end product evaluation	N/A
	<ul> <li>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</li> </ul>		N/A
	Test pin or the test rod inserted through relevant openings with minimal force of no more than 1 N	No opening for adapter model. Open frame model shall be determined in end product evaluation	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	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
	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	No such part for adapter model. Open frame model shall be determined in end product evaluation	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	Р
	When voltage exceeded 60 V, calculated or measured stored charge didn't exceed 45µC:	See appended Table 8.4.3	Р
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:	No such part.	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		Р
8.5.1	MEANS OF PROTECTION (MOP)		Р
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		Р



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Clause	Requirement + Test	Result - Remark	Verdict
	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		P
	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		P
	Components and wiring forming a MEANS OF PROTECTION comply with 8.10		Р
8.5.1.2	MEANS OF PATIENT PROTECTION (MOPP)		Р
	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		Р
	PROTECTIVE EARTH CONNECTIONS forming a MEANS OF PATIENT PROTECTION complied with Cl. 8.6		P
	Y1 or Y2 capacitor complying with standard IEC 60384-14 considered one MEANS OF PATIENT PROTECTION	See appended Tables 8.8.3 and 8.10	P
	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	See appended Tables 8.8.3 and 8.10	P
	Two capacitors used in series, each RATED for total WORKING VOLTAGE across the pair and have the same NOMINAL capacitance		Р
	Voltage Total Working (V) and C 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	See table 8.10	_
	Measurement of Air Clearance and Creepage distance on the outside	See insulation table	_
	Dielectric strength test across optocoupler	See table 8.8.3	_
8.5.1.3	MEANS OF OPERATOR PROTECTION (MOOP)	The separation between primary and secondary was evaluated by MOPP.	N/A
	Solid insulation forming a MEANS OF OPERATOR PROTECTION complied with:		N/A



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Clause	Requirement + Test	Result - Remark Verdi	
	- 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	
	- 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 CI. 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	N/A	
	Voltage τotal Working (V) and C 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	_	
	Measurement of Air Clearance and Creepage distance on the outside	_	
	Dielectric strength test across optocoupler	_	
	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	
<u> </u>		N/A	
		N/A	



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Clause	Requirement + Test	Result - Remark	Verdict
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	N/A
	Separation requirement not applied between multiple functions of a single F-TYPE APPLIED PART		N/A
	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:		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



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Clause	Requirement + Test Result - Remark	Verdict
	RISK MANAGEMENT FILE includes an assessment of the RISK of metal ACCESSIBLE PARTS contacting a source of voltage or LEAKAGE CURRENT above the limits	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 fro all PATIENT CONNECTIONS by one MEANS OF PATIENT PROTECTION for a WORKIN VOLTAGE equal to MAXIMUM MAINS VOLTAGE	om
	- cannot be connected to earth or hazardous voltage while the PATIENT CONNECTIONS are in contact with PATIENT	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	N/A
	(ISO 14971 Cl. 5.2-5.5, 6)	_
8.5.4	WORKING VOLTAGE	P -
	<ul> <li>Input supply voltage to ME EQUIPMENT was</li> <li>RATED voltage or voltage within RATED range resulting in highest measured value (V)</li> </ul>	P
	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)	d P



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Clause	Requirement + Test	Result - Remark	Verdict
	- 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	Р
	<ul> <li>Intentional or accidental earthing of PATIENT regarded as a NORMAL CONDITION for WORKING VOLTAGE involving a PATIENT CONNECTION not connected to earth</li> </ul>	No patient connection.	N/A
	- 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 part.	N/A
	<ul> <li>WORKING VOLTAGE for DEFIBRILLATION-PROOF APPLIED PARTS determined disregarding possible presence of defibrillation voltages</li> </ul>	No defibrillation-proof 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 motor.	N/A
8.5.5	DEFIBRILLATION-PROOF APPLIED PARTS		N/A
8.5.5.1	Classification "DEFIBRILLATION-PROOF APPLIED PART" applied to one APPLIED PART in its entirety	No defibrillation-proof applied parts.	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 potent EQUIPMENT	ial equalization of ME	N/A
8.6.1	Requirements of 8.6.2 to 8.6.8 applied		N/A



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Clause	Requirement + Test	Result - Remark	Verdict	
	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	
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		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:	No such construction.	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	No such construction.	N/A	
8.6.3	PROTECTIVE EARTH CONNECTION not used for a moving part,	No such construction.	N/A	
	except when MANUFACTURER demonstrated in RISK MANAGEMENT FILE connection will remain reliable during EXPECTED SERVICE LIFE		N/A	
8.6.4	a) PROTECTIVE EARTH CONNECTIONS carried fault currents reliably and without excessive voltage drop	Final judgement in end product for open frame model.	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	



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Clause	Requirement + Test Result - Remark	Verdict		
	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		
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	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		
	<ul> <li>Instructions for use contain information on function and use of POTENTIAL EQUALIZATION CONDUCTOR together with a reference to requirements of this standard</li> </ul>	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	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	N/A		
	ACCOMPANYING DOCUMENTS include a statement that the third conductor in the POWER SUPPLY CORD is only a functional earth.	N/A		



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Clause	Requirement + Test Result - Remark	Verdict
	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	Р
8.7.1	a) Electrical isolation providing protection against electric shock limits currents to values in 8.7.3	Р
	b) Specified values of EARTH LEAKAGE, TOUCH, PATIENT LEAKAGE, and PATIENT AUXILIARY CURRENTS applied in combination of conditions in appended Table 8.7	P
8.7.2	Allowable values specified in 8.7.3 applied under SINGLE FAULT CONDITIONS of 8.1 b), except	Р
	<ul> <li>where insulation used in conjunction with a PROTECTIVE EARTH CONNECTION, insulation short circuited only under conditions in 8.6.4 b)</li> <li>Final determination in end product for open frame model.</li> </ul>	N/A
	- the only SINGLE FAULT CONDITION for EARTH LEAKAGE CURRENT was interruption of one supply conductor at a time	N/A
	- LEAKAGE CURRENTS and PATIENT AUXILIARY CURRENT not measured in SINGLE FAULT CONDITION of short circuiting of one constituent part of DOUBLE INSULATION	Р
	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	Р
8.7.3	Allowable Values	Р
	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	Р
	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 (ITNC, ITSFC)	Р
	d) Earth Leakage Current did not exceed 5 mA in NORMAL CONDITION and 10 mA in SINGLE FAULT CONDITION (Ienc, Iesrc)	N/A



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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	P		
	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:	N/A		
8.7.4	LEAKAGE and PATIENT AUXILIARY CURRENTS measurements	N/A		
8.8	Insulation	Р		
8.8.1	Insulation relied on as MEANS OF PROTECTION, including REINFORCED INSULATION subjected to testing	Р		
	Insulation exempted from test (complies with clause 4.8)	Р		
	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	Р		
	Solid insulation forming SUPPLEMENTARY or REINFORCED INSULATION for a PEAK WORKING VOLTAGE greater than 71 V provided with:	P		
	a) 0.4 mm, min, distance through insulation, or Enclosure is 2.0mm thick	Р		
	b) does not form part of an ENCLOSURE and not subject to handling or abrasion during NORMAL USE, and comprised of:	Р		
	at least two layers of material, each passed the appropriate dielectric strength test  See appended Table 8.8.3	Р		
	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	Р		



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	Posult - Pomark	Verdict
Requirement + Test	Result - Remark	verdict
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		N/A
e) Finished wire with spirally wrapped or multi- layer extruded insulation, complying with Annex L	Certified triple insulated wire is used.	Р
BASIC INSULATION: minimum two wrapped layers or one extruded layer		N/A
SUPPLEMENTARY INSULATION: minimum two layers, wrapped or extruded		N/A
<ul> <li>REINFORCED INSULATION: minimum three layers, wrapped or extruded</li> </ul>		Р
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	Additional protection by insulating tape.	P
Finished component complied with routine dielectric strength tests of 8.8.3:	See appended Table 8.8.3	N/A
Tests of Annex L not repeated since material data sheets confirm compliance		N/A
Dielectric Strength		Р
Solid insulating materials with a safety function withstood dielectric strength test voltages:	See appended Table 8.8.3	Р
Insulation other than wire insulation		Р
Resistance to heat retained by all insulation and insulating partition walls during EXPECTED SERVICE LIFE of ME EQUIPMENT		Р
ME EQUIPMENT and design documentation examined:	See the table 8.10	Р
	INSULATION required between windings of wound components separated by interleaved insulation complying with a) or b), or both, except when  c) Wire with solid insulation, other than solvent based enamel, complying with a)  d) Wire with multi-layer extruded or spirally wrapped insulation complying with b) and complying with Annex L  e) Finished wire with spirally wrapped or multi-layer extruded insulation, complying with Annex L  – BASIC INSULATION: minimum two wrapped layers or one extruded layer  – SUPPLEMENTARY INSULATION: minimum two layers, wrapped or extruded  REINFORCED INSULATION: minimum three layers, wrapped or extruded  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  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	Result - Remark  BASIC, SUPPLEMENTARY, and REINFORCED INSULATION required between windings of wound components separated by interleaved insulation complying with a) or b), or both, except when  c) Wire with solid insulation, other than solvent based enamel, complying with a)  d) Wire with multi-layer extruded or spirally wrapped insulation complying with b) and complying with Annex L  e) Finished wire with spirally wrapped or multi-layer extruded insulation, complying with Annex L  — BASIC INSULATION: minimum two wrapped layers or one extruded layer  — SUPPLEMENTARY INSULATION: minimum two layers, wrapped or extruded  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  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



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Clause	Requirement + Test	Result - Remark	Verdict
	RISK MANAGEMENT FILE examined in conjunction with resistance to moisture, dielectric strength, and mechanical strength tests	GT-RM2014-001 Cl. 6 EL4	Р
	Satisfactory evidence of compliance provided by manufacturer for resistance to heat	No evidence is provided.	N/A
	Tests conducted in absence of satisfactory evidence for resistance to heat	Ball pressure test performed	Р
	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:	See appended Table 8.8.4.1	Р
	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	P
	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	No such material	N/A
8.8.4.2	Resistance to environmental stress		Р
	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		P
	Ceramic and similar materials not tightly sintered, and beads alone not used as SUPPLEMENTARY OF REINFORCED INSULATION	No such material	N/A
	Insulating material with embedded heating conductors considered as one MEANS OF PROTECTION but not two MEANS OF PROTECTION	No heating conductor	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	No such material	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	No such material	N/A



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Clause	Re	equirement + Test	Result - Remark	Verdict
8.9		CREEPAGE DISTANCES and AIR CLEARANCES		Р
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	Р
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 defibrillation-proof applied 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	The spacing between parts of opposite polarity fulfils the values of Table 11.	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	No such construction.	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
		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



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Clause	Requirement + Test Result - Remark	Verdic
	- 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	P
	Force was applied between bare conductors and outside metal enclosure when measuring CREEPAGE DISTANCES and AIR CLEARANCES  Refer to Insulation Diagram supplemental information for location and force used	
8.10	Components and wiring	Р
8.10.1	Components of ME EQUIPMENT likely to result in an unacceptable RISK by their movements mounted securely	Р
	RISK MANAGEMENT FILE includes an assessment of RISKS related to unwanted movement of components	3 <b>P</b>
8.10.2	Conductors and connectors of ME EQUIPMENT adequately secured or insulated to prevent accidental detachment	6 <b>P</b>
	Stranded conductors are not solder-coated when secured by clamping means to prevent HAZARDOUS SITUATIONS	P
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	N/A
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 cord connected hand-he control device, no cord connected foot-operated control device.	eld <b>N/A</b>
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



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	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		N/A
	a) Internal cables and wiring adequately protected against contact with a moving part or from friction at sharp corners and edges	No internal moving part.	N/A
	b) Wiring, cord forms, or components are not likely to be damaged during assembly or during opening or closing of ACCESS COVERS	No access covers	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 guiding roller.	N/A
8.10.7	a) Insulating sleeve adequately secured	See appended Table 8.10	Р
	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	Within its rated characteristics. See the table 8.10.	P
	c) Insulated conductors of ME EQUIPMENT subject to temperatures exceeding 70 °C	No such high temperature is acquired by test indicated in 11.1.	Р
8.11	Mains parts, components and layout		Р
8.11.1	a) ME EQUIPMENT provided with means of electrically isolating its circuits from SUPPLY MAINS simultaneously on all poles	Appliance coupler for open frame model. Plug for direct plug-in model.	P
	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)	Not permanently installed.	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		N/A
	- the isolation device specified in the ACCOMPANYING DOCUMENTS		Р
	b) Means of isolation incorporated in ME EQUIPMENT, or if external, described in technical description	Appliance coupler for open frame model. Plug for direct plug-in model.	P
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	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		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		N/A
	f) A suitable plug device used in non- PERMANENTLY INSTALLED ME EQUIPMENT with no SUPPLY MAINS SWITCH	Direct plug-in type	Р
	g) A fuse or a semiconductor device not used as an isolating means		Р
	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		Р
	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	No such part.	N/A
	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 multiple socket-outlets.	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	No 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):	No power supply cord.	N/A



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	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	No power supply cord.	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.	No power supply cord.	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	No power supply cord.	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	No power supply cord.	N/A
	b) Cord anchorage of POWER SUPPLY CORD is an insulating material, or		N/A
	<ul> <li>metal, insulated from conductive ACCESSIBLE PARTS non-PROTECTIVELY EARTHED by a MEANS OF PROTECTION, or</li> </ul>		N/A
	<ul> <li>metal provided with an insulating lining affixed to cord anchorage</li> </ul>		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



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	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	supply cord. N/A
	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 D² 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	erminal device. 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



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Clause	Requirement + Test	Result - Remark	Verdict
	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 mains terminal device.	N/A
	d) MAINS TERMINAL DEVICES not accessible without use of a TOOL		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		N/A
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		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		Р
	A fuse or OVER-CURRENT RELEASE provided in each supply lead for CLASS I and CLASS II ME EQUIPMENT with a functional earth connection:	See appended Table 8.10	Р
	- in at least one supply lead for other single- phase CLASS II ME EQUIPMENT	See appended Table 8.10	Р
	<ul> <li>neutral conductor not fused for PERMANENTLY INSTALLED ME EQUIPMENT</li> </ul>	Not permanently installed.	N/A
	<ul> <li>fuses or OVER-CURRENT RELEASES omitted due to provision of two MEANS OF PROTECTION between all parts within MAINS PART</li> </ul>	No such construction	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:	See appended Table 8.10 To be evaluated on end product	Р
	•	Î.	Р



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Clause	Requirement + Test Result - Remark	Verdict
	Justification for omission of fuses or OVER- CURRENT RELEASES documented	N/A
8.11.6	Internal wiring of the MAINS PART	Р
	a) Cross-sectional area of internal wiring in a MAINS PART between MAINS TERMINAL DEVICE or APPLIANCE INLET and protective devices suitable	10 for <b>P</b>
	b) Cross-sectional area of other wiring in MAINS PART and sizes of tracks on printed wiring circuits are sufficient	10 for <b>P</b>
9	PROTECTION AGAINST MECHANICAL HAZARDS OF ME EQUIPMEN AND ME SYSTEMS	Т Р
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	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	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:  No trapping zone.	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



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Clause	Requirement + Test Result - Remark	Verdict
	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
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



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	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
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	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



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Clause	Requirement + Test	Result - Remark	Verdict
	d) Emergency stopping device(s) are not part of normal operation of ME EQUIPMENT		N/A
	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
	<ul> <li>and uncontrolled or unintended movement of ME EQUIPMENT that could result in an unacceptable RISK prevented</li> </ul>		N/A
	<ul> <li>Situations where PATIENT is subjected to unacceptable RISKS due to proximity of moving parts, removal of normal exit routes, or other HAZARDS prevented</li> </ul>		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		N/A



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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:	No rough surface / sharp edge.	Р
9.4	Instability HAZARDS	1	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	Direct plug-in type.	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
9.4.2.4.2	Force required to move MOBILE ME EQUIPMENT did not exceed 200 N		N/A



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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
9.5.1	Suitability of means of protecting against expelled parts determined by assessment and examination of RISK MANAGEMENT FILE	N/A
	All identified RISKS associated with expelled parts mitigated to an acceptable level	N/A



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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 ultrasou	ınd) and vibration	N/A
9.6.1	Human exposure to acoustic energy and vibration from ME EQUIPMENT doesn't result in unacceptable RISK and	Component, to be determined as part of end product	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	Component, to be determined as part of end product	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)		_
	<ul> <li>140 dBC (peak) sound pressure level for impulsive or impact acoustic energy (dB)</li> </ul>		_
9.6.2.2	RISK MANAGEMENT FILE examined		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	No vibration.	N/A
	- 2.5 m/s² for a cumulative time of 8 h during a 24 h period (m/s²)		N/A
	<ul> <li>Accelerations for different times, inversely proportional to square root of time (m/s²)</li> </ul>		N/A
9.7	Pressure vessels and parts subject to pneumatic and hydraulic pressure N/A		N/A
9.7.2	Pneumatic and hydraulic parts of ME EQUIPMENT or ACCESSORIES met requirements based on examination of RISK MANAGEMENT FILE	No such parts.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	No unacceptable RISK resulted from loss of pressure or loss of vacuum		N/A
	<ul> <li>No unacceptable RISK resulted from a fluid je caused by leakage or a component failure</li> </ul>	et	N/A
	<ul> <li>Elements of ME EQUIPMENT or an ACCESSORY especially pipes and hoses leading to an unacceptable RISK protected against harmful external effects</li> </ul>	,	N/A
	<ul> <li>Reservoirs and similar vessels leading to an unacceptable RISK are automatically depressurized when ME EQUIPMENT is isolated from its power supply</li> </ul>		N/A
	Means provided for isolation, or local depressurizing reservoirs and similar vessels, and pressure indication when above not possible		N/A
	<ul> <li>All elements remaining under pressure after isolation of ME EQUIPMENT or an ACCESSORY fro 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 activit</li> </ul>	om	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	he	N/A
9.7.5	A pressure vessel withstood a HYDRAULIC TEST PRESSURE when MAXIMUM EQUIPMENT PRESSUR was more than 50 kPa, and product of MAXIMU EQUIPMENT PRESSURE and volume was more than 200 kPa	E IM	N/A
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 to MANUFACTURER'S data, ME EQUIPMENT, RISK MANAGEMENT FILE, and functional tests	se by	N/A
	a) Connected as close as possible to pressure vessel or parts of system it is to protect	•	N/A



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Clause		Result - Remark Verd	dict
	b) Installed to be readily accessible for inspection, maintenance, and repair	N/A	<b>A</b>
	c) Could be adjusted or rendered inoperative without a TOOL	N/A	4
	d) With discharge opening located and directed as to not to release material towards any person	N/A	4
	e) With discharge opening located and directed as to not to deposit material on parts that could result in an unacceptable RISK	N/A	4
	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	Δ.
	g) No shut-off valve provided between a pressure-relief device and parts it is to protect	N/A	4
	h) Min number of cycles of operation 100 000, except for one-time use devices (bursting disks)	N/A	4
	RISK MANAGEMENT FILE includes an assessment of the risks associated with the discharge opening of the pressure relief device	N/A	4
9.8	HAZARDS associated with support systems	N/A	4
9.8.1	ME EQUIPMENT parts designed to support loads or provide actuating forces when a mechanical fault could constitute an unacceptable RISK:	No support systems. N/A	4
	<ul> <li>Construction of support, suspension, or actuation system complied with Table 21 and TOTAL LOAD</li> </ul>	N/A	4
	Means of attachment of ACCESSORIES prevent possibility of incorrect attachment that could result in an unacceptable RISK	N/A	4
	- 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	4



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Clause	Requirement + Test Result -	Remark Verdict
	<ul> <li>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</li> </ul>	N/A
	<ul> <li>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</li> </ul>	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	N/A
	All identified RISKS are mitigated to an acceptable level	N/A
	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	N/A
9.8.3	Strength of PATIENT or OPERATOR support or suspension	n 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



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Clause	Requirement + Test	Result - Remark	Verdict	
	RISK MANAGEMENT FILE includes assessment of the RISKS associated with physical injuries and accidental loosening of fixings		N/A	
	SAFE WORKING LOAD of ME EQUIPMENT or its par	te	N/A	
	supporting or suspending PATIENTS or OPERATORS is sum of mass of PATIENTS or mas of OPERATORS plus mass of ACCESSORIES supported by ME EQUIPMENT or its parts		IVA	
	Supporting and suspending parts for adult human PATIENTS or OPERATORS designed for a PATIENT or OPERATOR with a min mass of 135 k and ACCESSORIES with a min mass of 15 kg, unless stated by MANUFACTURER	g	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 state in ACCOMPANYING DOCUMENTS	ed	N/A	
	Examination of markings, ACCOMPANYING DOCUMENTS, and RISK MANAGEMENT FILE confirmed compliance	:	N/A	
9.8.3.2	a) Entire mass of PATIENT or OPERATOR distributed over an area of 0.1 m <sup>2</sup> on a foot restemporarily 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 the 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 OF OPERATOR IN NORMAL USE maintaine BASIC SAFETY and ESSENTIAL PERFORMANCE confirmed test	d	N/A	



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Clause	Requirement + Test Result - Remark	Verdict
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
	<ul> <li>Has TENSILE SAFETY FACTORS for all parts not less than Table 21, row 7</li> </ul>	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
	-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 OF OPERATOR	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	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 DEVICE	ES	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 EXC HAZARDS	CESSIVE RADIATION	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 X-radiation.	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
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		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	No such radiation.	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.	No laser	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
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)	No such radiation.	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	No such radiation.	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	No such radiation.	N/A
11	PROTECTION AGAINST EXCESSIVE TEMPER HAZARDS	ATURES AND OTHER	Р
11.1	Excessive temperatures in ME EQUIPMENT		Р
11.1.1	Temperatures on ACCESSIBLE PARTS did not exceed values in Tables 22 and	See appended Table 11.1.1	Р
	Surfaces of test corner did not exceed 90 °C		Р
	THERMAL CUT-OUTS did not operate in NORMAL CONDITION		Р
	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)	10 s ≤ t < 1 min	Р
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 applied 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		_



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Clause	Requirement + Test Result - Remark	Verdict
	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
	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	N/A
	Probability of occurrence and duration of contact for parts likely to be touched and for APPLIED PARTS documented in RISK MANAGEMENT FILE	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	Р
11.2.1	ENCLOSURE has strength and rigidity necessary to prevent a fire and met mechanical strength tests for ENCLOSURES in 15.3	Р



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Clause	Requirement + Test Result - Remark	Verdic	
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 Not used in oxygen rich reduced by means limiting spread of environments me equipment	N/A	
	a) No sources of ignition discovered in an OXYGEN RICH ENVIRONMENT under any of the following conditions	N/A	
	when temperature of material raised to its ignition temperature	N/A	
	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	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 CI. 5.3-5.5, 6, 7.1-7.4)	N/A	



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Clause	Requirement + Test	Result - Remark	Verdict	
	1) Electrical components in an OXYGEN RICH ENVIRONMENT provided with power supplies having limited energy levels lower than thos considered sufficient for ignition in 11.2.2.1 as determined by examination, measurement calculation of power, energy, and temperaturin NORMAL and SINGLE FAULT CONDITIONS identified in 11.2.3	e a) nt or ires	N/A	
	2) Max oxygen concentration measured unti- did not exceed 25 % in ventilated compartm with parts that can be a source of ignition or SINGLE FAULT CONDITION and can be penetral by oxygen due to an undetected leak (%)	ents hly in ted	N/A	
	3) A compartment with parts or components can be a source of ignition only under SINGL FAULT CONDITION separated from another compartment containing an OXYGEN RICH ENVIRONMENT by sealing all joints and holes cables, shafts, or other purposes	E	N/A	
	Effect of possible leaks and failures under SINGLE FAULT CONDITION that could cause igr evaluated using a RISK ASSESSMENT to determine maintenance intervals by examination of documentation and RISK MANAGEMENT FILE	nition	N/A	
	4) Fire initiated in ENCLOSURE of electrical components in a compartment with OXYGEN 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 immed surroundings due to location of external exhoutlets of an OXYGEN RICH ENVIRONMENT		N/A	
11.2.2.3	Electrical connections within a compartment containing an OXYGEN RICH ENVIRONMENT un NORMAL USE did not produce sparks		N/A	
	<ul> <li>Screw-attachments protected against loosening during use by varnishing, use of spring washers, or adequate torques</li> </ul>		N/A	
	<ul> <li>Soldered, crimped, and pin-and-socket connections of cables exiting ENCLOSURE incadditional mechanical securing means</li> </ul>	clude	N/A	



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11.2.3 SINGLE FAULT CONDITIONS related to OXYGEN RICH ENVIRONMENTS ME EQUIPMENT and ME SYSTEMS considered  - Failure of a ventilation system constructed in accordance with 11.2.2.1 b) 2)		IEC 60601-1	
and ME SYSTEMS considered  - Failure of a ventilation system constructed in accordance with 11.2.2.1 b) 2)	Clause	Requirement + Test Result - Remark	Verdict
accordance with 11.2.2.1 b) 2)	11.2.3		T N/A
with 11.2.2.1 b) 3)			s N/A
ignition (as defined in 11.2.2.1 a)			N/A
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
leakage of oxygen-enriched gas		clearances providing equivalent of at least one MEANS OF PATIENT PROTECTION but less than two MEANS OF PATIENT PROTECTION that could create	N/A
ME EQUIPMENT met this clause for alternate means of compliance with selected HAZARDOUS SITUATIONS and fault conditions in 13.1.2			N/A
means of compliance with selected HAZARDOUS SITUATIONS and fault conditions in 13.1.2	11.3	Constructional requirements for fire ENCLOSURES of ME EQUIPMENT	Р
- constructional requirements specifically analysed in RISK MANAGEMENT FILE		means of compliance with selected HAZARDOUS	Р
analysed in RISK MANAGEMENT FILE		Constructional requirements were met, or	Р
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 :  insulated with PVC, TFE, PTFE, FEP, polychloroprene or polyimide as determined by examination of data on materials		analysed in RISK MANAGEMENT FILE:	N/A
and connectors within fire ENCLOSURE is minimum V-2, , when test in accordance with IEC 60695-11-10 or :  insulated with PVC, TFE, PTFE, FEP, polychloroprene or polyimide as determined by examination of data on materials		Justification, when requirement not met:	N/A
polychloroprene or polyimide as determined by examination of data on materials		and connectors within fire ENCLOSURE is minimum V-2, , when test in accordance with	Р
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		polychloroprene or polyimide as determined by	Р
11-10 conducted on 3 samples of complete parts (or sections of it), including area with min.		boards, and insulating material on which components are mounted is V-2, or better, based on IEC 60695-11-10 as decided by	P
thickness, ventilation openings		11-10 conducted on 3 samples of complete	Р
b) Fire ENCLOSURE met following:		b) Fire ENCLOSURE met following:	Р



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	IFC 60604 4	Nepolt 110. 220201702	
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Clause	Requirement + Test	Result - Remark	Verdict
	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	No openings on the enclosure. Final determination to be competed in the end product for open frame model.	P
	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 $\leq$ 2 × 2 mm centre to centre and wire diameter of at least 0.45 mm		P
	3) ENCLOSURE, baffles, and flame barriers have adequate rigidity and are made of appropriate metal or of non-metallic materials	See appended Table 8.10	Р
11.4	ME EQUIPMENT and ME SYSTEMS intended for use anaesthetics	with flammable	N/A
	ME EQUIPMENT, ME SYSTEMS and parts described in ACCOMPANYING DOCUMENTS for use with flammable with Annex G	Not category ap or category apg Me equipment.	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	No intended for use in conjunction with flammable agents	N/A
11.6	Overflow, spillage, leakage, ingress of water or cleaning, disinfection, sterilization and compaused 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	Final determination to be competed in the end product. EUT is ordinary.	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	No such situation.	N/A



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Clause	Requirement + Test Result - Remark	Verdict
	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
	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	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	N/A
	Effects of multiple cleanings/disinfections during EXPECTED SERVICE LIFE of EQUIPMENT evaluated by MANUFACTURER	N/A



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Clause	Requirement + Test Result -	- Remark Verdict	
11.6.7	Sterilization of ME EQUIPMENT and ME SYSTEMS		
	ME EQUIPMENT, ME SYSTEMS and their parts or ACCESSORIES intended to be sterilized assessed and documented and compliant with tests:	ilization requirement. N/A	
	RISK MANAGEMENT FILE includes an assessment of the RISKS associated with any deterioration following sterilization	N/A	
11.6.8	· · · · · · · · · · · · · · · · · · ·	etermination to be ed in the end product.	
11.7	ME EQUIPMENT, ME SYSTEM, and ACCESSORIES coming into direct or indirect contact with biological tissues, cells, or body fluids assessed and documented	h parts. N/A	
11.8	Interruption and restoration of power supply did not result in a loss of BASIC SAFETY or ESSENTIAL PERFORMANCE	h situation. N/A	
12	ACCURACY OF CONTROLS AND INSTRUMENTS AND AGAINST HAZARDOUS OUTPUTS	D PROTECTION N/A	
12.1	instruments stated	h control. N/A	
12.2	(ISO 14971 Cl. 5.3-5.5, 6, 7.1-7.4)  RISK of poor USABILITY, including identification, marking, and documents addressed in a USABILITY ENGINEERING	olicable to component N/A supply.	
12.3	MANUFACTURER implemented an ALARM SYSTEM compliant with IEC 60601-1-8:2006/AMD1:2012 and IEC 60601-1-8:2006/AMD2:2020	m system. 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	ardous output. N/A	
12.4.2	- need for indication associated with hazardous output addressed in RISK MANAGEMENT PROCESS (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	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	N/A	



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Clause	Requirement + Test Result - Remark	Verdict
12.4.4	RISKS associated with incorrect output addressed in RISK MANAGEMENT PROCESS	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  No radiation for diagnostic/therapeutic purposes.	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	N/A
12.4.6	RISKS associated with diagnostic or therapeutic acoustic pressure addressed in RISK MANAGEMENT	N/A
13	HAZARDOUS SITUATIONS AND FAULT CONDITIONS	Р
13.1	Specific HAZARDOUS SITUATIONS	Р
13.1.2	Emissions, deformation of ENCLOSURE or exceeding maximum temperature	Р
	- Emission of flames, molten metal, poisonous or ignitable substance in hazardous quantities did not occur	Р
	- Deformation of ENCLOSURE impairing compliance with 15.3.1 did not occur	Р
	Temperatures of APPLIED PARTS did not exceed allowable values in Table 24	
	- Temperatures of Accessible PARTS THAT ARE LIKELY TO BE TOUCHED, but not intended to be touched did not exceed limits in Table 34	P
	- Temperatures of ACCESSIBLE PARTS intended to be touched did not exceed limits in Table 23	P
	-Allowable values for "other components and materials" in Table 22 times 1.5 minus 12.5 °C were not exceeded	Р



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Clause	Requirement + Test Re	esult - Remark	Verdict
	Limits for windings in Tables 26, 27, and 31 not exceeded		Р
	Table 22 not exceeded in all other cases		Р
	Temperatures measured according to 11.1.3		Р
	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:		P
	Supply circuit was unable to supply 15 W one minute after 15 W drawn from supply circuit in SINGLE FAULT CONDITION:	ee appended Table 13.1.2	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
	<ul> <li>or parts and components completely contained within a fire ENCLOSURE complying with 11.3 as verified by review of design documentation</li> </ul>		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	ee appended Table 13.1.2	Р
13.1.3	- limits for LEAKAGE CURRENT in SINGLE FAULT CONDITION did not exceed	ee appended Table 8.7	Р
	- voltage limits for ACCESSIBLE PARTS and APPLIED PARTS did not exceed	ee appended Table 8.7	Р
13. 2	SINGLE FAULT CONDITIONS		Р
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		P
	ME EQUIPMENT complied with 13.2.2 -13.2.12: So	see appended Table 13.2	Р



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Clause	Requirement + Test Result - Remark	Verdict	
	RISK MANAGEMENT FILE includes an assessment of RISKS associated with leakage of liquid in a SINGLE FAULT CONDITION		
	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	Р	
	ME EQUIPMENT examined for compliance or appropriate tests such as dielectric strength of motor insulation according to 8.8.3 conducted	Р	
		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	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	
	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	



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Requirement + Test	Result - Remark	Verdict
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
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 provided in power supply.	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
		21/4
1) it is intended to be remotely or automatically controlled by a single control device with no redundant protection, or		N/A
	RESETTING THERMAL CUT-OUT operated, or current interrupted without possibility of automatic restoration before THERMAL STABILITY  ME EQUIPMENT switched off as soon as THERMAL STABILITY established and allowed to cool to room temperature when current not interrupted  Test duration was equal to RATED operating time for non-CONTINUOUS OPERATION  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  1) Controls limiting temperature in NORMAL CONDITION disabled, except THERMAL CUT-OUTS  2) When more than one control provided, they were disabled in turn  3) ME EQUIPMENT operated at RATED DUTY CYCLE until THERMAL STABILITY achieved, regardless of RATED operating time  ME EQUIPMENT with motors  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  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  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  a 3) Tests performed consecutively when more tests were applicable to the same ME EQUIPMENT  b) Motor met running overload protection test of	Requirement + Test Result - Remark  Operating period stopped when a non-SELF- RESETTING THERMAL CUT-OUT operated, or current interrupted without possibility of automatic restoration before THERMAL STABILITY  ME EQUIPMENT switched off as soon as THERMAL STABILITY STABILITY established and allowed to cool to room temperature when current not interrupted  Test duration was equal to RATED operating time for non-CONTINUOUS OPERATION  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  1) Controls limiting temperature in NORMAL CONDITION disabled, except THERMAL CUT-OUTS  2) When more than one control provided, they were disabled in turn  3) ME EQUIPMENT operated at RATED DUTY CYCLE until THERMAL STABILITY achieved, regardless of RATED operating time  ME EQUIPMENT with motors  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  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  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  a 3) Tests performed consecutively when more tests were applicable to the same ME EQUIPMENT  b) Motor met running overload protection test of



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Clause	Requirement + Test Result - Remark	Verdict
	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 $\leq$ 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)	_
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  No Such Parts/ PESS relied upon for Basic Safety or Essential Performance	N/A
	- when application of RISK MANAGEMENT showed that failure of PESS does not lead to unacceptable RISK	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	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/		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
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



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Clause	Requirement + Test Result - Rema	ark Verdict	
	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	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	N/A	
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	N/A	
14.8	An architecture satisfying the requirement is specified for PEMS and each of subsystems: (ISO 14971 CI. 7.2)	N/A	
14.9	Design is broken up into sub systems and descriptive data on design environment documented:	N/A	



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Clause	Requirement + Test	Result - Remark	Verdict
14.10	A VERIFICATION plan containing the specified information used to verify and document functions implementing BASIC SAFETY, ESSENTIAL PERFORMANCE, or RISK CONTROL measures		N/A
	<ul><li>milestone(s) when VERIFICATION is to be performed for each function</li></ul>		N/A
	<ul> <li>selection and documentation of VERIFICATION strategies, activities, techniques, and appropriate level of independence of the personnel performing the VERIFICATION</li> </ul>		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 CI. 7.2)		N/A
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/		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



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Clause	Requirement + Test Result	- Remark Verdict
	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
	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 ORGANI following:	ZATION include the 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:	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
15	CONSTRUCTION OF ME EQUIPMENT		Р
15.1	RISKS associated with arrangement of controls and indicators of ME EQUIPMENT addressed through the application of a USABILITY ENGINEERING PROCESS	No controls and indicators.	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	No such parts.	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		Р
15.3.1	Mould stress relief, push, impact, drop, and rough handling tests did not result in loss of BASIC SAFETY OR ESSENTIAL PERFORMANCE		Р
15.3.2	Push test conducted	See Appended Table 15.3	Р
	No damage resulting in an unacceptable RISK sustained		Р
15.3.3	Impact test conducted:	See Appended Table 15.3	Р
	No damage resulting in an unacceptable RISK sustained		Р
15.3.4	Drop test		Р
15.3.4.1	Sample of HAND-HELD ME EQUIPMENT, ACCESSORIES and HAND-HELD part with SAFE WORKING LOAD tested	See Appended Table 15.3	Р
	No unacceptable RISK resulted		Р
15.3.4.2	Sample of PORTABLE ME EQUIPMENT, ACCESSORIES and PORTABLE part with SAFE WORKING LOAD withstood stress as demonstrated by test	1 m drop test was chosen.	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:	Not mobile ME equipment.	N/A
	No damage resulting in an unacceptable RISK sustained		N/A



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Clause	Reguirement + Test Result - Remark		Verdict
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		Р
	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	80 °C	P
	No damage resulting in an unacceptable RISK		Р
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	No such environmental influences.	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 assem	ıbly	N/A
15.4.1	Incorrect connection of accessible connectors, removable without a TOOL, prevented where an unacceptable RISK exists,	No following connections.	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,:		N/A
	b) Medical gas connections on ME EQUIPMENT for different gases to be operated in NORMAL USE are not interchangeable inspection:		N/A
15.4.2	Temperature and overload control devices		Р
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	No such part.	N/A
	b) THERMAL CUT-OUTS with a safety function with reset by a soldering not fitted in ME EQUIPMENT	No such part.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict	
	c) An additional independent non-SELF- RESETTING THERMAL CUT-OUT is provided (ISO 14971 Cl. 5.2-5.5)	No such part.	N/A	
	d) Operation of THERMAL CUT-OUT or OVER CURRENT RELEASE doesn't result in a HAZARDON 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	No such part.	N/A	
	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 performin equivalent functions Certified according to appropriate standards	ng	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 wit appropriate IEC standards	h	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	nt	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 element provided with protection against overheating (ISO 14971 Cl. 5.2-5.5)		N/A	



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Clause	Requirement + Test Result - Remark	Verdict		
15.4.2.2	Temperature settings clearly indicated when means provided to vary setting of THERMOSTATS	N/A		
15.4.3	Batteries	N/A		
15.4.3.1	Battery housings provided with ventilation: No batteries. (ISO 14971 Cl. 5.2-5.5)	N/A		
	Battery compartments designed to prevent accidental short circuiting	N/A		
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	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	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	N/A		



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Clause	Requirement + Test	Result - Remark	Verdict
	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
	RISK MANAGEMENT FILE includes an assessment of RISKS associated with the use of indicator lights for EQUIPMENT incorporating non-luminous heaters		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)	No such part in power supply.	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 part in power supply	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 control devices in power supply.	N/A



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Clause	Requirement + Test Result - Remark	Verdict
	b) Foot-operated control device supported an actuating force of 1350 N in its position of NORMAL USE with no damage	N/A
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	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 mm² in cross- sectional area are not used  No such wire.	N/A
15.4.9	a) Oil container in PORTABLE ME EQUIPMENT allows for expansion of oil and is adequately sealed	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	Р
15.5.1	Overheating	Р
15.5.1.1	Transformers of ME EQUIPMENT are protected against overheating	Р
	During tests, windings did not open, no HAZARDOUS SITUATION occurred, and maximum temperatures of windings did not exceed values in Table 31	P
	Dielectric strength test conducted after short circuit and overload tests	Р
15.5.1.2	Transformer output winding short circuited, and test continued until protective device operated or THERMAL STABILITY achieved	Р



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Clause	Requirement + Test Result - Remark	Verdict	
	Short circuit applied directly across output windings	N/A	
15.5.1.3	Multiple overload tests conducted on windings:  No more than one protective device	N/A	
15.5.2	Transformers operating at a frequency above 1kHz tested according to clause 8.8.3:	Р	
	Transformer windings provided with adequate insulation	Р	
	Dielectric strength tests were conducted: See appended Table 15.5.2	Р	
15.5.3	Transformers forming MEANS OF PROTECTION as required by 8.5 comply with	Р	
	- Means provided to prevent displacement of end turns	Р	
	- protective earth screens with a single turn have insulated overlap	Р	
	- Exit of wires form internal windings of toroid transformers protected with double sleeving	Р	
	- insulation between primary and secondary windings complies with 8.8.2	Р	
	- CREEPAGE DISTANCES and AIR CLEARANCE comply with 8.9.4	Р	
16	ME SYSTEMS	N/A	
16.1	After installation or subsequent modification, ME SYSTEM didn't result in an unacceptable RISK compliance determined in the end product	N/A	
	RISK MANAGEMENT FILE includes an assessment of RISKS associated with installation and modification of an ME SYSTEM	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	



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Clause	Requirement + Test	Result - Remark	erdict
	tests performed under operating conditions specified by MANUFACTURER of ME SYSTEM	1	N/A
	Safety tests previously conducted on individual equipment of ME SYSTEM according to relevant standards not repeated	ľ	N/A
	RISK MANAGEMENT methods used by MANUFACTURER of an ME SYSTEM reconfigurable by RESPONSIBLE ORGANIZATION OF OPERATOR	ı	N/A
	Non-ME EQUIPMENT used in ME SYSTEM complied with applicable IEC or ISO safety standards	1	N/A
	Equipment relying only on BASIC INSULATION for protection against electric shock not used in ME SYSTEM	ı	N/A
16.2	ACCOMPANYING DOCUMENTS of an ME SYSTEM	ı	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	1	N/A
	ACCOMPANYING DOCUMENTS regarded as a part of ME SYSTEM	ı	N/A
	a) ACCOMPANYING DOCUMENTS provided for each item of ME EQUIPMENT supplied by MANUFACTURER	ı	N/A
	b) ACCOMPANYING DOCUMENTS provided for each item of non-ME EQUIPMENT supplied by MANUFACTURER	1	N/A
	c) the required information is provided:	ı	N/A
	<ul> <li>specifications, instructions for use as intended by MANUFACTURER, and a list of all items forming the ME SYSTEM</li> </ul>	1	N/A
	<ul> <li>instructions for installation, assembly, and modification of ME SYSTEM to ensure continued compliance with this standard</li> </ul>	ı	N/A
	instructions for cleaning and, when applicable, disinfecting and sterilizing each item of equipment or equipment part forming part of the ME SYSTEM	1	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



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Clause	Requirement + Test	Result - Remark	Verdict	
	<ul> <li>additional measures to be applied during preventive maintenance</li> </ul>		N/A	
	<ul> <li>a warning forbidding placement of MULTIPLE SOCKET-OUTLET, when provided and it is a separate item, on the floor</li> </ul>		N/A	
	a warning indicating an additional MULTIPLE SOCKET-OUTLET or extension cord not to be connected to ME SYSTEM		N/A	
	<ul> <li>a warning to connect only items that have been specified as part of ME SYSTEM or specified as being compatible with ME SYSTEM</li> </ul>		N/A	
	- maximum permissible load for any MULTIPLE SOCKET-OUTLET(S) used with ME SYSTEM		N/A	
	<ul> <li>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</li> </ul>		N/A	
	<ul> <li>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</li> </ul>		N/A	
	<ul> <li>an explanation indicating RISKS of connecting any equipment supplied as a part of ME SYSTEM to MULTIPLE SOCKET-OUTLET</li> </ul>		N/A	
	<ul> <li>permissible environmental conditions of use for ME SYSTEM including conditions for transport and storage</li> </ul>		N/A	
	<ul> <li>instructions to OPERATOR not to, simultaneously, touch parts referred to in 16.4 and PATIENT</li> </ul>		N/A	
	d) the following instructions provided for use by RESPONSIBLE ORGANIZATION:		N/A	
	<ul> <li>adjustment, cleaning, sterilization, and disinfection PROCEDURES</li> </ul>		N/A	
	<ul> <li>assembly of ME SYSTEMS and modifications during actual service life evaluated based on the requirements of this standard</li> </ul>		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	



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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		
16.9.1	Incorrect connection of accessible connectors, removable without a TOOL, prevented where unacceptable RISK can result	N/A		



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Clause	Requirement + Test	Result - Remark Verd	dict	
	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	N/A	A	
	<ul> <li>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</li> </ul>	N/A	A	
	Medical gas connections on the ME SYSTEM for different gasses operated in NORMAL USE are not interchangeable	N/A	A	
16.9.2	MAINS PARTS, components and layout	N/A	A	
16.9.2.1	a) – MULTIPLE SOCKET-OUTLET only allows connection using a TOOL, or	N/A	A	
	<ul> <li>MULTIPLE SOCKET-OUTLET is of a type that cannot accept MAINS PLUGS of any of the kinds specified in IEC/TR 60083, or</li> </ul>	N/A	A	
	<ul> <li>MULTIPLE SOCKET-OUTLET is supplied via a separating transformer</li> </ul>	N/A	A	
	b) – MULTIPLE SOCKET-OUTLET marked with SAFETY SIGN 2 of Table D.2 visible in NORMAL USE, and	N/A	A	
	<ul> <li>marked either individually or in combinations, with the maximum allowed continuous output in amperes or volt-amperes, or</li> </ul>	N/A	A	
	<ul> <li>marked to indicate the equipment or equipment parts it may safely be attached to</li> </ul>	N/A	A	
	MULTIPLE SOCKET-OUTLET is a separate item or an integral part of ME EQUIPMENT or non-ME EQUIPMENT	N/A	A	
	c) MULTIPLE SOCKET-OUTLET complied with IEC 60884-1 and the following requirements:	N/A	A	
	- CREEPAGE and CLEARANCES complied with 8.9	N/A	A	
	<ul> <li>It is CLASS I, and PROTECTIVE EARTH CONDUCTOR is connected to earthing contacts in socket-outlets</li> </ul>	N/A	A	
	- PROTECTIVE EARTH TERMINALS and PROTECTIVE EARTH CONNECTIONS comply with 8.6:	N/A	A	
	- ENCLOSURE complied with 8.4.2 d)	N/A	A	



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Clause	Requirement + Test	Result - Remark	Verdict
	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
	<ul> <li>Electrical terminals and connectors of MULTIPLE SOCKET-OUTLETS prevent incorrect connection of accessible connectors removable without a TOOL</li> </ul>		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
	<ul> <li>Degree of protection against ingress of water specified as in IEC 60529</li> </ul>		N/A
	<ul> <li>Separating transformer assembly marked according to 7.2 and 7.3</li> </ul>		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 $m\Omega$		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 m $\Omega$		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
	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 SYSTEMS	EQUIPMENT AND ME	N/A



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Clause		equirement + Test	Result - Remark	Verdict	
		RISKS associated confirmed by review:	Not applicable to power supply component; to be determined in the end product	N/A	
				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	
				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	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
	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



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Clause	Requirement + Test	Result - Remark	Verdict
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 CAT	EGORY 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		
	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
	b) ENCLOSURE complies with:		N/A
	- no openings on top covers of ENCLOSURE,		N/A
	<ul> <li>openings in side-covers prevented penetration of a solid cylindrical test rod</li> </ul>		N/A
	<ul> <li>openings in base plates prevented penetration of a solid cylindrical test</li> </ul>		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



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Clause	Requirement + Test	Result - Remark	Verdict
	Use of antistatic materials with a limited electrical resistance:		N/A
	<ul> <li>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</li> </ul>		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 EQUI	IPMENT, parts and	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
	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 <sub>max</sub> and I <sub>max</sub> occurring in their circuits, and complied as follows:		N/A
	Measured U <sub>max</sub> ≤ U <sub>zR</sub> with I <sub>zR</sub> as in Fig. G.1:		N/A
	Measured U <sub>max</sub> ≤ U <sub>c</sub> with C <sub>max</sub> as in Fig. G.2:		N/A
	Measured $I_{max} \le I_{zR}$ with $U_{zR}$ as in Fig G.1:		N/A
	Measured $I_{max} \le I_{zL}$ with $L_{max}$ and a $U_{max} \le 24$ V as in Fig G.3		N/A
	<ul> <li>Combinations of currents and corresponding voltages within the limitations IzR.UzR ≤ 50 W extrapolated from Fig G.1</li> </ul>		N/A
	No extrapolation made for voltages above 42 V		N/A
	<ul> <li>Combinations of capacitances and corresponding voltages within limitations of C/2U<sup>2</sup></li> <li>≤ 1.2 mJ extrapolated from Fig G.2</li> </ul>		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	No extrapolation made for voltages above 242V		N/A
	U <sub>max</sub> determined using actual resistance R		N/A
	– Combinations of currents and corresponding inductances within limitations L/2l^2 $\leq 0.3$ mJ extrapolated from Fig G.3		N/A
	No extrapolation made for inductances larger than 900 mH		N/A
	<ul> <li>U<sub>max</sub> was the highest supply voltage occurring in circuit under investigation with sparking contact open</li> </ul>		N/A
	<ul> <li>I<sub>max</sub> was the highest current flowing in circuit under investigation with sparking contact closed</li> </ul>		N/A
	<ul> <li>C<sub>max</sub> and L<sub>max</sub> taken as values occurring at the component under investigation producing sparks</li> </ul>		N/A
	- Peak value considered when a.c. supplied		N/A
	<ul> <li>An equivalent circuit calculated to determine equivalent max capacitance, inductance, and equivalent U<sub>max</sub> and I<sub>max</sub>, either as d.c. or a.c. peak values in case of a complicated circuit</li> </ul>		N/A
	Temperature measurements made according to 11.1, and U <sub>max</sub> , I <sub>max</sub> , R, L <sub>max</sub> , and C <sub>max</sub> 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



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Clause	Requirement + Test	Result - Remark	Verdict
	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
	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 compone	ents 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



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Clause	Requirement + Test	Result - Remark	Verdict
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
	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 $U_{\text{max}}$ and $I_{\text{max}}$ occurring in their circuits complied with requirements, taking $C_{\text{max}}$ and $L_{\text{max}}$ into consideration:		N/A
	Measured $U_{max} \le U_{zR}$ with $I_{zR}$ as in Fig. G.4:		N/A
	Measured $U_{max} \le U_{zC}$ with $C_{max}$ as in Fig. G.5:		N/A
	Measured I <sub>max</sub> ≤ I <sub>zR</sub> with U <sub>zR</sub> as in Fig G.4:		N/A
	Measured $I_{max} \le I_{zL}$ with $L_{max}$ and a $U_{max} \le 24$ V as in Fig G.6		N/A
	<ul> <li>Extrapolation from Figs G.4, G.5, and G.6 was limited to areas indicated</li> </ul>		N/A
	<ul> <li>U<sub>max</sub> was the highest no-load voltage occurring in the circuit under investigation, taking into consideration mains voltage variations as in Cl. 4.10</li> </ul>		N/A
	<ul> <li>I<sub>max</sub> was the highest current flowing in the circuit under investigation, considering MAINS VOLTAGE variations as in Cl. 4.10</li> </ul>		N/A
	<ul> <li>C<sub>max</sub> and L<sub>max</sub> are values occurring in relevant circuit</li> </ul>		N/A
	– $U_{\text{max}}$ additionally determined with actual resistance R when equivalent resistance R in Fig G.5 was less than 8000 $\Omega$		N/A
	- Peak value considered when a.c. supplied		N/A
	<ul> <li>An equivalent circuit calculated to determine max capacitance, inductance, and U<sub>max</sub> and I<sub>max</sub>, either as d.c. or a.c. peak values in case of a complicated circuit</li> </ul>		N/A
	<ul> <li>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</li> </ul>		N/A
	- requirement not applied to transformers complying with this standard		N/A



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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 <sub>max</sub> , I <sub>max</sub> , R, L <sub>max</sub> and C <sub>max</sub> 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				
L.1	Basic, Supplementary, Double, and Reinforced Insulation in wound components without interleaved insulation complied with this Annex  Approved TIW is used in mains transformer.				
L.2	Wire construction				
	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	Approved TIW is used in mains transformer.	N/A		
	Layers of spirally wrapped wire insulation are sufficiently secured to maintain the overlap		N/A		
L.3	Type Test		N/A		
	The wire subjected to tests of L.3.1 to L.3.4 at a temperature and a relative humidity specified	Approved TIW is used in mains transformer.	N/A		
	Temperature (°C)		_		
	Humidity (%):		_		



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Clause	Requirement + Test	Result - Remark	Verdict
L.3.1	Dielectric strength		
	Dielectric strength test of Clause 8.8.3 for the appropriate type and number of MOP(s) conducted with no breakdown:	Approved TIW is used in mains transformer.	N/A
	- 3000 V for BASIC and SUPPLEMENTARY INSULATION (V):		N/A
	- 6000 V for REINFORCED INSULATION (V):		N/A
L.3.2	Flexibility and adherence		
	Sample subjected to flexibility and adherence	Approved TIW is used in mains transformer.	N/A
	Sample examined per IEC 60851-3: 1997, cl. 5.1.1.4, followed by dielectric test of cl. 8.8.3, with no breakdown		N/A
	Test voltage was at least the voltage in Tables 6 and 7 but not less than the following:		N/A
	- 1500 V for BASIC and SUPPLEMENTARY INSULATION (V):		N/A
	- 3000 V for REINFORCED INSULATION (V):		N/A
	Tension applied to wire during winding on mandrel calculated from the wire diameter equivalent to 118 MPa ± 11.8 MPa:		N/A
L.3.3	Heat Shock		N/A
	Sample subjected to heat shock test 9 of IEC 60851-6:1996, followed by dielectric strength test of clause 8.8.3	Approved TIW is used in mains transformer.	N/A
	Test voltage was at least the voltage in Tables 6 and 7, but not less than the following:		N/A
	- 1500 V for BASIC and SUPPLEMENTARY INSULATION (V):		N/A
	- 3000 V for REINFORCED INSULATION (V):		N/A
	Oven temperature based on Table L.2 (°C):		_
	Mandrel diameter and tension applied as in clause L.3.2, (MPa; N/mm²):		N/A
	Dielectric strength test conducted at room temperature after removal from the oven		N/A
L.3.4	Retention of electric strength after bending		N/A
	Five samples prepared as in L.3.2 subjected to dielectric strength and bending tests	Approved TIW is used in mains transformer.	N/A
	Test voltage was at least the voltage in Tables 6 and 7, but not less than the following:		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	- 1500 V for BASIC and SUPPLEMENTARY INSULATION (V)		N/A
	- 3000 V for REINFORCED INSULATION (V):		N/A
	Test voltage applied between the shot and conductor		N/A
	Mandrel diameter and tension applied as in L.3.2, (MPa; N/mm²):		N/A
L.4	Tests during manufacture		N/A
L.4.1	Production line dielectric strength tests done by the manufacture per L.4.2 and L.4.3:	Approved TIW is used in mains transformer.	N/A
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:	Approved TIW is used in mains transformer.	N/A
	- 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):		N/A
L.4.3	Sampling tests conducted using twisted pair samples (IEC 60851-5:1996, clause 4.4.1):	Approved TIW is used in mains transformer.	N/A
	Minimum breakdown test voltage at least twice the voltage in Tables 6 and 7 but not less than:		N/A
	- 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		N/A



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Clause	Requirement + Test	Result - Remark	Verdict

4.2.2	RM RESULTS TABLE: General requirements for RISK MANAGEMENT			Р	
Clause of ISO	Document Ref.	in RMF (Document No. ise, version)	Result - Remarks		
14971	General process	Particular Medical Device			
4.1	Risk management procedure GTQPR05000 A2 5.0	_	Risk Management Process (excluding production and post-production)	P	
4.2	Risk management procedure GTQPR05000 A2 5.0	_	Adequate Resources	P	
4.2	Risk management procedure GTQPR05000 A2 5.0	_	Assignment of qualified personnel	P	
4.2	Risk management procedure GTQPR05000 A2 5.0	_	Policy for determining criteria for risk acceptability	P	
4.3	_	Risk Management Report 2.0	Competence of personnel	Р	
4.4a	_	Risk management plan GT-RMPLAN2014-001	Risk Management Plan - the scope of the planned risk management activities	Р	
4.4b	_	Risk management plan GT-RMPLAN2014-001	Risk Management Plan - assignment of responsibilities and authorities	Р	
4.4c	_	Risk management plan GT-RMPLAN2014-001	Risk Management Plan - requirements for review of risk management activities	Р	
4.4d	_	Risk management plan GT-RMPLAN2014-001	Risk Management Plan - criteria for risk acceptability	Р	
4.4e	_	Risk management plan GT-RMPLAN2014-001	Risk Management Plan - a method to evaluate the overall residual risk, and criteria for acceptability of the overall residual risk	P	
4.4f	-	Risk management plan GT-RMPLAN2014-001	Risk Management Plan - activities for verification of the implementation and effectiveness of risk control measures	Р	
4.5	_	Risk management procedure GTQPR05000 A2 6.0	Risk Management File	Р	
5.1	_	Risk management procedure GTQPR05000 A2 6.0	Risk Analysis - Process	Р	



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		IEC 60	601-1	
Clause	Requirement +	Test	Result - Remark	Verdict
4.2.2	RM RESULTS	TABLE: General requiren	nents for RISK MANAGEMENT	Р
Clause of ISO	Document Ref. in RMF (Document No. paragraph/clause, version)		Result - Remarks	Verdict
14971	General process	Particular Medical Device		
5.2	_	Risk Management Report GT-RM2013-010 6.1	Risk Analysis - Intended use and reasonably foreseeable misuse	Р
5.3	_	Risk Management Report GT-RM2013-010 6.1	Risk Analysis - Identification of characteristics related to safety	Р
5.4	_	Risk Management Report GT-RM2013-010 6.2	Risk Analysis - Identification of hazards and hazardous situations	Р
5.5	_	Risk Management Report GT-RM2013-010 6.4	Risk Analysis - Risk estimation	Р
6	_	Risk Management Report GT-RM2013-010 7	Risk Evaluation	Р
7.1	_	Risk Management Report GT-RM2013-010 8.1	Risk Control - Risk control option analysis	Р
7.2	_	Risk Management Report GT-RM2013-010 8.1	Risk Control - Implementation of risk control measures	Р
7.3	_	Risk Management Report GT-RM2013-010 8.2	Risk Control - Residual risk evaluation	Р
7.4	_	Risk Management Report GT-RM2013-010 8.3	Risk Control - Benefit-risk analysis	Р
7.5a	_	Risk Management Report GT-RM2013-010 8.1	Risk Control - Risks arising from risk control measures (new hazards or hazardous situations introduced)	N/A
7.5b	_	Risk Management Report GT-RM2013-010 8.2	Risk Control - Risks arising from risk control measures (estimated risks for previously identified hazardous situations affected)	N/A
7.6	_	Risk Management Report GT-RM2013-010 8.1	Risk Control - Completeness of risk control	Р



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Clause	Requirement + Test	Result - Remark	Verdict

4.2.2	RM RESULTS TABLE: General requirements for RISK MANAGEMENT			
Clause of ISO	Document Ref. in RMF (Document No. paragraph/clause, version)		Result - Remarks	Verdict
14971	General process	Particular Medical Device		
8	Risk Management Report		Evaluation of overall residual risk	Р
	GT-RM2013-010 10			
9	_	GT-RM2013-010 A2	Risk management review	Р

## **Supplementary Information:**

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



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4.3	TABLE: ESSENTIAL PERFORMANCE					
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					Р			
Operat	Operating Conditions / Ratings		Frequency (Hz)	Current (A)	Power (W or VA)	Power factor (cos φ)			
Tested on m	Tested on model GTM41134-0648-***, 48Vdc output, 0.125A								
Normal co	ndition	264	50/60	76	8.9	<0.9			
Normal co	ondition	240	50/60	80	8.7	<0.9			
Normal condition		100	50/60	137	7.9	<0.9			
Normal co	ondition	90	50/60	149	8.1	<0.9			
Tested on m	nodel GTM41134-0612-3.0-***,	9Vdc outpu	ut, 0.66A						
Normal co	ondition	264	50/60	76	9.3	<0.9			
Normal co	ondition	240	50/60	83	9.3	<0.9			
Normal co	ondition	100	100 50/60 143 8.7		<0.9				
Normal condition		90	50/60	155	8.5	<0.9			
Tested on model GTM41134-0603-***, 3.3Vdc output, 1.8A									
Normal co	ondition	264	50/60	84	10.2	<0.9			
Normal co	ndition	240	50/60	89	10.0	<0.9			



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Clause	Requirement + Test	Result - Remark	Verdict

4.11	TABLE: Power Input						Р
Opera	Operating Conditions / Ratings		Frequency (Hz)	Current (A)	Power (W or VA)		wer factor (cos φ)
Normal co	ondition	100	50/60	161	10.1		<0.9
Normal co	ondition	90	50/60	174	10.1		<0.9
Tested on r	nodel GTM41134-0606-1.0, 5V	dc output, 1	.2A				
Normal co	ondition	264	50/60	72	8.4		<0.9
Normal co	ondition	240	50/60	77	8.4		<0.9
Normal co	ondition	100	50/60	141	8.5		<0.9
Normal co	ondition	90	50/60	154	8.7		<0.9
Tested on r	nodel GT-41134-0606-W2-TAB	, 6Vdc outp	ut, 1.0A				
Normal co	ondition	132	60	124	8.9		<0.9
Normal co	ondition	120	60	136	9.3	<0.9	
Normal co	ondition	108	60	145	9.2	<0.9	
Tested on r	nodel: GTM96060-0603, 3.3Vd	c / 1.8A outp	out.				
Normal co	ondition	264	50/60	84	10.2	<0.9	
Normal co	ondition	240	50/60	89	10.0	<0.9	
Normal co	ondition	100	50/60	161	10.1	<0.9	
Normal co	ondition	90	50/60	174	10.1	<0.9	
Tested on r	nodel: GTM96060-0606-1.0, 5.	0Vdc / 1.2A	output.			ı	
Normal co	ondition	264	50/60	76	8.1	<0.9	
Normal co	ondition	240	50/60	81	8.0	<0.9	
Normal co	ondition	100	50/60	139	7.9	<0.9	
Normal condition		90	50/60	153	8.0	<0.9	
Tested on r	nodel: GTM96060-0648, 48Vdd	/ 0.125A o	utput.			1	
Normal co	ondition	264	50/60	76	8.1		<0.9
L		1	1	1	1	1	



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Clause	Requirement + Test		Result - Remark	Verdict

4.11	TABLE: Power Input					Р
Operat	ing Conditions / Ratings	Voltage (V)	Frequency (Hz)	Current (A)	Power (W or VA)	Power facto (cos φ)
Normal co	ondition	240	50/60	80	7.9	<0.9
Normal co	ondition	100	50/60	137	8.7	<0.9
Normal co	ondition	90	50/60	149	8.9	<0.9

# Supplementary Information:

5.9.2	TABLE: Determ	ABLE: Determination of ACCESSIBLE parts					
Location		Determination method (NOTE1)	Comments				
Enclosure		Test finger, test hook	Can't insert				

# **Supplementary information:**

<sup>&</sup>lt;sup>1)</sup> NOTE: The determination methods are: visual; rigid test finger; jointed test finger; test hook.



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Clause	Requirement + Test		Result - Remark	Verdict

7.1.2	TABLE: Legibility of Marking					
Markings tested		Ambient Illuminance (Ix)	Remarks			
Outside Markings (Clause 7.2):		100-1500	Readable			
Inside Ma	rkings (Clause 7.3):		N/A			
Controls 8	& Instruments (Clause 7.4):		N/A			
SAFETY SIG	GNS (Clause 7.5):		N/A			
Symbols (	Clause 7.6):		N/A			

### 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						
Character	istics of the Marking Label tested:		Rem	arks			
Material o	f Marking Label:	See Table 8.10	Р				
Ink/other	printing material or process:	See Table 8.10	Р				
Material (d	composition) of Warning Label:		N/A				
Ink/other	printing material or process:		N/A				
Other	······································		N/A				
	Marking Label Tested	l:	Rem	arks			
See Table	8.10		Р				

### **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.



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8.4.2	8.4.2 TABLE: TABLE: Working Voltage / Power Measurement									
Test supply	/ voltage/frequ	ency (V/Hz) <sup>1</sup>	)		:					
Location		ı	Measured value	S						
From/To	Vrms	Vpk or Vdc	Peak-to- peak ripple <sup>2)</sup>	Power W/VA	Energy (J)	Remari	ks			
Transforme primary to secondary				-		For all models				
Secondary output connector		<60Vdc				For all models				

### **Supplementary Information:**

<sup>&</sup>lt;sup>3)</sup> 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 k $\Omega$  + 500  $\Omega$ . See clause 8.4.2

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										Р
Maximum a	allowable voltage (\	V)							: 60	<b>'</b>	
			Vo	ltage me	easured	l (V)			,		
Voltage Me	easured Between:	1	2	3	4	5	6	7	8	9	10
Plug pins 1	1 and 2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
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 cl	harge w	hen me	easured	voltage	excee	ded 60	v (μc)	: 45		
			Calcula	ited sto	red cha	rge (μc)			·		
Voltage Me	easured Between:	1	2	3	4	5	6	7	8	9	10
Plug pins 1	1 and 2										
Plug pin 1	and plug earth pin										

<sup>1)</sup>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. <sup>2)</sup>. If the d.c peak-to-peak ripple >10%, waveform considered as a.c. See clause 8.4.2



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				IEC 6	0601-1						
Clause	Clause Requirement + Test Result - Remark								1	Verdict	
Plug pin 2	and plug earth pin										
Plug pin 1	and enclosure										
Plug pin 2	and enclosure										
Suppleme	ntary 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						
Maximu	m allowable residual voltage	(V)	:	60 V			
Maximu	m allowable stored charge w	hen residual voltage	exceeded 60 V:	45 μC			
	tion of the capacitive circuit cessible capacitor or circuit parts)	Measured residual voltage (V)	Calculated stored charge (μC)	Remari	ĸs		
Supplen	nentary information:						

8.5.5.1a	TABLE: defibrillation-proof applied parts – measurement of hazardous electrical energies							
Test Condition Figs. 9 & 1		made on test voltage		Measured voltage between Y1 and Y2 (mV)	R	emarks		
Supplemen	ntary information:							

8.5.5.1b	TABLE: defibrillation-proof applied parts – verification of recovery time					
Applied part with test voltage		Test voltage polarity	Recovery time from documents (s)	Measured recovery time (s)	Rema	rks
Supplemer information						



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Clause	Requirement + Test	F	Result - Remark	Verdict		
8.5.5.2	TABLE: DEFIBRILLATION-PROOF APPLIED PARTS OF PATIENT CONNECTIONS OF DEFIBRILLATION-PROOF APPLIED PARTS - Energy reduction test –measurement of Energy delivered to a 100 $\Omega$ load					
	Test Voltage applied to  Measured Energy E1 (mJ)  Measured Energy E2 (mJ)  E2 (mJ)  E3 % C					
PATIENT CO	ONNECTION 1 or APPLIED PART with ONNECTIONS 2, 3, and 4 of the same ART connected to earth					
PATIENT CO	ONNECTION 2 or APPLIED PART with ONNECTIONS 1, 3, and 4 of the same ART connected to earth					
PATIENT CO	ONNECTION 3 or APPLIED PART with ONNECTIONS 1, 2, and 4 of the same ART connected to earth					
PATIENT CO	ONNECTION 4 or APPLIED PART with ONNECTIONS 1, 2, and 3 of the same ART connected to earth					
E1= Measu	entary information: For compliance: E1 red energy delivered to $100 \Omega$ with ME Equ red energy delivered to $100 \Omega$ without ME of the second s	uipment connected;	2			

8.6.4	TABLE: Impedance and current-carrying capability of PROTECTIVE EARTH CONNECTIONS					N/A
measured between parts		Test current (A) /Duration (s)	Voltage drop measured between parts (V)	Maximum calculated impedance (mΩ)	al	aximum lowable pedance (mΩ)

### **Supplementary information:**

PERMANENTLY INSTALLED ME EQUIPMENT, impedance between PROTECTIVE EARTH TERMINAL and a PROTECTIVELY EARTHED part - Limit 100 m $\Omega$ ME EQUIPMENT with an APPLIANCE INLET, impedance between earth pin in the APPLIANCE INLET and a PROTECTIVELY EARTHED part - Limit 100 m $\Omega$ 

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 m $\Omega$ 

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 m $\Omega$ 



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Clause	Requirement + Test	Result - Remark	Verdict		

8.7 TABLE: leakage current				Р
Type of leakage current and test condition (including single faults)	Supply voltage (V)	Supply frequency (Hz)	Measured max. value (µA)	Remarks
Fig. 13 - Earth Leakage (ER)	_	_	_	Maximum allowed values: 5 mA NC; 10 mA SFC
Final judgement shall be made on this co	omponent w	hen installed	in the end pr	
Fig. 14 - Touch Current (TC)	_	_	_	Maximum allowed values: 100 μA NC; 500 μA SFC
NC	264	60	<1uA	Plastic enclosure
SFC, interrupt one conductor	264	60	<1uA	Plastic enclosure
SFC, interrupt one conductor reverse	264	60	<1uA	Plastic enclosure
NC	264	60	53	Output terminal +
SFC, interrupt one conductor	264	60	140	Output terminal +
SFC, interrupt one conductor reverse	264	60	134	Output terminal +
NC	264	60	76	Output terminal -
SFC, interrupt one conductor	264	60	160	Output terminal -
SFC, interrupt one conductor reverse	264	60	154	Output terminal -
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)
N/A				
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
N/A				
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)
N/A				
Fig. 18 - Patient leakage current with external voltage on metal Accessible				Maximum allowed values: Type B or BF AP: 500 μA



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Clause	Requirement + Test	Result - Remark	Verdict		

Type of leakage current and test condition (including single faults)	Supply voltage (V)	Supply frequency (Hz)	Measured max. value (µA)	Remarks
Part that is not Protectively Earthed	. ,			Type CF: N/A
N/A				
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)
N/A				
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)
N/A				
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)
N/A				
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
N/A				
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
N/A				
Function Earth Conductor Leakage Current (FECLC)	_	_	_	Maximum allowed values: 5 mA NC; 10 mA SFC
N/A				
Supplementary information:				



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

TC - Touch current

P - Patient leakage current

PA - Patient auxiliary current

TP - Total Patient current

PM - Patient leakage current with mains on the applied parts

MD - Measuring device

A - After humidity conditioning

B - Before humidity conditioning

1 - Switch closed or set to normal polarity

0 - Switch open or set to reversed polarity

NC - Normal condition

SFC - Single fault condition



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8.8.3		TABLE: Dielectric strength test of solid insulating materials with safety         unction – MEANS OF OPERATOR PROTECTION (MOOP) / MEANS OF PATIENT PROTECTION         MOPP)						
Inculation	under teet	Inculation Type	Reference	Voltage	A.C. test	Dielectric		
Insulation under test (area from insulation diagram)		Insulation Type (1 or 2 MOOP/MOPP)	PEAK WORKING VOLTAGE (U) V peak	PEAK WORKING VOLTAGE (U) V d.c.	voltages in V r.m.s <sup>1)</sup>	breakdown after 1 minute Yes/No <sup>2)</sup>		
B/C (mains to enclosure)		2MOPP	240 x 1.414		4000	No breakdown		
D (secondary to enclosure)		2MOPP		Max. 48	1000	No breakdown		
E/F (mains to secondary, on PCB and transformer)		2MOPP	250 x 1.414		4000	No breakdown		
G (mains to secondary on 2 identical bridge capacitor in series, test on single capacitor)		2MOPP	250 x 1.414		4000	No breakdown		

# Supplementary information:

<sup>1</sup> Alternatively, per the Table (i.e., \_\_dc), a d.c. test voltage equal to the peak value of the a.c. test voltage used.

<sup>2</sup> 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).

8.8.4.1	TABLE: Resistance to heat - Ball pressure test o	f th	thermoplastic parts P			
	Allowed impression diameter (mm):	≤ 2	2 mm —			
	Force (N):	20			_	
Part/material Test Impress temperature (°C) diameter						
Enclosure & Blade holder						
SE1X			(pass 125°C ball	pressure	test by UL)	
SE1			125		1.6	
SE100			125		1.5	
C2950			125		1.4	
CX7211			125		1.4	
EXCY009	8		125	_	1.3	
940	·		125		1.6	



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945		125	1.3
LN-1250P		125	1.3
LN-1250G		125	1.4
PA-765A		125	1.3
PC-540		125	1.3
Bobbin of T1			
T375J		125	1.3
PM-9823	·	125	1.3
CP-J-8800	·	125	1.4

# **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).



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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	Р			

Yes/No

Specific areas of circuits short-circuited and test conditions

Test in lieu of CREEPAGE Observed (i.e., fire hazard, shock hazard, explosion, discharge of parts, etc.)?

Remarks

See the table 13.1

# 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						
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:**

<sup>&</sup>lt;sup>1)</sup> 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.



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8.9.3.3	Table: Thermal cycling tests on one sample of cemented joint with other insulating parts (see 8.9.3.3)					
Part tested	Sample	Each test duration and temperature	Dielectric test voltage	Dielectric strength test Breakdown: Yes/No		
		10 Cycles conducted of the following:				
	1	1 - 68 h at T1 ± 2 °C =°C <sup>1</sup>				
		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:**

 $<sup>^{1)}</sup>$  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.



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8.10	0 TABLE: Critical components information					Р	
Object / par No.	rt	Manufacturer/ trademark	Type / model	Technical data	Standard		ark(s) of nformity <sup>1)</sup>
Enclosure & Blade holde		SABIC INNOVATIVE PLASTICS B V	SE1X SE1 945	Min. V-1 at 1.5 mm thickness	IEC/EN 60601-1 UL 94 UL 746 A/B/C/D	ар	sted with pliance . E45329
Alt.		SABIC INNOVATIVE PLASTICS B V	SE100	Min. V-1 at 2.0 mm thickness	IEC/EN 60601-1 UL 94 UL 746 A/B/C/D	ар	sted with pliance . E45329
Alt.		SABIC INNOVATIVE PLASTICS B V	C2950 CX7211 940	Min. V-0 at 2.0 mm thickness	IEC/EN 60601-1 UL 94 UL 746 A/B/C/D	ар	sted with pliance . E45329
Alt.		SABIC INNOVATIVE PLASTICS B V	HF500R	PC, V-0, Min. thickness: 2.0mm, 125°C	IEC 62368-1 UL 94 UL 746 A/B/C/D	ар	sted with pliance . E45329
Alt.		SABIC JAPAN L L C	945	PC, Min. V-0, Min. thickness: 2.0mm, 120°C	IEC 62368-1 UL 94 UL 746 A/B/C/D	ар	sted with pliance . E207780
Alt.		SABIC JAPAN L L C	HF500R	PC, V-0, Min. thickness: 2.0mm, 125°C	IEC 62368-1 UL 94 UL 746 A/B/C/D	ар	sted with pliance . E207780
Alt.		TEIJIN CHEMICALS LTD	LN-1250G	Min. V-0 at 2.0 mm thickness	IEC/EN 60601-1 UL 94 UL 746 A/B/C/D	appliance	
Alt.		CHI MEI Corporation	PA-765A	Min. V-1 at 2.0 mm thickness	IEC/EN 60601-1 UL 94 UL 746 A/B/C/D	ар	sted with pliance . E56070
Alt.		CHI MEI Corporation	PC-540	Min. V-0 at 2.0 mm thickness	IEC/EN 60601-1 UL 94 UL 746 A/B/C/D	ар	sted with pliance . E56070
AC inlet for Class I mod	lel	Zhejiang LECI Electronics Co., Ltd.	DB-6	2.5A, 250Vac Standard sheet: C6	IEC/EN 60320-1 UL 498	VDE 40032465 UL E302229	
Alt.		Rich Bay Co., Ltd.	R-30790 R-307	2.5A, 250Vac Standard sheet: C6	IEC/EN 60320-1 UL 498		0E 030381 . E184638
Alt.		Sun Fair Electric Wire & Cable (HK)Co. Ltd.	S-02	2.5A, 250Vac Standard sheet: C6	IEC/EN 60320-1 UL 498		DE 034448 . E226643



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Alt.	TECX-UNIONS Technology Corporation	TU-333 series	2.5A, 250V Standard s C6		IEC/EN 60320-1 UL 498		05430 E100004
Alt.	Rong Feng Industrial Co., Ltd.	RF-190	2.5A, 250V Standard s C6		IEC/EN 60320-1 UL 498		30379 102641
Alt.	Inalways Corporation	0724	2.5A, 250V Standard s C6		IEC/EN 60320-1 UL 498	ENE 2010 UL E	
Alt.	Zhe Jiang BeiErjia	ST-A04-002	250 Vac; 2, pins,	,5A; 3	IEC/EN 60320-1 UL 498		16045 225980
Alt.	Zhejiang LECI Electronics Co., Ltd.	DB-14	10A, 250Va Standard s C14		IEC/EN 60320-1 UL 498		32137 302229
Alt.	Rich Bay Co., Ltd.	R-301SN	10A, 250Va Standard si C14		IEC/EN 60320-1 UL 498		30228 184638
Alt.	Sun Fair Electric Wire & Cable (HK)Co. Ltd.	S-03	10A, 250Va Standard s C14		IEC/EN 60320-1 UL 498		34447 226643
Alt.	TECX-UNIONS Technology Corporation	TU-301-S TU-301-SP	10A, 250Va Standard s C14		IEC/EN 60320-1 UL 498		25582 220004
Alt.	Rong Feng Industrial Co., Ltd.	SS-120	10A, 250Va Standard s C14		IEC/EN 60320-1 UL 498		28101 E102641
Alt.	Inalways Corporation	0711 series	10A, 250Va Standard s C14		IEC/EN 60320-1 UL 498	ENE 2010 UL E	
Alt.	Zhe Jiang BeiErjia	ST-A01-003J	250 Vac; 10 pins,	0A; 3	IEC/EN 60320-1 UL 498		3388 225980
AC inlet for Class II model	Zhejiang LECI Electronics Co., Ltd.	DB-8	2.5A, 250V Standard s C8		IEC/EN 60320-1 UL 498		32028 302229
Alt.	Rich Bay Co., Ltd.	R-201SN90	2.5A, 250V Standard s C8		IEC/EN 60320-1 UL 498		30384 E184638
Alt.	Sun Fair Electric Wire & Cable (HK)Co. Ltd.	S-01	2.5A, 250V Standard si C8		IEC/EN 60320-1 UL 498		34449 E226643



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Alt.	Rong Feng Industrial Co., Ltd.	RF-180	2.5A, 250V Standard sl C8		IEC/EN 60320-1 UL 498		30168 E102641
Alt.	Inalways Corporation	0721 series	2.5A, 250V Standard sl C8		IEC/EN 60320-1 UL 498	ENEC 2010087 UL E94191	
Alt.	Zhe Jiang BeiErjia	ST-A03-005	250 Vac; 2, pins,	5A; 2	IEC/EN 60320-1 UL 498		4833 225980
Alt.	Kunshan Dlk Electronics Technology Co., Ltd	CDJ-8	2.5A, 250V Standard sl C8		IEC/EN 60320-1 UL 498		25531 317189
Insulating tub used on appliance inle	WOER HEAT-	RSFR RSFR-H RSFR-HPF	600V, 125°	С	IEC/EN 60601-1 UL 224	Tested within appliance UL E203950	
Alt.	QIFURUI ELECTRONICS CO	QFR-h	600V, 125°	С	IEC/EN 60601-1 UL 224	appli	ed within ance 225897
Alt.	DONGGUAN SALIPT CO LTD	SALIPT S- 901-300 SALIPT S- 901-600	Min. 300V,	125°C	IEC/EN 60601-1 UL 224	appli	ed within ance 209436
Alt.	GUANGZHOU KAIHENG ENTERPRISE GROUP	K-2 (+) K-2 (CB)	Min. 300V,	125°C	IEC/EN 60601-1 UL 224	appli	ed within ance 214175
Alt.	CHANGYUAN ELECTRONICS (SHENZHEN) CO LTD	CB-HFT	Min. 300V,	125°C	IEC/EN 60601-1 UL 224	appli	ed within ance 180908
Alt.	SHENZHEN WOLIDA TRADING CO LTD	RSFR-H	600V, 125°	С	IEC/EN 60950-1 UL 224	appli	ed within ance 9530
Internal prima wiring	DONGGUAN YUE YANG WIRE & CABLE CO LTD	1007, 1015, 1185, 2464, 2468	Min. 18AWG, min. 300Vac, min. 80°C				ed with ance 230810
Alt.	YONG HAO ELECTRICAL INDUSTRY CO LTD	1007, 1015, 1185, 2464, 2468			IEC/EN 60601-1 UL 758	appli	ed with ance 240426



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Alt.	HIP TAI ELECTRIC WIRE CO	1007, 1015, 1185, 2464, 2468	Min. 18AWG, min. 300Vac, min. 80°C	IEC/EN 60601-1 UL 758	Tested with appliance UL E225804
Alt.	KUNSHAN NEW ZHICHENG ELECTRONICS TECHNOLOGIES CO LTD	1007, 1015, 1185, 2464, 2468	Min. 18AWG, min. 300Vac, min. 80°C	IEC/EN 60601-1 UL 758	Tested with appliance UL E237831
Alt.	SHENG YU ENTERPRISE CO LTD	1007, 1015, 2464, 2468	Min. 18AWG, min. 300Vac, min. 80°C	IEC/EN 60601-1 UL 758	Tested with appliance UL E219726
Alt.	Suzhou Jiahuishu Electronic Co Ltd	1007, 1015, 1185, 2464, 2468	Min. 18AWG, min. 300Vac, min. 80°C	IEC/EN 60601-1 UL 758	Tested with appliance UL E353532
Alt.	SUZHOU HONGMENG ELECTRONIC CO LTD	1007, 1015, 1185, 2464, 2468	Min. 18AWG, min. 300Vac, min. 80°C	IEC/EN 60601-1 UL 758	Tested with appliance UL E315421
Alt.	ZHUANG SHAN CHUAN ELECTRICAL PRODUCTS (KUNSHAN) CO LTD	1007, 1015, 1185, 2464, 2468	Min. 18AWG, min. 300Vac, min. 80°C	IEC/EN 60601-1 UL 758	Tested with appliance UL E333601
Alt.	SUZHOU QCTECH CO LTD	1007, 1015, 1185, 2464, 2468	Min. 18AWG, min. 300Vac, min. 80°C	IEC/EN 60601-1 UL 758	Tested with appliance E322968
Alt.	DONGGUAN CHUANTAI WIRE PRODUCTS CO LTD	1007, 1015, 1185, 2464, 2468	Min. 18 AWG, Min. 300V, Min. 80°C,	IEC/EN 60601-1 UL 758	Tested with appliance UL E315628
Alt.	Dongguan Cooperation Wire&Cable Co Ltd	1007, 1015, 1185, 2464, 2468	Min. 18 AWG, Min. 300V, Min. 80°C,	IEC/EN 60601-1 UL 758	Tested with appliance UL E204204
Alt.	Suzhou Liyueke Electronic Technology Co Ltd	1007, 1015, 1185, 2464, 2468	Min. 18 AWG, Min. 300V, Min. 80°C,	IEC/EN 60601-1 UL 758	Tested with appliance UL E476385
Insulating she only for GT- 41134-0606- W2-TAB	et FORMEX,DIV OF IL TOOL WORKS INC, FRMRLY FASTEX, DIV OF IL TOOL WORKS INC	FORMEX GK series	V-0, min. 0.4 mm thickness, 115°C	IEC/EN 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E121855



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Alt.	MIANYANG LONGHUA FII CO LTD	PP-WT-20	VTM-0, mir mm thickne 65°C		IEC/EN 60950-1 UL 94 UL 746 A/B/C/D	appl	Tested with appliance UL E254551		
Alt.	SKC CO LTD	SH71S	VTM-2, mir mm thickne 105°C		IEC/EN 60950-1 UL 94 UL 746 A/B/C/D	appl	ed with iance 74359		
Alt.	TORAY INDUSTRIES	INC Lumirror H10	VTM-2, mir mm thickne 105°C		IEC/EN 60950-1 UL 94 UL 746 A/B/C/D	appl	ed with iance 86511		
Alt.	SABIC INNOVATIVE PLASTICS US L C	FR60 series FR63 series FR65 series FR7 series FR700 series	V-0, min. 0 thickness,		IEC/EN 60950-1 UL 94 UL 746 A/B/C/D	appl	ed with iance E121562		
Alt.	SICHUAN LONGHUA FII CO LTD	_M PP-(i)(j)	V-0, min. 0 thickness, 8	, 80°C UL 94 applia		ed with iance 254551			
Alt.	ITW ELECTRONIC COMPONENT PRODUCTS (SHANGHAI)	-S/	V-0, min. 0 thickness,		IEC/EN 60950-1 UL 94 UL 746 A/B/C/D	appl	ed within iance 256266		
Alt.	CHENGDU KANGLONGX PLASTICS CO LTD		VTM-0, mir mm thickne 110°C		IEC/EN 60950-1 UL 94 UL 746 A/B/C/D	appl	ed within iance 315185		
PCB	TECHNI TECHNOLOG LTD	T2A Y T2B T4 T2	Min. V-0, m mm thickne 130°C		IEC/EN 60601-1 UL 796	appl	ed with iance 154355		
Alt.	DONGGUAN I TONG ELECTRONIC CO LTD	2V0	Min. V-0, m mm thickne 130°C		IEC/EN 60601-1 UL 796	appl	ed with iance 243157		
Alt.	CHEERFUL ELECTRONIC	03 03A 02	Min. V-0, m mm thickne 130°C		IEC/EN 60601-1 UL 796		ed with iance E199724		
Alt.	DONGGUAN DAYSUN ELECTRONIC CO LTD	DS2	Min. V-0, min 1.6 mm thickness, 130°C		IEC/EN 60601-1 UL 796	appl	ed with iance 2251754		



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Alt.		SUZHOU CITY YILIHUA ELECTRONICS CO LTD	YLH-1	Min. V-0, m mm thickne 130°C		IEC/EN 60601-1 UL 796	appl	ted with iance E251781
Alt.		SHANGHAI AREX PRECISION ELECTRONIC CO LTD	02V0 03V0 04V0	Min. V-0, m mm thickne 130°C		IEC/EN 60601-1 UL 796	appl	ted with iance E186016
Alt.		BRITE PLUS ELECTRONICS (SUZHOU) CO LTD	DKV0-3A DGV0-3A	Min. V-0, m mm thickne 130°C		IEC/EN 60601-1 UL 796	appl	ted with liance E177671
Alt.		KUOTIANG ENT LTD	C-2 C-2A	Min. V-0, m mm thickne 130°C		IEC/EN 60601-1 UL 796	appl	ted with iance E227299
Alt.		PACIFIC WIN INDUSTRIAL LTD	PW-02 PW-03	Min. V-0, m mm thickne 130°C		IEC/EN 60601-1 UL 796	appl	ted with iance E228070
Alt.		SHENZHEN TONGCHUANGX IN ELECTRONICS CO LTD	тсх	Min. V-0, min 1.6 mm thickness, 130°C		IEC/EN 60601-1 UL 796	appl	ted with iance E250336
Alt.		JIANGSU DIFEIDA ELECTRONICS CO LTD	DFD-1	Min. 1.6 mr thickness, 1 0, 130°C		IEC/EN 60601-1 UL 796	appl	ted within iance
Alt.		SHANGHAI H- FAST ELECTRONICS CO LTD	211001 411001	Min. 1.6 mr thickness, 1 0, 130°C		IEC/EN 60601-1 UL 796	appl	ted with iance E337862
Alt.		YUANMAN PRINTED CIRCUIT CO LTD	1V0	Min. 1.6 mr thickness, I 0, 130°C		IEC/EN 60601-1 UL 796	appl	ted within iance
Alt.		KUNSHAN CITY QIANDENG WUQIAO ELECTRICAL APPLIANCE FACTORY	WQ-A, WQ-B, WQ-C	Min. 1.6 mr thickness, i 0, 130°C		IEC/EN 60601-1 UL 796	appl	ted within iance E492425
Alt.		Jiangxi ZHONG XIN HUA Electronics Industry Co Ltd	ZXH-2	Min. 1.6 mr thickness, I 0, 130°C		IEC/EN 60601-1 UL 796	appl	ted within iance



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Alt.		Shenzhen Jia Li Chuang Technology Development Co LTD	JLC-2	Min. 1.6 mm thickness, min. 0, 130°C	V- IEC/EN 60601-1 UL 796	Tested within appliance UL E479892
Alt.		Interchangeable	Interchangeab le	Min. V-0, min 1, mm thickness, 130°C	.6 IEC/EN 60601-1 UL 796	Tested with appliance UL Approved.
Fuse (F1, F (F2 is optio		Conquer Electronics Co., Ltd.	MST	T1A or T6.3A, 250V	IEC/EN 60127-2 UL 248-1 UL 248-14	VDE 40017118 UL E82636
Alt.		Ever Island Electric Co., Ltd. and Walter Electric	2010	T1A or T6.3A, 250V	IEC/EN 60127-2 UL 248-1 UL 248-14	VDE 40018781 UL E220181
Alt.		Bel Fuse Ltd.	RST	T1A or T6.3A, 250V	IEC/EN 60127-2 UL 248-1 UL 248-14	VDE 40011144 UL E20624
Alt.		Cooper Bussmann LLC	SS-5	T1A or T6.3A, 250V	IEC/EN 60127-2 UL 248-1 UL 248-14	VDE 40015513 UL E19180
Alt.		Das & Sons International Ltd.	385T series	T1A or T6.3A, 250V	IEC/EN 60127-2 UL 248-1 UL 248-14	VDE 40008524 UL E205718
Alt.		Shenzhen Lanson Electronics Co. Ltd.	SMT	T1A or T6.3A, 250V	IEC/EN 60127-2 UL 248-1 UL 248-14	VDE 40012592 UL E221465
Alt.		Walter Electronic Co. Ltd.	ICP series	T1A or T6.3A, 250V	IEC/EN 60127-2 UL 248-1 UL 248-14	VDE 40012824 UL E56092
Alt.		Zhongshan Lanbao Electrical Appliances Co., Ltd.	RTI-10 series	T1A or T6.3A, 250V	IEC/EN 60127-2 UL 248-1 UL 248-14	VDE 40017009 UL E213695
Alt.		Sun Electric Co.	5T	T1A or T6.3A, 250V	IEC/EN 60127-2 UL 248-1 UL 248-14	VDE 40027241 UL E166522
Alt.		Bel Fuse Ltd.	5ST	T1A or T6.3A, 250V	IEC/EN 60127-2 UL 248-1 UL 248-14	VDE 40000507 UL E20624
Alt.		Dongguan Better	932	T1A or T6.3A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40033369 UL E300003



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			IEC 6	0601-1				
Clause	Req	uirement + Test			Result -	Remark		Verdict
Alt.		Conquer Electronics Co., Ltd.	MET series	T1A or T6.3 250V	3A,	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40017157 UL E82636	
Alt.		Suzhou Walter Electronic Co. Ltd.	2000	T1A or T6.3 250V	3A,	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14		8790 56092
Y-Capacitor (CY1, CY2) (optional)		SUCCESS ELECTRONICS CO LTD	SE SB	Type Y1, m 470pF, min 125°C		IEC/EN 60384- 14 UL 60384-14 UL 1414	VDE 4003	37221
Alt.		MURATA MFG CO LTD	КХ	Type Y1, max. 470pF, min. 250V, 125°C		IEC/EN 60384- 14 UL 60384-14 UL 1414		)2831 :37921
Alt.		WALSIN TECHNOLOGY CORP	АН	Type Y1, max. 470pF, min. 250V, 125°C		IEC/EN 60384- 14		
Alt.		JYA-NAY CO LTD	JN	Type Y1, m 470pF, min 125°C		IEC/EN 60384- 14 UL 60384-14 UL 1414	VDE 40001831 UL E201384	
Alt.		HAOHUA ELECTRONIC CO	СТ7	Type Y1, m 470pF, min 125°C		IEC/EN 60384- 14 UL 60384-14 UL 1414		)3902 :233106
Alt.		JERRO ELECTRONICS CORP	JX-series	Type Y1, m 470pF, min 125°C		IEC/EN 60384- 14 UL 60384-14 UL 1414		32158 333001
Alt.		TDK CORP	CD	Type Y1, max. 470pF, min. 250V, 125°C		IEC/EN 60384- 14 UL 60384-14 UL 1414		124321 37861
Alt.		JYH CHUNG ELECTRONICS CO LTD	JD	Type Y1, max. 470pF, min. 250V, 125°C		IEC/EN 60384- 14 UL 60384-14 UL 1414	VDE 137027 UL E187963	
Alt.		WELSON INDUSTRIAL CO LTD	WD	Type Y1, m 470pF, min 125°C		IEC/EN 60384- 14 UL 60384-14 UL 1414		115455 104572



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Clause	Requirement + Test			Result -	Remark		Verdict		
Alt.	Xiangtai Electronic (Shenzhen) Co., Ltd.	YO-series	Type Y1, m 470pF, min 125°C		IEC/EN 60384- 14 UL 60384-14 UL 1414	VDE 40036880 UL E319473			
Alt.	Shantou High- New Technology Dev. Zone Songtian Enterprise Co., Ltd.	CD-series	Type Y1, m 470pF, min 125°C		IEC/EN 60384- 14	1	25754 2208107		
Alt.	Shantou High- New Technology Dev. Zone Songtian Enterprise Co., Ltd.	CE-series	Type Y1, m 470pF, min 125°C		IEC/EN 60384- 14		25748 2208107		
Varistor (MOV (optional)	V1) JOYIN CO LTD	07N471K 10N471K 14N471K	Max continuous voltage: 300VAC, 6kV/3kA, 40/85/56		IEC 61051-2 UL 1449		005937 325508		
Alt.	CENTRA SCIENCE CORP	07D471K 10D471K 14D471K	Max continuous voltage: 300VAC, 6kV/3kA, 40/85/56		0VAC, UL 1449		)8220 316325		
Alt.	THINKING ELECTRONIC INDUSTRIAL CO LTD	TVR07471K TVR10471K TVR14471K TVR10471K- M	Max continu voltage: 30 6kV/3kA, 40	0VAC,	IEC 61051-2 UL 1449		005944 314979		
Alt.	SUCCESS ELECTRONICS CO LTD	SVR07D471K SVR10D471K SVR14D471K	Max continuoultage: 30/6kV/3kA, 46	OVAC,	IEC 61051-2 UL 1449	VDE	30401 123677 330256		
Alt.	CERAMATE TECHNICAL CO LTD	GNR07D471K GNR10D471K GND14D471K	Max continuous voltage: 30 6kV/3kA, 40	OVAC,	IEC 61051-2 UL 1449		31745 315429		
Alt.	BRIGHTKING (SHENZHEN) CO LTD	07D471K 10D471K 14D471K 10H471K-(+)	Max continuous voltage: 300VAC, 6kV/3kA, 40/85/56		IEC 61051-2 UL 1449		27827 E327997		
Alt.	Best Bright Electronics Co. ltd.	07D471K 10D471K 14D471K	Max continuous voltage: 300VAC, 6kV/3kA, 40/85/56		voltage: 300VAC, UL 1449		)5858 :315524		
Alt.	HONGZHI ENTERPRISES LTD	HEL-07D471K HEL-10D471K HEL-14D471K	Max continuous voltage: 30 6kV/3kA, 40	0VAC,	IEC 61051-2 UL 1449		)8621 :324904		



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		IEC 6	0601-1					
Clause Re	quirement + Test			Result - Remark			Verdict	
Alt.	GUANGXI NEW FUTURE INFORMATION INDUSTRY CO LTD	07D471K 10D471K 14D471K	Max contin voltage: 30 6kV/3kA, 4	OVAC,	IEC 61051-2 UL 1449		30322 323753	
Alt.	WALSIN TECHNOLOGY CORP	VZ10D471K VZ14D471K	Max contin voltage: 30 6kV/3kA, 4	0VAC,	IEC 61051-1 IEC 61051-2		10090 309297	
Alt.	Shantou High- New Technology Dev. Zone Songtian Enterprise Co., Ltd.	07D471K 10D471K 14D471K	Max contin voltage: 30 6kV/3kA, 4	OVAC,	IEC 61051-1 IEC 61051-2		23049 230837	
Alt.	Guangdong Huiwan Electronics Technology Co., LTD.	V-471K-10D, V-471K-10E V-471K-14D, V-471-14E	Max continuous voltage: 300VAC, 6kV/3kA, 40/85/56		IEC 61051-1 IEC 61051-2	4004	VDE 40043880 UL E480104	
Varistor (MOV1 (optional) (only for GT-41134- 0606-W2-TAB)	) Panasonic Corporation	ERZV20D241 (V20241U)	Max contin voltage: 15 6kV/3kA, 4	OVAC,	IEC 61051-2 UL 1449		18677 E321499	
Alt.	Brightking (Shenzhen) Co., Ltd.	241KD20J	Max contin voltage: 15 6kV/3kA, 4	OVAC,	IEC 61051-2 UL 1449		27827 327997	
Alt.	EPCOS	S20K150	Max continuous voltage: 150VAC, 6kV/3kA, 40/85/56		IEC 61051-2 UL 1449		27582 2321126	
Alt.	Thinking Electronic Industrial Co., Ltd.	TVR20241K	Max continuous voltage: 150VAC, 6kV/3kA, 40/85/56		IEC 61051-2 UL 1449		VDE 005944 UL E314979	
Alt.	Success Electronics Co., Ltd.	SVR20D241K	Max contin voltage: 15 6kV/3kA, 4	OVAC,	IEC 61051-2 UL 1449		30401 330256	



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IEC 60601-1									
Clause	Requirement + Test			Result -	Remark		Verdict		
Transformer (T1)	BOAM/ HAOPUWEI	XF00716I for 3.3-4.9V XF00714I for 5-8.9V XF00717 for 9-14.9V XF00718 for 15-18.9V XF00719 for 19-24V XF00814 for 24.1-36V XF00841 for 36.1-48V TF032 for 5- 8.9V TF033 for 9- 14.9V TF034 for 15- 18.9V TF035 for 19- 24V	Class B, wi critical com listed below	ponent	IEC 60601-1	appli	ed with ance		
-Insulation system	ENG ELECTRIC CO LTD	ENG130-1	Class 130(l	В)	IEC/EN 60601-1 UL 1446	appli	ed with ance 308897		
-Alt.	GLOBTEK INC	GTX-130-TM	Class 130(l	В)	IEC/EN 60601-1 UL 1446	appli	ed with ance 243347		
-Alt.	SHAN DONG BOAM ELECTRIC CO LTD	BOAM-01	Class 130(l	В)	IEC/EN 60601-1 UL 1446	appli	ed with ance 252329		
-Alt.	BOAM	B1	Class 130 (	(B)	IEC/EN 60601-1 UL 1446	appli	ed with ance :252329		
-Alt.	WUXI HAOPUWEI ELECTRONICS CO LTD	ZT-130	Class 130(l	В)	IEC/EN 60601-1 UL 1446	appli	ed with ance 315275		
-Magnet wird (Primary)	PACIFIC ELECTRIC WIRE & CABLE (SHENZHEN) CO LTD	UEWN/U	130°C		IEC/EN 60601-1 UL 1446	appli	ed with ance 201757		
-Alt.	JUNG SHING WIRE CO LTD	UEW-4 UEY-2	130°C		IEC/EN 60601-1 UL 1446	appli	ed with ance 174837		



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		IEC 6	0601-1			
Clause Rec	uirement + Test			Result -	Remark	Verdict
-Alt.	JIANGSU HONGLIU MAGNET WIRE TECHNOLOGY CO LTD	2UEW/130	130°C		IEC/EN 60601-1 UL 1446	Tested with appliance UL E335065
-Alt.	CHANGZHOU DAYANG WIRE & CABLE CO LTD	2UEW/130	130°C		IEC/EN 60601-1 UL 1446	Tested with appliance UL E158909
-Alt.	WUXI JUFENG COMPOUND LINE CO LTD	2UEWB	130°C		IEC/EN 60601-1 UL 1446	Tested with appliance UL E206882
-Alt.	JIANGSU DARTONG M & E CO LTD	UEW	130°C		IEC/EN 60601-1 UL 1446	Tested with appliance UL E237377
-Alt.	SHANDONG SAINT ELECTRIC CO LTD	UEW/130	130°C		IEC/EN 60601-1 UL 1446	Tested with appliance UL E194410
-Alt.	ZHEJIANG LANGLI ELECTRIC EQUIPMENTS CO LTD	UEW	130°C		IEC/EN 60601-1 UL 1446	Tested with appliance UL E222214
-Alt.	BOLUO COUNTY XIN LONG ELECTRICIAN DATA CO LTD	2UEW-F	MW 79-C,	155°C	IEC/EN 60601-1 UL 1446	Tested with appliance UL E229423
-Alt.	NINGBO JINTIAN NEW MATERIAL CO LTD	2UEW	MW 75-C,	130°C	IEC/EN 60601-1 UL 1446	Tested with appliance UL E227047
-Secondary wire of T1 (TIW)	GREAT LEOFLON INDUSTRIAL CO LTD	TRW (B)	Min.130°C		IEC/EN 60601-1 UL 2353	Tested with appliance UL E211989
-Alt.	COSMOLINK CO LTD	TIW-M	Min.130°C		IEC/EN 60601-1 UL 2353	Tested with appliance UL E213764
-Alt.	FURUKAWA ELECTRIC CO LTD	TEX-E	Min.130°C		IEC/EN 60601-1 UL 2353	Tested with appliance UL E206440
-Alt.	TOTOKU ELECTRIC CO LTD	TIW-2	Min.130°C		IEC/EN 60601-1 UL 2353	Tested with appliance UL E166483



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		IEC 6	0601-1				
Clause Re	quirement + Test			Result -	Remark		Verdict
-Alt.	E&B TECHNOLOGY CO LTD	E&B-XXXB E&B-XXXB-1	Min.130°C		IEC/EN 60601-1 UL 2353	appl	ed with iance 315265
-Alt.	CHANGYUAN ELECTRONICS (SHENZHEN) CO LTD	CB-TIW	Min.130°C		IEC/EN 60601-1 UL 2353	appl	ed with iance 249037
-Alt.	SHENZHEN JIUDING NEW MATERIAL CO LTD	DTIW-B	Min.130°C		IEC/EN 60601-1 UL 2353		37495 357999
-Bobbin	CHANG CHUN PLASTICS CO LTD	T375J T375HF	V-0, 150°C thickness: (		IEC/EN 60601-1 UL 94 UL 746 A/B/C/D	appl	ed with iance 59481
-Alt.	SUMITOMO BAKELITE CO LTD	PM-9820 PM-9823	V-0, 150°C thickness: (		IEC/EN 60601-1 UL 94 UL 746 A/B/C/D	appl	ed with iance 41429
-Alt.	SHOWA DENKO MATERIALS TECHNO SERVICE CO., LTD.	thickness: 0.6mm			IEC/EN 60601-1 UL 94 UL 746 A/B/C/D	appl	ed with iance 514814
ELECTRICAL		1350F-1 1350T-1 44	130°C		IEC/EN 60601-1 UL 510	appl	ed with iance 17385
-Alt.	BONDTEC PACIFIC CO LTD	370S	130°C		IEC/EN 60601-1 UL 510	appl	ed with iance 175868
-Alt.	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	PZ CT WF	130°C		IEC/EN 60601-1 UL 510	appl	ed with iance 165111
-Alt.	JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD	JY25-A	130°C		IEC/EN 60601-1 UL 510	appl	ed with iance 246950
-Alt.	CHANG SHU LIANG YI TAPE INDUSTRY CO LTD	LY-XX	130°C		IEC/EN 60601-1 UL 510	appl	ed with iance 246820
Non-critical con	nponent list					•	



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Clause	Req	irement + Test		Result - Remark			Verdict	
Output cord		Interchangeable	Interchangeab le	Min. 24AWG, min. 300Vac, min. 80°C		IEC/EN 60601-1 UL 758	appl	ed with iance approved
	Supplementary information:  1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.							

Object / part	Manufacturer/	Type / model	Technical data	Standard	Mark	(s) of
No.	trademark	Type / model	reominour data	Otanidard		ormity <sup>1)</sup>
Description:						
Description:						
- Description:						

8.11.3.5 TABLE: CORD ANCHORAGES						N/A
Cord under test		Mass of equipment (kg)	Pull (N)	Torque Nm)	Rem	narks
Supplemen	tary information:					



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8.11.3.6	TABLE: Cord guard							
Cord under test		Test mass	Measured curvature	Remark	<b>KS</b>			
Supplemen	Supplementary information:							

9.2.2.2	TABLE: Measurement of gap "a" according to Table 20 (ISO 13852: 1996)					N/A
Part of body		Allowable adult gap <sup>1)</sup> , mm	Measured adult gap, mm	Allowable children gap <sup>1)</sup> , 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, wris	t, fist	> 100		> 100		
Finger		> 25 or < 8		> 25 or < 4		

Supplementary information: <sup>1)</sup> 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		
ME EQUIPMENT end stop		Test Condition (cycles, load, speed)	Remarks
Suppleme	ntary information:		1

9.4.2.1	TABLE: Instability—overbalance in transport position			
ME EQUIPMENT preparation		Test Condition (transport position) Remarks		
Supplemen	tary information:			



Total Quality. Assured. Page 136 of 237 Report No. 220201762SHA-001 IEC 60601-1 Clause Requirement + Test Result - Remark Verdict 9.4.2.2 TABLE: Instability—overbalance excluding transport position N/A **ME EQUIPMENT Test Condition (excluding transport** Remarks position) Test either 5° incline and verify preparation Warning marking or 10 ° incline) Supplementary information:

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

9.4.2.4.2	TABLE: Casto	TABLE: Castors and wheels – Force for propulsion		
ME EQUIPMENT preparation		Test Condition (force location and height)	Remarks	
Supplemer	ntary 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		
Supplemer	ntary information:				



9.4.3.1 TABLE: Instability from unwanted lateral movement (including sliding) in transport position  ME EQUIPMENT Preparation Working load, locking device(s), caster position)  Supplementary information:  9.4.3.2 TABLE: Instability from unwanted lateral movement (including sliding) excluding transport position  ME EQUIPMENT Preparation Test Condition (working load, locking device(s), caster position, force, force location, force direction)  Supplementary information:	lotal Quality	. Assured.	Page 137 of 237	Report No. 22020176	2SHA-001
9.4.3.1 TABLE: Instability from unwanted lateral movement (including sliding) in transport position  ME EQUIPMENT Preparation Working load, locking device(s), caster position)  Supplementary information:  9.4.3.2 TABLE: Instability from unwanted lateral movement (including sliding) excluding transport position  ME EQUIPMENT Preparation Test Condition (working load, locking device(s), caster position, force, force location, force direction)  Supplementary information:			IEC 60601-1		
transport position  ME EQUIPMENT Preparation  Test Condition (transport position, working load, locking device(s), caster position)  Supplementary information:  9.4.3.2 TABLE: Instability from unwanted lateral movement (including sliding) excluding transport position  ME EQUIPMENT Preparation  Test Condition (working load, locking device(s), caster position, force, force location, force direction)  Supplementary information:	Clause Requirement + Test		Test R	esult - Remark	Verdict
Preparation working load, locking device(s), caster position)  Supplementary information:  9.4.3.2 TABLE: Instability from unwanted lateral movement (including sliding) excluding transport position  ME EQUIPMENT Preparation Test Condition (working load, locking device(s), caster position, force, force location, force direction)  Supplementary information:	9.4.3.1	3, 3,			
9.4.3.2 TABLE: Instability from unwanted lateral movement (including sliding) excluding transport position  ME EQUIPMENT Test Condition (working load, locking device(s), caster position, force, force location, force direction)  Supplementary information:  9.4.4 TABLE: Grips and other handling devices	ME EQUIPMENT		working load, locking device(s), cas		
excluding transport position  ME EQUIPMENT Preparation  Test Condition (working load, locking device, s), caster position, force, force location, force direction)  Supplementary information:  D.4.4 TABLE: Grips and other handling devices					
Preparation device(s), caster position, force, force location, force direction)  Supplementary information:  9.4.4 TABLE: Grips and other handling devices	9.4.3.2			(including sliding)	N/A
9.4.4 TABLE: Grips and other handling devices	=		device(s), caster position, force, for		
and the same and t	Suppleme	ntary information:			
Clause and Name of Test	9.4.4	TABLE: Grips	and other handling devices		N/A
Charle and Hame of Fest	Clause and Name of Test		Test Condition		

9.7.5	9.7.5 TABLE: Pressure vessels						N/A
Hydrau Pneumat Suitable I and Te Pressu	tic or Media est	Vessel Burst	Permanent Deformation	Leaks	Vessel fluid substance		Remarks

**Supplementary information:** 



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				IEC 6	0601-1				
Clause	Red	quirement + Test				Resu	ılt - Remark		Verdict
9.7.5	TABLE: Pressure vessels					N/A			
Suppleme	ntary In	formation:					I		

9.8.3.2 TABLE: PATIENT support/suspension system - Static forces						N/A
ME EQUIPMENT part or area		Position	Load	Area	Remai	ks
Suppleme	ntary Inforr	mation:				

9.8.3.3	TABLE: Support/Suspension System – Dynamic forces due to loading from persons							
ME EQUIPMENT part or area		Position	Safe Working Load	Area	Remark	S		
Supplemer	Supplementary Information:							

10.1.1	TABLE: Measurement of X - radiation		
Maximum	allowable radiation pA/kg ( μSv/h) (mR/h)	36 (5 μSv/h) (0.5 mR/h)	



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	Surface area under test Surface no./ Description <sup>1)</sup>	Measured Radiation, pA/kg (μSv/h) (mR/h)	Remarks
1/ /			
2/ /			
3/ /			
4/ /			
5/ /			
6/ /			
7/ /			
8/ /			
9/ /			
10/ /			

# Supplementary information:

<sup>&</sup>lt;sup>1)</sup> 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



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

11.1.1	TABLE: E	xcessive temperatur	es in ME I	EQUIPMEN	Т				Р
Model No:			1	2	3	4	5		6
Test ambie	40 <sup>7</sup>	40 <sup>7</sup>	50 <sup>7</sup>	50 <sup>7</sup>	50 <sup>7</sup>		50 <sup>7</sup>		
Test supply voltage/frequency (V/Hz) <sup>4)</sup> :			See below	See below	See below	See below			See below
Model No.	Thermo- couple No.	Thermocouple loc	ation <sup>3)</sup>	tempera Table 22	allowable ature <sup>1)</sup> from 2, 23 or 24 o for AP <sup>5)</sup> (°C	mea	Max asured erature <sup>2)</sup> , (°C)		Remarks
1	264V/60H	Z							
	1	Enclosure			71	5	6.8	P(1	s ≤ t < 10 s)
	2	Fuse nearby PCB			130	4	5.2		Р
	3	PCB near D1			130	5	9.6		Р
	4	C1			105	6	8.7		Р
	5	PCB near Q1			130	9	1.0		Р
	6	T1 winding		130-	-10=120	8			COR method not used)
	7	PCB		130		6	66.9 <b>P</b>		Р
	85V/50Hz								
	1	Enclosure			71	5	7.3	P(1	s ≤ t < 10 s)
	2	Fuse nearby PCB			130	4	5.8		Р
	3	PCB near D1			130	6	0.0		Р
	4	C1			105	6	9.4		Р
	5	PCB near Q1			130	9	1.5		Р
	6	T1 winding		130-	-10=120	8	3.7	,	COR method not used)
	7	РСВ			130	6	7.6		Р
2	264V/60H	Z							
	1	PCB near D1			130	4	3.7		Р
	2	C1			105	5	1.4		Р
	3	PCB near Q1			130	6	2.0		Р
	4	T1 winding		130-	-10=120	6	9.2		COR method not used)
	5	T1 bobbin			105	7	2.0		Р
	6	PCB near U21			130	5	3.5		Р



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		IE	EC 60601-1				
Clause	Requirement + Test		Result -	Verdict			
	80V/60H	lz					
	1	PCB near D1	130	41.8	Р		
	2	C1	105	49.8	Р		
	3	PCB near Q1	130	56.5	Р		
	4	T1 winding	130-10=120	64.7	P(COR method not used)		
	5	T1 bobbin	105	67.7	Р		
	6	PCB	130	48.4	Р		
3	102V/60	Hz	•				
	1	T1 winding	130-10=120	105.3	P(COR method not used)		
	2	T1 core		102.3	Р		
	3	C2	105	89.9	Р		
	4	C6	105	82.0	Р		
	5	PCB near F1	130	56.2	Р		
	6	PCB near Q1	130	89.0	Р		
	7	Enclosure	71	55.3	P(1 s ≤ t < 10 s)		
	132V/60Hz						
	1	T1 winding	130-10=120	104.3	P(COR method not used)		
	2	T1 core		101.1	Р		
	3	C2	105	88.1	Р		
	4	C6	105	82.0	Р		
	5	PCB near F1	130	55.5	Р		
	6	PCB near Q1	130	87.8	Р		
	7	Enclosure	71	65.6	P(1 s ≤ t < 10 s)		
4	80V/50H	lz			•		
	1	T1 winding	130-10=120	96.0	P(COR method not used)		
	2	T1 core		95.0	Р		
	3	Varistor	85	72.0	Р		
	4	CY1	85	75.0	Р		
	5	PCB	130	79.0	Р		
	6	External enclosure	71	68.0	P(1 s ≤ t < 10 s)		
	7	Internal enclosure	-	76.0	Р		



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		IE	C 60601-1			
Clause	Requir	rement + Test	Result -	Result - Remark		
	8	Output cord	80	64.0	Р	
	264V/60	Hz				
	1	T1 winding	130-10=120	97.0	P(COR method not used)	
	2	T1 core		97.0	Р	
	3	Varistor	85	69.0	Р	
	4	CY1	85	74.0	Р	
	5	PCB	130	78.0	Р	
	6	External enclosure	71	68.0	P(1 s ≤ t < 10 s	
	7	Internal enclosure	-	77.0	Р	
	8	Output cord	80	63.0	Р	
5	80V/50H	Z			•	
	1	T1 winding	130-10=120	94.0	P(COR method not used)	
	2	T1 core		91.0	Р	
	3	Varistor	85	69.0	Р	
	4	CY1	85	71.0	Р	
	5	PCB	130	78.0	Р	
	6	External enclosure	71	65.0	P(1 s ≤ t < 10 s	
	7	Internal enclosure	-	70.0	Р	
	8	Output cord	80	64.0	Р	
	264V/60	Hz				
	1	T1 winding	130-10=120	95.0	P(COR method not used)	
	2	T1 core		93.0	Р	
	3	Varistor	85	66.0	Р	
	4	CY1	85	70.0	Р	
	5	PCB	130	78.0	Р	
	6	External enclosure	71	65.0	P(1 s ≤ t < 10 s	
	7	Internal enclosure	-	70.0	Р	
	8	Output cord	80	63.0	Р	
6	80V/50H	Z	1	1	•	
	1	T1 winding	130-10=120	94.0	P(COR metho not used)	
	2	T1 core		91.0	Р	



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Clause	Requir	ement + Test	Result -	Remark	Verdict
	3	Varistor	85	69.0	Р
	4	CY1	85	71.0	Р
	5	PCB	130	78.0	Р
	6	External enclosure	71	65.0	P(1 s ≤ t < 10 s)
	7	Internal enclosure	-	70.0	Р
	8	Output cord	80	64.0	Р
	264V/60	264V/60Hz			
	1	T1 winding	130-10=120	95.0	P(COR method not used)
	2	T1 core		93.0	Р
	3	Varistor	85	66.0	Р
	4	CY1	85	70.0	Р
	5	PCB	130	78.0	Р
	6	External enclosure	71	65.0	P(1 s ≤ t < 10 s)
	7	Internal enclosure	-	70.0	Р
	8	Output cord	80	63.0	Р

### Supplementary information:

- 1) Maximum allowable temperature on surfaces of test corner is 90 °C
- <sup>2)</sup> 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.
- <sup>4)</sup> 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.
- 5) APPLIED PARTS intended to supply heat to a PATIENT See RISK MANAGEMENT FILE containing temperatures and clinical effects. Also, see instructions for use.

Information from Risk Management, as applicable:

11.1.3d	TABLE: Temperature of windings by change-of-resistance method							N/A
Temperatu	re T of winding:	t <sub>1</sub> (°C)	R <sub>1</sub> (Ω)	t <sub>2</sub> (°C)	R <sub>2</sub> (Ω)	T (°C)	Allowed T <sub>max</sub> (°C)	Insulatio n class
Supplemen	tary information:							



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Clause	Requirement + Test		Result - Remark	Verdict	

11.2.2.1	TABLE: Alternative method to 11.2.2.1 a) 5) to determine existence of an ignition source				
Areas wher	re sparking might cause ignition:	Remarks			
1.					
2.					
3.					
4.					
5.					
6.					
	f the parts between which sparks gnation, Manufacturer):	could occur (Composition,	Remarks	3	
1.					
2.					
3.					
4.					
5.					
6.					
Test param EQUIPMENT:	eters selected representing worst	t case conditions for ME	Remarks	5	
Oxygen co	ncentration (%):				
Fuel	:				
Current (A)	·····:				
Voltage (V)	:				
Capacitanc	e (μF):				
Inductance	or resistance (h or Ω):				
No. of trials	s (300 Min):				
Sparks resi	ulted in ignition (Yes/No):				
C la	and information. Took was a divise of 4	4 0 0 4 -) 5) 8 5: 25 27	diferente de Consideration		

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:



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Clause	Requirement + Test		Result - Remark	Verdict

11.6.1	TABLE: overflow, spillage, leakage, ingress of water, cleaning, disinfection, sterilization, compatibility with substances				
Clause / Test Name Test Condition Part under test Remarks					
Supplemen	ntary informa	tion:			
Information	n from Risk I	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					s to	N/A	
Power diss	ipated less	than (W)	:	15			
Energy dis	sipated less	s than (J)		900			
Part or co	omponent ted	Measured power dissipated (W)	Calculated dissipa		SINGLE FAULT CONDITIONS waived (Yes/No)	R	emarks
Supplement	tary informat	ion:					



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Clause Requirement + Test			Result - Remark	Verdict

13.2	TABLE: SINGLE FAULT CONDITIONS in accordance wi	th 13.2.2 to 13.2.13, inclusive	Р
Clause No.	Description of SINGLE FAULT CONDITION	Results observed	HAZARDOUS SITUATION (Yes/No)
13.2.2	Electrical SINGLE FAULT CONDITIONS per CI. 8.1:	_	_
	C1 short circuit	Fuse open, EUT shut down immediately	No
	D2 short circuit	Fuse open, EUT shut down immediately	No
	D6 SHORT CIRCUIT	No output	No
	C5 SHORT CIRCUIT	EUT protected immediately	No
	D1 SHORT CIRCUIT	Fuse open, EUT shut down immediately	No
	Q1 PIND-S SHORT CIRCUIT	Fuse open, EUT shut down immediately	No
	Q1 pinG-S short circuit Fuse open, EUT immediat		No
13.2.3	Overheating of transformers per Clause 15.5:	_	_
		See 15.5	No
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:	_	_
	No therm		N/A
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:	_	_
		No temperature limiting device	N/A
13.2.6	Leakage of liquid - RISK MANAGEMENT FILE examined to determine the appropriate test conditions (sealed rechargeable batteries exempted)	_	-
			N/A



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Clause	Requirement + Test		Result - Remark	Verdict

Clause No.	Description of SINGLE FAULT CONDITION	Results observed	
13.2.7	Impairment of cooling that could result in a HAZARD using test method of 11.1:	_	_
	Single ventilation fans locked consecutively	No fan used	N/A
	Ventilation openings on top and sides impaired by covering openings on top of ENCLOSURE or positioning of ME EQUIPMENT against walls	No ventilation opening	N/A
	Simulated blocking of filters	No filter	N/A
	Flow of a cooling agent interrupted	No cooling agent used	N/A
13.2.8	Locking of moving parts – Only one part locked at a time – Also see 13.2.10 below:	_	_
		No moving part	N/A
13.2.9	Interruption and short circuiting of motor capacitors – Motor capacitors short & open circuited <sup>1)</sup> – Also see 13.10	_	_
		No motor	N/A
13.2.10	Additional test criteria for motor operated ME EQUIPMENT in 13.2.8 &13.2.9:	1	_
	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 or upper limit of RATED voltage range for specified time:	No motor	N/A
	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	No motor	N/A
	Temperatures measured as specified in 11.1.3 d)	No motor	N/A
	Temperatures did not exceed limits of Table 26	No motor	N/A
13.2.11	Failures of components in ME EQUIPMENT used in conjunction with OXYGEN RICH ENVIRONMENTS:	_	_
			N/A



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Clause	Requirement + Test	Result - Remark	Verdict

Clause No.	Description of SINGLE FAULT CONDITION	Results observed	HAZARDOUS SITUATION (Yes/No)
13.2.12	Failure of parts that might result in a MECHANICAL HAZARD (See 9 & 15.3):	ı	-
			N/A

## Supplementary information:

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)				
Clause	Name of Test	Test conditions	Observed result	s/Remarks	
15.3.2	Push Test	Force = 250 N ± 10 N for 5 s	No damage		
15.3.3	Impact Test	Steel ball (50 mm in dia., 500 g $\pm$ 25 g) falling from a 1.3 m	No damage		
15.3.4.1	Drop Test (hand-held)	Free fall height (m) = 1	No damage		
15.3.4.2	Drop Test (portable)	Drop height (cm) =	N/A		
15.3.5	Rough handling test	Travel speed (m/s) =	N/A		
15.3.6	Mould Stress Relief	7 h in oven at temperature (°C) = 80	No damage		

Supplementary information: <sup>1)</sup> 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: ac	ctuating parts of controls of ME EQUIPMENT – torque & axial pull tests N/A				
Rotating control under test		Gripping diameter "d" of control knob (mm) <sup>1)</sup>	Torque from Table 30 (Nm)	Axial force applied (N)	Unacceptable RISK occurred Yes/No	Remarks

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



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Clause	Requirement + Test Result - Remark Verdict					rdict			
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						P			
Primary vo	ltage (most a	dverse value from 9	0 % to 110 %	of RATED voltage)(V	<b>/)</b> <sup>1)</sup> :			-	-
RATED inpu	RATED input frequency (Hz)						-		
	Class of	Type of	Protective	Time to THERMAL	Maxim		Maximun	1	

Winding tested	Class of insulation (A, B, E, F, or H)	Type of protective device (fuse, circuit breaker) /Ratings	operated	Time to THERMAL STABILITY (when protective device did not operate)(Min)	Maximum allowed temp from Table 31 (°C)	Maximum winding temp measured (°C)	Ambient (°C)
All models	В	N/A <sup>2</sup>	No	5 Min	165 <sup>3</sup>	Max.83	25

## Supplementary information:

<sup>&</sup>lt;sup>3</sup> Thermocouples are used, so the limit is to be reduced by10 °C.

	TABLE: transformer overload test – conducted only when protective device punder short-circuit test operated					
Primary volt	age, most adverse v	alue between 90 % to 110	% of RATED voltage	∋ (V)¹):		264V
RATED input	frequency (Hz)			:		60HZ
		current that would active method a) (A)			See	e below
		when protective device the was shunted (A)			Not fuse	
Winding test	Class of insulation (A, B, E, F, H)	Type of protective device used (fuse, circuit breaker)/Ratings	Maximum allowed temp from Table 31 (°C)	Maximur winding te measured	mp	Ambient (°C)
Output 3.3V	В	Fuse 1A (OL current 2.53A)	165 <sup>2</sup>	107		25
Output 9V	В	Fuse 1A (OL current 0.94A)	165 <sup>2</sup>	105	105 25	
Output 48V	В	Fuse 1A (OL current 0.24A)	165 <sup>2</sup>	106	106 25	

<sup>&</sup>lt;sup>1</sup> 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.

<sup>&</sup>lt;sup>2</sup> SMPS current limiting circuits operated immediately.



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### 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.

15.5.2	TABLE: Transformer dielectric strength after humidity preconditioning of 5.7					Р
Transford Model/Type No	-	Test voltage applied between	Test voltage, (V)	Test frequency (Hz)	Breakdown Yes/No	Deterioration Yes/No
All mode	els	Primary & secondary windings	4000	60	No	No
All mode	els	Core & secondary windings	4000	60	No	No

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

- 1. Each transformer model is identical in insulation construction including clearance and creepage except number of turns per coil.
- 2. The core of transformer (T1) is considered as primary winding, the TIW is used in secondary winding of transformer (T1).
- 3. All types of transformer from all manufacturers listed in table 8.10 are tested.

16.6.1	TABLE: LEAKAGE	BLE: 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)	CURRENT interr PROTEC	red TOUCH in event of uption of CTIVE EARTH CTOR, (μΑ)	
		100		500			
		100		500			
		100		500			
		100		500			
		100		500			
Supplement	Supplementary information:						



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SP TABLE: Additional or special tests conducted			
Clause and Name of Test	Test type and condition	Observed result	S
Supplementary information:			



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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
	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



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Clause	Requirement + Test	Result - Remark	Verdict	
	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	
	b) performs RISK MANAGEMENT ACTIVITIES associated with continued use of the LEGACY SOFTWARE		N/A	
	Considering the following aspects:		N/A	
	<ul> <li>integration of the LEGACY SOFTWARE in the overall MEDICAL DEVICE architecture</li> </ul>		N/A	
	<ul> <li>continuing validity of RISK CONTROL measures, implemented as part of the LEGACY SOFTWARE</li> </ul>		N/A	
	<ul> <li>identification of HAZARDOUS SITUATIONS associated with the continued use of the LEGACY SOFTWARE</li> </ul>		N/A	
	<ul> <li>identification of potential causes of the LEGACY SOFTWARE contributing to a HAZARDOUS SITUATIONS</li> </ul>		N/A	
	definition of RISK CONTROL measures for each potential cause of the LEGACY SOFTWARE contributing to a HAZARDOUS SITUATIONS		N/A	



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Clause	Requirement + Test	Result - Remark	Verdict
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
	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



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Clause	Requirement + Test	Result - Remark	Verdict
	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
	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 SYS	TEM 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 ITE development plan are included or referenced:	MS of class C, in the software	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 follow included or referenced:	ing VERIFICATION information are	N/A
	a) DELIVERABLES requiring VERIFICATION		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	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
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 included or referenced:	following information has	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



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Clause	Requirement + Test	Result - Remark	Verdict		
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 MANUFAC procedure for:	TURER includes or references a	N/A		
	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 SOFTW includes in the software requirements:	YARE, the MANUFACTURER	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		
	I) 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		



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Clause	Requirement + Test Result - Remark	Verdict	
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	
5.3.5	[C] The MANUFACTURER identifies any segregation between SOFTWARE ITEMS that is necessary for RISK CONTROI, 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	



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Claves		\/a==!:-:
Clause	Requirement + Test Result - Remark	Verdict
	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
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



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Clause	Requirement + Test	Result - Remark	Verdict
	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
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	1	N/A
5.7.1	[A, B, C] Establish tests for software requirements		_



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Clause	Requirement + Test Result - Remark	Verdict	
	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	
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:		
	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	



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Clause	Requirement + Test	Result - Remark	Verdict	
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	
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 MEDICAL DEVICE SOFTWARE as defined by the MANUFACTURER relevant regulatory requirements, the MANUFACTURER	CTURER or a time specified by	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 handli MEDICAL DEVICE SOFTWARE including as appropriate:	ng of media containing the	N/A	
	- replication		N/A	
	– media labelling		N/A	
	– packaging		N/A	
	- protection		N/A	
	- storage		N/A	
	– delivery		N/A	



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Clause	Requirement + Test	Result - Remark	Verdict

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
	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



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Clause	Requirement + Test	Result - Remark	Verdict
	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		_
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 appropriate:	f software HAZARDS as	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 (including SOUP) to determine whether:	MEDICAL DEVICE SOFTWARE	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	_



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Clause	Requirement + Test R	Result - Remark	Verdict
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
8.1.2	[A, B, C] For each SOUP CONFIGURATION ITEM being used the MANUFACTURER documents:	d, including standard libraries,	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 redependencies between:	elationships and	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	_	
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Clause	Requirement + Test	Result - Remark	Verdict
9.1	[A, B, C] The MANUFACTURER prepares a PROBLEM REPORT for each problem detected in the MEDICAL DEVICE SOFTWARE		N/A
	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 de	etermine 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 TESTI SYSTEMS following a change, the MANUFACTURER inclu		N/A



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Clause	Requirement + Test	Result - Remark	Verdict		
	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		



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Clause	Requirement + Test	Result - Remark	Verdict

Attachmei	nt	Software - Mapping of require	d evidence and manufactu	rer documents	N/A
Standard Clause		Deliverables	Title	Revision #	Date
4.3		tware safety classification cument			
4.3	me	ecification of risk control asures external to software stem			
4.3		tionale of classification for composed software system			
4.4.2		k management activities for acy software			
4.4.3	Ga	p analysis for legacy software			
4.4.4		p closure plan for legacy tware			
4.4.5	Rat	tionale for use of legacy software			
5.1.1	Sof	tware development plan			
5.1.3	sof	ftware requirements reference to tware design and development cument			
5.1.4	and	velopment standards, methods d tools records for class C tware			
5.1.5		ftware integration and integration ting plan			
5.1.6	Sof	tware verification plan			
5.1.7	Sof	tware risk management plan			
5.1.8	Do	cument management procedures			
5.1.9		tware configuration nagement procedures			
5.2		tware system requirements ecification			
5.2.3		ecification of risk control asure implemented in software			
5.3	Sof	tware system architecture sign specification			
5.3		ftware item architecture design ecification			



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Clause	Requirement + Test		Result - Remark	Verdict

Attachmer	Software - Mapping of requi	red evidence and manufactu	irer 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			
7.4	Risk management of software change process			
8.1	Configuration identification record			



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Report	NO.	22020	176251	HA-001

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

Attachmer	Software - Mapping of required evidence and manufacturer documents			N/A	
Standard Clause		Deliverables	Title	Revision #	Date
8.2	Cha	ange control process			
8.2	Red	cords for traceability of change			
9		tware problem resolution cess			
9		tware problem resolution ords			

## Supplementary information:



## **Attachment 1: Photo of EUT**



PHOTO 1: EXTERNAL VIEW – 1 OF ADAPTER MODEL GT\*41134\*\*\*\*\*\*( First structure)



PHOTO 2: EXTERNAL VIEW - 2 OF ADAPTER MODEL GT\*41134\*\*\*\*\*\*





PHOTO 3: EXTERNAL VIEW - 3 OF ADAPTER MODEL GT\*41134\*\*\*\*\*\*



PHOTO 4: INTERNAL VIEW OF ADAPTER MODEL GT\*41134\*\*\*\*\*\*





PHOTO 5: COMPONENT SIDE VIEW OF PCB OF ADAPTER MODEL GT\*41134\*\*\*\*\*\*

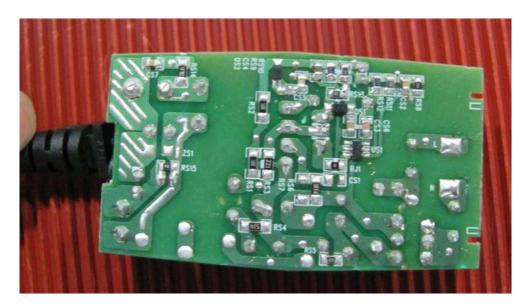


PHOTO 6: SOLDERING SIDE VIEW OF PCB OF ADAPTER MODEL GT\*41134\*\*\*\*\*\*





PHOTO 7: COMPONENT SIDE VIEW OF OPEN FRAME MODEL(Second structure)

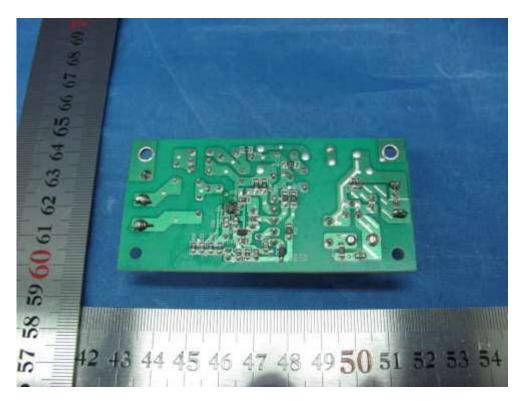


PHOTO 8: SOLDERING SIDE VIEW OF OPEN FRAME MODEL

TRF No. IEC60601\_1T



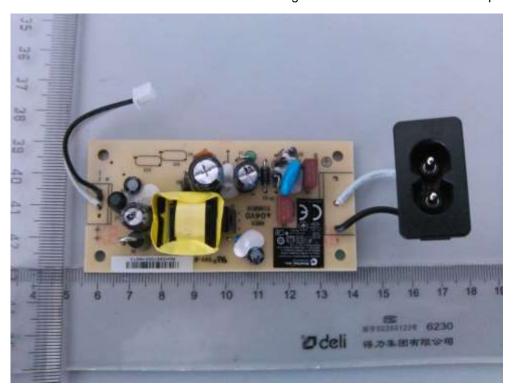


PHOTO 9: COMPONENT SIDE OF OPEN FRAME MODEL WITH APPLIANCE INLET

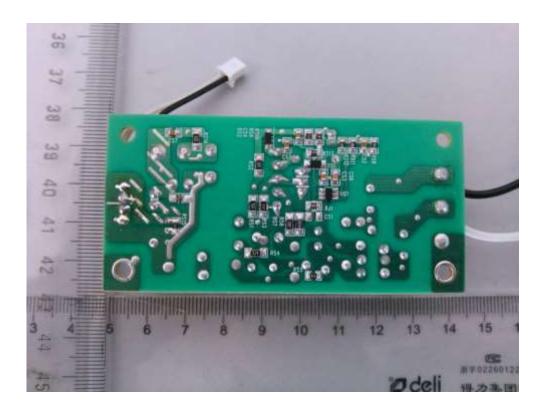


PHOTO 10: SOLDERING SIDE OF OPEN FRAME MODEL WITH APPLIANCE INLET





PHOTO 11: EXTERNAL VIEW - 1 OF MODEL GT-41134-0606-W2-TAB(Third structure)



PHOTO 12: EXTERNAL VIEW - 2 OF MODEL GT-41134-0606-W2-TAB



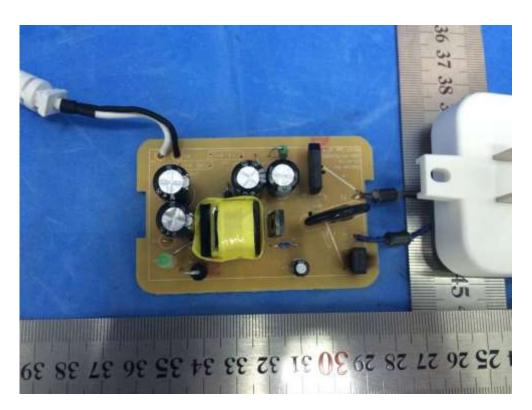


PHOTO 13: COMPONENT SIDE VIEW OF PCB OF MODEL GT-41134-0606-W2-TAB

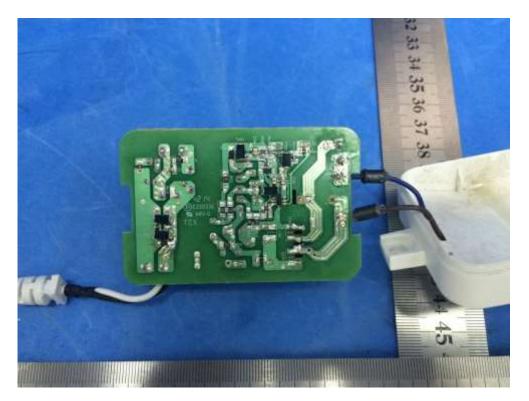


PHOTO 14: SOLDERING SIDE VIEW OF PCB OF MODEL GT-41134-0606-W2-TAB





PHOTO 15: EXTERNAL VIEW OF ADAPTER MODEL GTM96060 OR GTM41134 SERIES



PHOTO 16: INTERNAL VIEW OF ADAPTER MODEL GTM96060 OR GTM41134 SERIES

TRF No. IEC60601\_1T



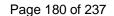


PHOTO 17: COMPONENT SIDE VIEW OF PCB OF MODEL GTM96060 OR GTM41134 SERIES



PHOTO 18: COMPONENT SIDE VIEW OF PCB OF MODEL GTM96060 OR GTM41134 SERIES

TRF No. IEC60601\_1T





 IEC60601-1

 Clause
 Requirement + Test
 Result - Remark
 Verdict

Report No. 220201762SHA-001

#### Attachment 2: National difference of US

#### ATTACHMENT TO TEST REPORT

# IEC 60601-1:2005 + AMD 1:2012 US NATIONAL DIFFERENCES

MEDICAL ELECTRICAL EQUIPMENT - PART 1: GENERAL REQUIREMENTS FOR BASIC SAFETY AND ESSENTIAL PERFORMANCE

Differences according to ...........: National standard AAMI/IEC 60601-1:2005 + AMD 1:2012

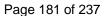
Attachment Form No. .....: US\_ND\_IEC60601\_1P

Attachment Originator.....: UL(US)

Master Attachment.....: 2019-09-02

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	National Differences		Р
4.8	Components of ME EQUIPMENT		
	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.		Р
	(Replacement of clause 4.8 b)		
4.10.2	SUPPLY MAINS FOR ME EQUIPMENT AND ME SYSTEMS		Р
	(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.		Р
	(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"		N/A
6.0	Classification of ME EQUIPMENT and ME SYSTEMS		N/A
6.6	Mode of operation		N/A
	(Addition to reflect agreement with NFPA 70)  X-Ray systems are classified as long time operation (> 5 min) or momentary operation (< 5 sec).	Not X-ray system	N/A
7.0	ME EQUIPMENT identification, marking and documents		N/A
7.2.11	Mode of operation		N/A
	(Addition to reflect agreement with NFPA 70) X-Ray systems are marked as long time operation or momentary operation.	Not X-ray system	N/A





IEC60601-1			
Clause	Requirement + Test	Result - Remark	Verdict

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.	No medical gas	N/A
8.0	Protection against electrical hazards from ME EQU	JIPMENT	Р
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.	Direct plug-in	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.	Not X-ray system	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	Not X-ray system	N/A
8.7.3	Allowable values		Р
	(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 subclause 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.	Р
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.	Not permanently connected.	N/A
	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.	No such cord is provided.	N/A



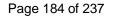
	IEC60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	The installation of connecting cords between EQUIPMENT parts meets the requirements of the NEC, as applicable. Cable used as external interconnection between units are as follows:	No such cable.	N/A
	1) If exposed to abuse, the cables are Type SJT, SJTO, SJO, ST, SO, STO, or equivalent flexible cord or similar multiple-conductor appliance-wiring material such as computer cable	No such cable.	N/A
	<ul> <li>2) If not exposed to abuse, the cables are as indicated in item 1) above or are:</li> <li>i) Type SPT-2, SP-2, or SPE-2, or equivalent,</li> <li>ii) Type SVr, SVRO, SVE, or equivalent flexible cord or similar multiple-conductor appliance wiring material, or</li> <li>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.</li> </ul>	No such cable.	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.	No such cable.	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.	No such cable.	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	No such cord.	N/A
8.11.3.3	Cross-sectional area of POWER SUPPLY CORDS		N/A





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(Addition to reflect agreement with NFPA 99)	Not X-ray equipment.	N/A
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.		
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





	IEC60601-1		
Clause	Requirement + Test	Result - Remark	Verdict

#### Attachment 3: National difference of Canada

#### ATTACHMENT TO TEST REPORT

# IEC 60601-1:2005, COR1:2006, COR2:2007, AMD:1:2012. CANADIAN NATIONAL DIFFERENCES

MEDICAL ELECTRICAL EQUIPMENT — PART 1: GENERAL REQUIREMENTS FOR BASIC SAFETY
AND ESSENTIAL PERFORMANCE

Differences according to ...... CAN/CSA-C22.2 No. 60601-1:14

Attachment Form No...... CA\_ND\_IEC60601\_1P

Attachment Originator ...... CSA Group

Master Attachment ...... 2019-06-18

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

	National Differences	
1	Scope, object and related standards	Р
1.1	Scope	Р
	[Replace the first paragraph with the following]	Р
	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.	
	[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	
4.0	SAFETY and ESSENTIAL PERFORMANCE requirements.	
1.3	Collateral standards	P
	[Replace this clause with the following]	P
	Applicable Canadian 60601 calleteral standards	
	Applicable Canadian 60601 collateral standards become normative at the date of their publication	
	and apply together with this Standard.	
1.4	Particular standards	P
1.4	[Replace this clause with the following]	P
	[Neplace this clause with the following]	F
	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.	

2	Normative references	Р
	[Add the following]	Р
	Where reference is made to CSA Group	



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Clause	Requirement + Test	Result - Remark	Verdict
	Standards, such reference are considere to the latest edition and all amendments to that edition. This Standard refers to the Standards, and the years shown indicate editions available at the time of printing:  CSA Group	published e following	
	B51-09 Boiler, pressure vessel, and pressure pip C22.1-12 Canadian Electrical Code, Part I CAN/CSA-C22.2 No. 0-10 General requirements — Canadian Elect Code, Part II C22.2 No. 21-95 (R2009)		
	Cord sets and power supply cords C22.2 No. 42-10 General use receptacles, attachment plu similar wiring devices C22.2 No. 49-10 Flexible cords and cables CAN/CSA-E61558-2-1-03 (R2012)		
	Safety of power transformers, power sup and similar — Part 2: Particular requirem separating transformers for general use Z32-09  Electrical safety and essential electrical shealth care facilities  CAN/CSA-Z305.8-03 (R2013)	ents for	
	Medical supply units Z305.12-06 (R2012) Safe storage, handling, and use of portal systems in residential buildings and healt facilities Z305.13-09	th care	
	Plume scavenging in surgical, diagnostic therapeutic, and aesthetic settings CAN/CSA-Z5359-10 Low-pressure hose assemblies for use w medical gases CAN/CSA-Z9170-1-11		
	Terminal units for medical gas pipeline sy Part 1: Terminal units for use with compremedical gases, vacuum, and anaesthetic scavenging systems  CAN/CSA-Z10524-1:12  Pressure regulators for use with medical	essed gas	
	Pressure regulators for use with medical Part 1: Pressure regulators and pressure regulators with flow-metering devices CAN/CSA-Z15002:12 Flow-metering devices for connection to units of medical gas pipeline systems		
	ASME (American Society of Mechanic Engineers) PTC 25-2008 Pressure Relief Devices CGA (Compressed Gas Association)	al	



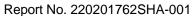
	IEC60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	V-1-2013 Standard for Compressed Gas Cylinder Valve Outlet and Inlet Connections V-5-2008 (reaffirmed 2013) Diameter Index Safety System (Noninterchangeable Low Pressure Connections for Medical Gas Applications) ISO (International Organization 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		N/A
3.41	HIGH VOLTAGE		N/A
	Replace this clause with the following]  voltage above 750 V, as defined in the Canadian Electrical Code, Part I	Noted, but no such HV in EUT	N/A
4.	General requirements		Р
4.1A	[Add the following clause]  General requirements applicable to ME EQUIPMENT and ME SYSTEMS are provided in		Р
4.8	CAN/CSA-C22.2 No. 0. Components of ME EQUIPMENT		P
	[Replace Items a) and b) and Note 2 with the following]  a) the applicable safety requirements of a relevant CSA Group, IEC, or ISO Standard; or	UL approved.	P
	b) where there is no relevant CSA Group, IEC, or ISO Standard, the requirements of this Standard shall be applied.		Р
	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		Р
	[Replace the first sentence with the following]  ME EQUIPMENT intended to be connected to SUPPLY MAINS is in accordance with the Canadian Electrical Code, Part I, and the following RATED voltages are not be exceeded:	al	Р



otal Quality. Assure	rage for 0/23/	Report No. 220201762	25HA-001
	IEC60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
7.	ME EQUIPMENT identification, marking and docu	ments	Р
7.7	[Replace Clauses 7.7.1 to 7.7.5 with the following Colours of the insulation of conductors are in accordance with the Canadian Electrical Code,		P
	Part I.  A PROTECTIVE EARTH CONDUCTOR or a PROTECTIVE EARTH CONNECTION of any insulation on conductor is identified by either green or green and yellow colours at least at the termination of the conductors.	UL approved.	P
	Identification by green or green and yellow insulation are only used for		Р
	- PROTECTIVE EARTH CONDUCTORS (see 8.6.2);		Р
	- conductors as specified in 7.7.2;  Note: In other safety standards such as IEC 60950-1, internal connections between conductive parts and the main protective earth		Р
	<ul> <li>are called "protective bonding conductors".</li> <li>POTENTIAL EQUALIZATION CONDUCTORS (see 8.6.7);</li> </ul>		Р
	- FUNCTIONAL EARTH CONDUCTORS (see 8.6.9).		Р
	Colours of neutral conductors and POWER SUPPLY CORD conductors are in accordance with the Canadian Electrical Code, Part I, CSA C22.2 No. 21, and CSA C22.2 No. 49.		Р
<b>8</b> 8.7.3	Protection against electrical HAZARDS from ME [Add the following paragraph]  Allowable values are also in accordance with the Canadian Electrical Code, Part I.	EQUIPMENT	P
8.11.3.2	[Replace this clause with the following] The following requirements for POWER SUPPLY CORDS apply:	Certified appliance coupler and plug	Р
	a) The MAINS PLUG of non-PERMANENTLY INSTALLED EQUIPMENT is	Certified appliance coupler and plug	Р
	<ul> <li>i) if moulded-on type, a hospital-grade mains plug complying with CSA C22.2 No. 21;</li> </ul>	No power cord	N/A
	ii) a hospital-grade disassembly attachment plug type complying with CSA C22.2 No. 42 or	No power cord	N/A



	IEC60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	iii) Class II equipment having fuses on the line side(s), and the neutral may use a non-polarized attachment plug. CSA configuration type 1-15P is required and meets all applicable requirements in CSA C22.2 No. 21 and CS. 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:	A	N/A
	the centre contact of an Edison base lampholder;	No power cord	N/A
	2) a single pole switch;	No power cord	N/A
	<ol><li>an automatic control with a marked off position;</li></ol>	No power cord	N/A
	4) a solitary fuse/fuse holder; or	No power cord	N/A
	<ol><li>any other single pole overcurrent protective device.</li></ol>	No power cord	N/A
	b) A detachable POWER SUPPLY CORD for non- PERMANENTLY INSTALLED EQUIPMENT (cord- connected equipment) is of a type	No power cord	N/A
	<ul> <li>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;</li> </ul>		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	No power cord	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.	No power cord	N/A
	c) The detachable POWER SUPPLY CORD	No power cord	N/A
	<ul> <li>i) comply with the applicable requirements of CSA C22.2 No. 21; and</li> </ul>	No power cord	N/A
	ii) not be smaller than No. 18 AWG, and the mechanical serviceability is not less than:	No power cord	N/A
	Type SJ or equivalent for ME EQUIPMENT that is mobile or exposed to abuse; and	No power cord	N/A
	Type SV or equivalent for ME EQUIPMENT that is not exposed to abuse (or Type HPN if required because of temperature)	No power cord	N/A





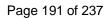
	IEC60601-1				
Clause	Requirement + Test	Result - Remark	Verdict		
	Note: See CSA C22.2 No. 49 for requirements for the cord types mentioned in Sub-item 2).				
	d) Installation of POWER SUPPLY CORDS are meeting the requirements of the Canadian Electrical Code, Part I, as applicable	No power cord	N/A		
8.11.5	Mains fuses and OVER-CURRENT RELEASES		Р		
	[Replace this clause with the following]	See the table 8.10.	Р		
	Installation of overcurrent protective devices are in accordance with the Canadian Electrical Code, Part I.				

9	Protection against MECHANICAL HAZARDS of ME E	Protection against MECHANICAL HAZARDS of ME EQUIPMENT and ME SYSTEMS	
9.7.5	[Replace this clause with the following]	No pressure vessel	N/A
	Pressure vessels comply with the requirements of CSA B51, as applicable		
9.7.7	[Replace this clause with the following]	No pressure relief device	N/A
	A pressure-relief device comply, as applicable, with the requirements of ASME PTC 25 or equivalent Canadian requirements.		

15	Construction of ME EQUIPMENT.		Р
15.4.1	[Add the following item] 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 is	No gas connection	N/A
	i)as-specific, yoke type, or nut and nipple type valve connections complying with CGA V-1 for pressures over 1380 kPa (200 psi); or	No gas connection	N/A
	ii)	No gas connection	N/A
	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.		_

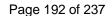


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	IEC60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
15.4.8	[Add the following paragraph]  Flexible cords and equipment wire of ME EQUIPMENT are in accordance with the Canadian Electrical Code, Part I		N/A
16	ME SYSTEMS		N/A
16.1	[Replace the paragraph that starts with "An ME SYSTEM shall provide:" with the following]		N/A
	An ME SYSTEM provide     within the PATIENT ENVIRONMENT, the level of safety equivalent to ME EQUIPMENT complying with this CSA Group Standard; and	Not medical system	N/A
	<ul> <li>outside the PATIENT ENVIRONMENT, the level of safety equivalent to equipment complying with their respective CSA Group, IEC, or ISO safety Standards.</li> </ul>	Not medical system	N/A
	[Replace the third-last paragraph with the following]	Not medical system	N/A
	Non-ME EQUIPMENT, when used in an ME SYSTEM, complies with the CSA Group, IEC, or ISO safety Standards that are relevant to that equipment.		
16.9.2.1	d) If the MULTIPLE SOCKET OUTLET is combined with a separating transformer, the following additional requirements apply:		_
	<ul> <li>The separating transformer complies with this Standard. 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.</li> </ul>	No MSO	N/A
	Note 1: As a separating transformer is not a MAINS SUPPLY TRANSFORMER, it does not require more than BASIC INSULATION.	No MSO	N/A
	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 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.	r	N/A
	The separating transformer assembly is a CLASS I construction.	No MSO	N/A
	<ul> <li>The degree of protection against ingress of water as given in IEC 60529 is specified.</li> </ul>	No MSO	N/A





IEC60601-1				
Clause	Requirement + Test		Result - Remark	Verdict
	-	The separating transformer assembly is marked according to the requirements of 7.2 and 7.3.	No MSO	N/A
	-	The MULTIPLE SOCKET OUTLET is permanently connected to the separating transformer, or the socket-outlet of the separating transformer assembly is 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)	t	N/A
	[Add	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.	No MSO	N/A





	IEC60601-1			
Clause	Requirement + Test	Result - Remark	Verdict	

#### Attachment 4: National difference of Korea

# ATTACHMENT TO TEST REPORT IEC 60601-1 REPUBLIC OF KOREA NATIONAL DIFFERENCES

(MEDICAL ELECTRICAL EQUIPMENT - PART 1 : GENERAL REQUIREMENTS FOR BASIC SAFETY AND ESSENTIAL PERFORMANCE)

Differences according to .....: Notification of MFDS No. 2020-12, Annex 1

Attachment Form No. ..... KR\_ND\_ IEC60601\_1P

Attachment Originator....: KTR

**Master Attachment**.....: 2020-05-12

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	Special national conditions (if any)		_
Voltage	National supply voltages are 110, 220 V and 380 V.		Р
Frequency	Only appliances having supply frequency of 60 Hz or a frequency range including 60 Hz are accepted.		Р
Instruction	Instruction manuals and appliance markings related safety, including nameplate shall be in Korean or graphical symbols in accordance with IEC Publication 417.	Shall be checked in end product level.	N/A
Plug	Plugs for connection of the equipment to the supply mains shall comply with the Korean Standard (KSC 8305 and 8300)		Р



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	IEC60601-1		
Clause	Requirement + Test	Result - Remark	Verdict

### **Attachment 5: National difference of Japan**

# ATTACHMENT TO TEST REPORT IEC 60601-1 JAPAN NATIONAL DIFFERENCES

MEDICAL ELECTRICAL EQUIPMENT - PART 1: GENERAL REQUIREMENTS FOR BASIC SAFETY AND ESSENTIAL PERFORMANCE

A1:2012(MOD))

Attachment Form No. ...... JP\_ND\_IEC60601\_1P

Attachment Originator....: TÜV Rheinland Japan Ltd.

Master Attachment.....: 2019-05-03

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	National Differences	Р
1.3	In NOTE 3, add the following: In Japan, to check the corresponding Japanese Industrial Standard(s) is required.	_
1.4	At the end of NOTE, add the following: In Japan, to check the corresponding Japanese Industrial Standard(s) is required.	_



IEC60601-1				
Clause	Requirement + Test	Result - Remark	Verdict	
2	Replace the listed standards with th JIS B 7761-3, Hand-transmitted vibil General requirements for measurent evaluation  NOTE: ISO 5349-1, Mechanical vibration - Nevaluation of human exposure to hand-trans Part 1: General requirements (IDT)  JIS B 9718:2013, Safety of machined distances to prevent hazard zone be upper and lower limbs  NOTE: ISO 13857:2008, Safety of machiner distances to prevent hazard zones being real lower limbs (IDT)  JIS C 0445, Identification of equipment and of terminations of certain design conductors, including general rules alphanumeric system  NOTE: IEC 60445, Basic and safety principle interface, marking and identification - Identifiterminals, conductor terminations and conductors. Including principles  NOTE: IEC 60447, Basic and safety principle interface, marking and identification - Actuationally S C 0920:2003, Degrees of protection principles  NOTE: IEC 60529:2001, Degrees of protection process (IP Code)  NOTE 1: IEC 60529:2001, Degrees of protection process (IP Code)  NOTE 2: According to IEC60601-1:2005, IEC Amendment 1:1999 are listed as Normative however, the latest edition is edition 2.1 issued corresponding Japanese Industrial standard normative reference.  JIS C 1509-1, Electroacoustics - Someters - Part 1: Specifications  NOTE: IEC 61672-1, Electroacoustics - Someters - Part 2: Pattern evaluation to NOTE: IEC 61672-2, Electroacoustics - Someters - Part 2: Pattern evaluation tests (IDT)	ration - Part 3: ment and reasurement and mitted vibration - rry - Safety eing reached by		



IEC60601-1				
Clause	Requirement + Test	Result - Remark	Verdict	
2	JIS C 2134, Method for the determination of proof and the comparative tracking indices of insulating materials  NOTE: IEC 60112, Method for the determination of the pand the comparative tracking indices of solid insulating materials (IDT)  JIS C 3301:2000, Rubber insulated flexible of NOTE: IEC 60245-4:1994, Rubber insulated cables - Rayoltages up to and including 450/750 V - Part 4: Cords at flexible cables, Amendment 1:1997 (NEQ)  JIS C 3306:2000, Polyvinyl chloride insulated of rated voltages up to and including 450/750 V - Part 5: Flexible cords  NOTE: IEC 60227-5:1997, Polyvinyl chloride insulated of rated voltages up to and including 450/750 V - Part 5: Flexibles (cords) (NEQ)  JIS C 4003, Electrical insulation - Thermal evaluation and designation  NOTE: IEC 60085, Electrical insulation - Thermal evaluation and designation (MOD)  JIS C 5101-14:2009, Fixed capacitors for use electronic equipment - Part 14: Sectional specification - Fixed capacitors for electroma 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 electroma interference suppression connection to the supply mains (IDT)  JIS C 6065:2013, Audio, video and similar electronic apparatus - Safety requirements  NOTE: IEC 60085:2001, Audio, video and similar electronic apparatus - Safety requirements, Amendment 1:2005 and Amendment 2:2010 (MOD)  JIS C 6802:2011, Safety of laser products - Pa Equipment classification and requirements (IDT)  JIS C 6950-1:2012, Information technology equipment - Safety - Part 1: General requirer  NOTE: IEC 60950-1:2005, Information technology equipment - Part 1: General requirer  NOTE: IEC 60965, Mechanical safety of cathode ray tubes  NOTE: IEC 61965, Mechanical safety of cathode ray tubes  NOTE: IEC 61965, Mechanical safety of cathode ray tubes	f solid proof  ords ated and d  cables of lexible  ation e in gnetic he  fixed and  onic and  ort 1:  ments ment -		



IEC60601-1				
Clause	Requirement + Test	Result - Remark	Verdict	
2	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 household and similar purposes - Part 1: General requirements (MOD)  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 correspondit to IEC/TR 60083, Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC, which has been listed in IEC 60601-1:2005. Refer to JIS T 1021, too.  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 (IDT)  JIS C 60079-0, Explosive atmospheres - Part 0: Equipment - General requirements  NOTE: IEC 60079-0, Explosive atmospheres - Part 0: Equipment - General requirements (IDT)  JIS C 60079-2, Electrical apparatus for explosive gas atmospheres - Part 2: Pressurized enclosure "p"  NOTE: IEC 60079-2, Explosive atmospheres - Part 2: Equipment protection by pressurized enclosures "p" (IDT)  JIS C 60079-6, Electrical apparatus for explosive gas atmospheres - Part 6: Oil immersion "o"  NOTE: IEC 60079-6, Explosive atmospheres - Part 6: Equipment protection by oil immersion "o" (IDT)  JIS C 60364-4-41, Low-voltage electrical installations - Part 4-41: Protection for safety - Protection against electric shock  NOTE: IEC 60364-1:2009, 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 (IDT)	art :		



IEC60601-1				
Clause	Requirement + Test	Result - Remark	Verdict	
2	JIS C 60695-11-10, Fire hazard testing - Part 10: Test flames - 50 W horizontal and vertica flame test methods  NOTE: IEC 60695-11-10, Fire hazard testing - Part 11-1 flames - 50 W horizontal and vertical flame test methods JIS T 0601-1-3, Medical electrical equipment 1-3: General requirements for basic safety ar essential performance - Collateral Standard: Radiation protection in diagnostic X-ray equip NOTE: IEC60601-1-3, Medical electrical equipment - Pa General requirements for basic safety and essential performance - Collateral standard: Radiation protection in diagnostic X-ray equipment (IDT)  JIS T 0801-1:2010, Sterilization of health care products - Ethylene oxide - Part 1: Requirement for development, validation and routine control sterilization process for medical devices  NOTE: ISO 11135-1:2007, Sterilization of health care prethylene oxide - Part 1: Requirements for development, validation and routine control of a sterilization process for medical devices (IDT)  JIS T 0806-1:2010, Sterilization of health care products - Radiation - Part 1: Requirements for development, validation and routine control of sterilization process for medical devices  NOTE: ISO 11137-1:2006, Sterilization of health care products - Moist heat - Part 1: Requirements for 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  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 (IDT)  JIS T 2304:2012, Medical device software - Software - Software life cycle processes  IEC62304:2006, Medical device software - Software Ife processes (IDT)  JIS T 14971:2012, Medical devices - Application of management to medical devices - Application of management to medical	O: Test S (IDT) - Part and Dement art 1-3: in e e ents ol of a coducts - or e for if a coducts - ation devices e for rol of a coducts - or cycle tion of		



	IEC60601-1			
Clause	Requirement + Test	Result - Remark	Verdict	
2	JIS T 60601-1-8, Medical electrical equipmer Part 1-8: General requirements for basic sat and essential performance - Collateral stand General requirements, tests and guidance for alarm systems in medical electrical equipmer medical electrical systems  NOTE: IEC60601-1-8, Medical electrical equipment - For General requirements for basic safety and essential performance - Collateral standard: General requirement and guidance for alarm systems in medical electrical earn medical electrical systems (IDT)  JIS Z 8000 (all parts), Quantities and units NOTE: ISO 80000-1, Quantities and units - Part 1: Get JIS Z 8736-1, Acoustics - Determination of spower levels of noise sources using sound intensity - Part 1: Measurement at discrete NOTE: ISO 9614-1, Acoustics - Determination of sounlevels of noise sources using sound intensity - Part 1: Measurement at discrete points (IDT)  JIS Z 9101:2005, Safety colours and safety Design principles for safety signs in workplatand public areas  NOTE: ISO 3864-1:2002, Graphical symbols - Safety of and safety signs - Part 1: Design principles for safety sworkplaces and public areas (IDT)  ISO 780, Packaging - Distribution packaging Graphical symbols for handling and storage packages  NOTE: JIS Z 0150 Packaging - Distribution packaging Graphical symbols for handling and storage of packages  NOTE: JIS 2 0150 Packaging - Distribution packaging Graphical symbols for handling and storage of packages  NOTE: JIS K 6271-2 Rubber, vulcanized or thermoplasticed or thermoplastic - Measurement resistivity  NOTE: JIS K 6271-2 Rubber, vulcanized or thermoplasticatic and conductive products - Determination of resistivity – Part 2: Parallel terminal esystem (MOD)  ISO 2878, Rubber, vulcanized or thermopla Antistatic and conductive products for hospital use - Electrical resistance limits	fety dard: or ent and Part 1-8: hts, tests quipment heral sound points d power  signs - lices colours igns in g - of - es (MOD) ers, of stic - lectrode stic - ination		



	IEC60601-1			
Clause	Requirement + Test	Result - Remark	Verdict	
2	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 7000-DB:2004, Graphical symbols for use on equipment - Index and synopsis NOTE: "DB" indicated ISO-IEC jointed online database. ISO 7010:2011, Graphical symbols - Safety colours and safety signs - Registered safety signs 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 (MOD). However, other Parts than Part 1 and Part 7 have still not been published as JIS. ISO 15223-1:2012, Medical devices Symbols to be used with medical device labels, labelling and information to be supplied Part 1: General requirements ISO 23529, Rubber General procedures for preparing and conditioning test pieces for physical test methods NOTE: JIS K 6250, Rubber General procedures for preparing and conditioning test pieces for physical test methods (MOD) IEC 60079-5, Explosive atmospheres — Part 5: Equipment protection by powder filling "q" IEC 60086-4, Primary batteries - Part 4: Safety of lithium batteries NOTE: JIS C 8513 Safety of primary lithium batteries (MOD) IEC 60127-1, Miniature fuses - Part 1: Definitions for miniature fuses and general requirements for miniature	o o		



	IEC60601-1				
Clause	Requirement + Test	Result - Remark	Verdict		
2	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 cab rated voltages up to and including 450/750V - Part 1: General requirements (MOD)	oles of	_		
	IEC 60245-1:2003, Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 1: General requirements and Amendment 1:2007  NOTE: The corresponding JIS standard: None JIS C 3663-1:2010 Rubber insulated cables - Rated voltag to and including 450/750 V - Part 1: General requirements (MOD) corresponds to IEC 60245-1:2008.	jes up			
	IEC 60252-1, AC motor capacitors - Part 1: General - Performance, testing and rating - Saf requirements - Guidance for installation and operation	fety			
	IEC 60320-1, Appliance couplers for household and similar general purposes - Part 1: General requirements  NOTE: JIS C 8283-1 Appliance couplers for household and similar general purposes - Part 1: General requirements (M	d			
	IEC 60335-1:2010, Household and similar electrical appliances - Safety - Part 1: General requirements  NOTE: The corresponding JIS standard: None JIS C 9335-1:2003 Household and similar electrical appliant Safety - Part 1: General requirements (MOD) corresponds IEC 60335-1:2001.				
	IEC 60417, Graphical symbols for use on equipment				
	IEC 60601-1-2:2001, Medical electrical equipm - Part 1-2: General requirements for safety - Collateral standard: Electromagnetic compatibi Requirements and tests  NOTE 1: The current "JIS T 0601-1-2:2012 Medical electric equipment - Part 1-2: General requirements for safety - Electromagnetic compatibility - Requirements and tests" corresponds to IEC 60601-1-2:2001 and Amendment 1:200 NOTE 2: Currently, IEC 60601-1-2 Ed 2.1:2004 or IEC 6060 2 Ed 3:2007 is used in other countries.	cal			



IEC60601-1				
Clause	Requirement + Test	Result - Remark	Verdict	
2	IEC 60601-1-6, Medical electrical equipmen 1-6: General requirements for basic safety a essential performance - Collateral standard: Usability NOTE: As the corresponding international standard, IE is applicable.	and :		
	IEC 60730-1:2010, Automatic electrical con household and similar use - Part 1: General requirements			
	NOTE: The corresponding JIS standard: None JIS C 9730-1:2010 Automatic electrical controls for hor and similar use - Part 1:General requirements (MOD) corresponds to IEC 60730-1:1999, Amendment 1: 200 Amendment 2:2007			
	IEC 60851-3:2009, Winding wires - Test me Part 3: Mechanical properties NOTE: JIS C 3216-3:2011, Winding wires - Test metho 3: Mechanical properties (MOD)			
	IEC 60851-5:2008, Winding wires - Test me Part 5: Electrical properties NOTE: JIS C 3216-5:2011, Winding wires - Test metho 5: Electrical properties (MOD)			
	IEC 60851-6:1996, Methods of test for wind wires - Part 6: Thermal properties and Amer 1:1997			
	IEC 61058-1:2000, Switches for appliances 1: General requirements, Amendment 1:200 Amendment 1:2007 NOTE: The corresponding JIS standard: None JIS C 4526-1:2013 Switches for appliances - Part 1: G requirements (MOD) corresponds to IEC 61058-1:2008	O1 and General		
	IEC 61558-2-1, Safety of power transformer power supplies, reactors and similar product Part 2-1: Particular requirements and tests f separating transformers and power supplies incorporating separating transformers for ge applications	ots - for s		
	NOTE: JIS C 61558-2-1 Safety of power transformers, supplies, reactors and similar products - Part 2-1: Parti requirements and tests for separating transformers and supplies incorporating separating transformers for gen	icular d power		



IEC60601-1				
Clause	Requirement + Test	Result - Remark	Verdict	
2	IEC 62133, Secondary cells and batteries containing alkaline or other non-acid electrolytes. Safety requirements for portable sealed secondar cells, and for batteries made from them, for use in portable applications.  NOTE: JIS C 8712:2015 Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications (MOD) was created changing the technical contents of IEC 62133:2012.  IEC 62366:2014, Medical devices - Application of usability engineering to medical devices	y I	_	
3.9	Add NOTE as follows: NOTE 2 IEV stands for International Electrotechnical Vocabulary		_	
3.50	Replace NOTE 2 as follows: NOTE 2 See also JIS C 8303 and IEC 60309-1 and JIS T 1021.		_	
3.61	Add NOTE as follows:  NOTE In this standard, MECHANICAL HAZARD suitably understandable by replacing mechanical HAZARD with mechanical HAZARDOUS SITUATION, HARM or unacceptable RISK.	is	_	
3.70	Replace the existing text with: condition in which all means provided for protection against HAZARDOUS SITUATIONS or HARM are intact		_	
4.10.1	In the existing text, replace "a separate power supply" with "a separate power supply (e.g. a power supply of other equipment)".		_	
7.3.3	Replace the third paragraph with: Where lithium batteries or fuel cells are incorporated and where incorrect replacement would result in an unacceptable RISK, a warning indicating that replacement by inadequately traine personnel could result in a HAZARDOUS SITUATION (such as excessive temperatures, fire or explosion) shall be given in addition to the identifying marking referring to information stated in the ACCOMPANYING DOCUMENTS.	cells.	N/A	
7.3.4	Add the following NOTE  NOTE Corresponding Japanese Industrial  Standard for IEC 60127-1: JIS C 6575-1:2009		_	



	IEC60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
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 (all parts) 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 "I" is used for litre, although the symbol "L" is also given in JIS Z 8000 (all parts).	No numeric indications of parameters.	N/A
7.7.4	Under the existing text, add the following: If polyvinyl chloride insulated flexible cord of JIS C 3306 or rubber insulated flexible cord of JIS C 3301 is used, the conductor may be coloured "white".		N/A
7.7.5	Under the existing text, add the following: If polyvinyl chloride insulated flexible cord of JIS C 3306 or rubber insulated flexible cord of JIS C 3301 is used, conductors may be of the colour specified in the these standards.		N/A
7.9.3.2	Replace the fourth dash with:  – 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
8.8.2	For a), add the following NOTE:  NOTE – Generally, "distance through insulation" means the thickness of insulation. However, for example, if a transformer installed into a metal case is insulated by filler, the thickness is not always uniformly. Therefore, such expression was used.		Р
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.		Р
8.9.1.2	At the end of the title of this sub-clause, add "(Apply to MOOP)".		
8.9.1.3	At the end of the title of this sub-clause, add "(Apply to MOOP)".		
3.9.1.4	At the end of the title of this sub-clause, add "(Apply to MOOP)".		_
3.9.1.5	At the end of the title of this sub-clause, add "(Apply to MOOP and MOPP)".		_
8.9.1.6	At the end of the title of this sub-clause, add "(Apply to MOOP and MOPP)".		_



IEC60601-1				
Clause	Requirement + Test	Result - Remark	Verdict	
8.9.1.7	At the end of the title of this sub-clause, ad "(Apply to MOOP)".	d	_	
8.9.1.8	At the end of the title of this sub-clause, ad "(Apply to MOOP)".	d	_	
8.9.1.9	At the end of the title of this sub-clause, ad "(Apply to MOOP)".	d	_	
8.9.1.10	At the end of the title of this sub-clause, ad "(Apply to MOOP)".	d	_	
8.9.1.11	At the end of the title of this sub-clause, ad "(Apply to MOOP)".	d	_	
8.9.1.12	At the end of the title of this sub-clause, ad "(Apply to MOOP)".	d	_	
8.9.1.13	At the end of the title of this sub-clause, ad "(Apply to MOOP)".	d		
8.9.1.14	At the end of the title of this sub-clause, ad "(Apply to MOOP)".	d	_	
8.11.3.2	Add the following between the first paragraph the second paragraph:  And, rubber insulated flexible cords of JIS C polyvinyl chloride insulated flexible cords of 3306 or cords of which the robustness is equor more than those are usable.  Add the following between the second paraland the last paragraph:  And, in the case of cords of JIS C 3306, shause; for polyvinyl chloride insulated flexible cord temperature of the above-mentioned externmetal part exceeds 60 °C, and; for grade heat-resistant polyvinyl chloride in flexible cords, if the temperature of the above-mentioned external metal part exceeds 75°	C 3301, JIS C ual to graph all not s, if the nal nsulated ve-	N/A	
9.2.2.2	In the bottom column of Table 20, replace the existing text with the following:  a The values in this table are taken from JI 9718:2013.		_	
9.2.4	In e), replace a further "MECHANICAL HAZ and the original "HAZARD" with a further "HAZARDOUS SITUATION" and the origin "HAZARDOUS SITUATION", respectively.		_	
9.3	Replace the NOTE 2: A sharp edge MECHANICAL HAZARD cou wire insulation which could lead to an elect HAZARDOUS SITUATION. This requirement intended to cover all these HAZARDS.	rical	N/A	



	IEC60601-1				
Clause	Requirement + Test	Result - Remark	Verdict		
9.8.3.3	Figure 33: Replace the fourth sentence of the existing NOTE with the following and change "NOTE" to "NOTE 1": The resiliency or spring factor of the foam (ILD or IFD ratings) has not been specified. Add the following NOTE: NOTE 2: NOTE 1 above stated that in the corresponding international standards, "when dropping the weight, the characteristics of the foam are probably not important, therefore The resiliency or spring factor of the foam (ILD or IFD ratings) is not specified." However, This expression is confusing, and it was modified.	г	N/A		
10.1.1	Add in NOTE 1 "Current irradiation dose unit is n R unit, but Gy unit (air kerma), which correspond to 1 mR/h ≈ 10 µGy/h." Replace (0,1 mR/h) with (0.1 mR/h ≈ 1 µGy/h) in NOTE 2."	ds	_		
10.5	Replace "other than that produced by lasers and light emitting diodes" with "other than that produced by lasers"		_		
10.6	Replace "other than that produced by lasers and light emitting diodes" with "other than that produced by lasers"		_		
10.7	Replace "other than that produced by lasers and light emitting diodes" with "other than that produced by lasers"		_		
11.1.1	To the existing text of a in the Table 22, add the following:  (For example, the maximum temperature limit of transformer with three insulating materials of Cla A, Class B and Class E shall be the lowest limit 105 °C of Class A.)		Р		
13.2.10	In Table 26, replace the existing NOTE with the following:  NOTE The temperature limits in this table were derived from Table B.1 of JIS C 6950-1:2012 (in the corresponding international standard, IEC 61010-1:2001 [22]).				



IEC60601-1				
Clause	Requirement + Test	Result - Remark	Verdict	
16.1	Replace the last two paragraphs with the followin Otherwise, non-ME EQUIPMENT shall be those which are in compliance with relevant JIS standards or the Technical Requirements of the Electrical Appliance and Material 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. the cast combined with a separating transformer with DOUBLE INSULATION or RAINFORCED INSULATION, equipment only with BASIC INSULATION may be used.  Compliance is checked by inspection of appropriate documents or certificates.	ot	N/A	
16.6.4.1	In NOTE, replace "no possibility of any HAZARD with "no possibility of any HAZARDOUS SITUATION".	"	_	
16.9.2.1	In the text of c), replace "IEC 60884-1" with "IEC 60884-1 or JIS C 8282-1".		_	
Annex I	In I.1.3, replace the first dash with the following: - PATIENTS should only be connected to APPLIED PARTS of ME EQUIPMENT complying with this standard. Other equipment should comp with relevant IEC or ISO standards or comply with relevant JIS safety standards or the Technical Requirements of the Electrical Appliance and Material Safety Act, or ensure safety equivalent to the said standards/technical requirements. Replace the existing NOTE 2 with the following: NOTE 2 IEC 60601: MEDICAL ELECTRICAL EQUIPMENT in compliance with IEC 60601 (all parts) or JIS T 0601 (all parts). Replace the existing NOTE 3 with the following: NOTE 3 IEC xxxxx: Non-medical equipment in compliance with relevant IEC safety standards. Include non-medical equipment in compliance wit relevant JIS safety standards or the Technical Requirements of the Electrical Appliance and Material Safety Act, or non-medical equipment ensuring safety equivalent to the said standards/technical requirements.	h D	N/A	
Annex L	In the first paragraph, replace "wound components" with "wound components (e.g. transformers, motors, etc.)"		_	



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Clause	Requirement + Test	Result - Remark	Verdict

# Attachment 6: Evaluation sheet for interchangeable plug portion

Supplementary tests on plug portion according to EN 50075:1990

Supplement	ary tests on plug portion according to EN 50075.1990	
1.	Dimensions (Clause 7 of EN 50075)	
	Plugs shall comply with standard size. (Standard sheet 1)	Р
2.	Protection Against Electric Shock (Clause 8 of EN 50075)	
2.1	Live parts of plugs with the exception of the bare metal parts of the pins, shall not be accessible. (Clause 8.1 of EN 50075)	Р
2.2	It shall not be possible to make connection between a pin of a plug and a live socket contact of a socket-outlet while the other pin is an accessible. (Clause 8.2 of EN 50075)	Р
2.3	External parts of plugs, with the exception of pins, shall be of insulating material. (Clause 8.3 of EN 50075)	Р
3.	Construction (Clause 9 of EN 50075)	
3.1	The plug cannot be opened by hand or by using a general purpose tool. (Clause 9.1 of EN 50075)	Р
3.2	Pins of plugs shall be solid and shall have adequate mechanical strength. (Clause 9.3 of EN 50075)	Р
3.3	Pins of plugs shall be locked against rotation and adequately fixed into the body of the plug. (Clause 9.4 of EN 50075)	Р
3.4	Plugs shall be provided with soldered, crimped or equally effective permanent connection. (Clause 9.5 of EN 50075)	Р
3.5	Plug shall be shaped in such a way and made of such a material that they can easily be withdrawn by hand from a socket-outlet. (by gripping the medical power supply's enclosure, Clause 9.6 of EN 50075)	Р
4.	Resistance to Humidity (Clause 10 of EN 50075)	N/A
	The integrated pins were tested together with the medical power supply. (See test report for medical power supply)	
5.	Insulation Resistance and Electric Strength (Clause 11 of EN 50075)	N/A
	(See test report for medical power supply)	
6.	Mechanical Strength (Clause 13 of EN 50075)	
	Plug shall have adequate mechanical strength to withstand the stresses imposed during use.	Р



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	Clause	Requirement + Test	Result - Remark	Verdict
6.′	1	The plugs are pressed between two flat surfaces with a 15min after removal of the force, the plug shall not show result in undue alteration of the dimensions which ensured (Clause 13.1 of EN 50075)	w such deformation as would	Р
6.2	2	The plug is tested in a tumbling barrel. (Clause 13.2 of EN 50075, fall number is shown in test supply) After the test, the plug shall show no damage within the in particular: No part shall become detached or loosened The pin shall not turn when a torque of 0.4Nm is Note: A section of the pin is square constructed for present.	e meaning of this standard,	Р
6.3	3	The pins is held in a suitable clamp in such a position the wire (D=1+-0.02mm, U-shaped) rests on the plug pin. It backwards and forwards, so that the wire rubs along the movements is 20 000, and the rate of the operation is 20 (Clause 13.3 of EN 50075)	The plug is caused to move e pin. The number of the	Р
		After the test, the pin show no damage which may effect use of the plug, in particular, the insulating sleeve shall up.		Р
6.4	4	A pull force of 40N is applied for 60s on each pin in turn longitudinal axis of the pin. The pull is applied 60min af in a heating cabinet of 70°C. After the plug cooling dow pin shall not have displaced in the body of the plug mor EN 50075)	ter the plug has been placed on to ambient temperature, any	Р
7.		Resistance to Heat and to Ageing (Clause 14 of EN	l 50075)	Р
8.		<b>Current-carrying Parts and Connections (Clause 15</b>	of EN 50075)	
8.′	1	Connection, electrical and mechanical, shall withstand occurring in normal use, and electrical connections sha pressure is not transmitted through insulating material. (Clause 15.1 & 15.2 of EN 50075)	all be designed that contact	Р
8.2	2	Current-carrying parts shall be of copper or an alloy cocopper. (Clause 15.3 of EN 50075)	ntaining at least 58% of	Р
9.		Creepage Distance, Clearances, and Distances Thre (Clause 16 of EN 50075)	ough Insulation	Р
10		Resistance of Insulating Material to Abnormal Heat (Clause 17 of EN 50075)	t and to fire	Р



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Clause	Requirement + Test	Result - Remark	Verdict

# **Appendix: Dimensions of integral plug**

	DIMENSIONS Checked by means of measurement according to EN50075 Standard sheet 1		Р
Position	Requirement (mm)	Measured (mm)	Verdict
1	25,6 – 26,6	25,84	Р
2	13 – 14,4	13,98	Р
3	45°	45°	Р
4	R5 – 6	R5,4	Р
5	34,6 – 36	35,09	Р
6	18-19,2 in the plane of the engagement face	18,15	Р
0	17-18 at the ends of the pins	17,55	Р
7	4min	-	N/A
8	φ3,8max	φ3,42	Р
9	10-11	10,05	Р
10	18,5 – 19,5	19,12	Р
11	ф3,94 - ф4,06	ф3,98	Р
	Dimensions of position 1, 2 and 3 shall not be exceeded within a distance of 18mm from the engagement face of the plug	19,15	Р
	The edges of the metal parts shall be either chamfered or rounded off	Rounded off	Р

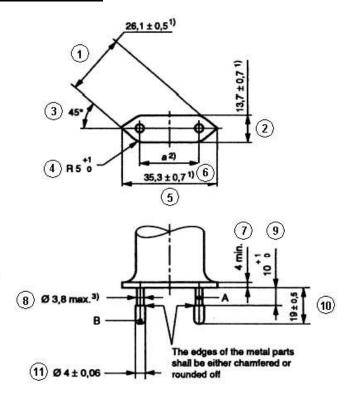


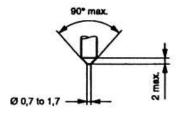
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Clause	Requirement + Test	Result - Remark	Verdict

#### **EN50075: 1990 STANDARD SHEET 1**





Alternative for end of pins

A. Insulating collar B. Metal pin

#### Dimensions in millimetres

- 1) These dimensions shall not be exceeded within a distance of 18 mm from the engagement face of the plug.
- 2) Dimension a is:
  - 18 mm to 19,2 mm in the plane of the engagement face;
  - 17 mm to 18 mm at the ends of the pins.
- 3) This dimension may be increased to 4 mm within a distance of 4 mm from the engagement face of the plug.

Pin ends shall be rounded, or conical as shown in detail sketch.

The sketches are not intended to govern design except as regards the dimensions shown.



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Clause	Requirement + Test	Result - Remark	Verdict	

# Appendix: Photo for plug portion according to EN 50075:1990





The connector conduct part can't be touched by test finger. CI & CR are measured according to table 2.10.3 & 2.10.4.



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Clause	Requirement + Test	Result - Remark	Verdict



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Clause	Requirement + Test		Result - Remark	Verdict

#### Appendix: Equipment's combined with Australian plug.

# The Australian plug was tested according to Annex J of AS/NZS 3112:2011+A1:2012:

Clause	Requirement – Test	Remark	Verdict
2.2	PLUG PINS		Р
2.2.1	MATERIAL FOR PINS: - Copper alloy containing at least 58% copper for parts made from cold rolled sheet		Р
2.2.2	ASSEMBLY OF PINS - Assembled in factory and non-rewirable		Р
2.2.3	FORM OF PIN		Р
2.2.4*	INSULATION OF PLUG PINS - Live parts of insulated pins plug are not exposed when plug is partially or fully engaged with the associated socket.		Р
2.3	INSULATING MATERIALS		Р
2.3.1	GENERAL		Р
2.3.2	PLUG BODY - Consisting of PBT which has properties not inferior to those specified in AS 3121 for insulating mouldings having a temperature class of 80°C		Р
2.3.3	PLUG COVER - Consisting of PVC which has properties not inferior to those specified in AS 3121 for insulating mouldings having a temperature class of 60°C		Р
2.8	RATINGS AND DIMENSIONS OF LOW VOLTAGE PLUGS - Comply with Figure 2.1 (c), rated 10A 250V~ Distance between live pin and edge of plug moulding more than 9 mm		Р
2.9	INTERNAL CONNECTIONS -No earthing connection		N/A
2.10	ARRANGEMENT OF EARTHING CONNECTIONS -No earthing connection		N/A
2.12	MARKING (No marking is applicable for the integral plug portion. See markings for transformer)		N/A
2.12.6	CONFIGURATION OF PLUGS - Figure 2.1 (c), the pin configuration is neutral and active in a clockwise direction		Р
2.13	TESTS ON PLUGS		Р



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Clause	Requirement + Test		Result - Remark	Verdict

Clause	Requirement – Test	Remark	Verdict
2.13.3	HIGH VOLTAGE TEST		Р
2.13.7	TUMBLING BARREL TEST		Р
2.13.8	TEMPERATURE RISE TEST		Р
2.13.9	SECUREMENT OF PLUG		Р
2.13.9.1	MOVEMENT OF PINS		Р
2.13.9.2	FIXING OF PINS		Р
2.13.13	ADDITIONAL TESTS ON THE INSULATION MATERIAL OF INSULATED PIN PLUGS		Р

INSULA	INSULATING MATERIALS TEST IN ACCORDANCE WITH AS/NZS 3121: 2002			
7.1	General		Р	
7.2	Resistance to heat test The moulding shall be placed in an oven and maintained for 6 h at the temperature appropriate to its class (see Clause 5) plus 10°C. The temperature of the oven during this period shall not vary by more than ± 5°C. The moulding shall show no physical or chemical change likely to impair the safety of the equipment of which it forms a part.		Р	
7.3	Water absorption test The complete moulding shall be immersed in water at 20 °C ± 5°C for 48 h. The moulding shall not swell, delaminate, warp or show any physical change to a degree that would be liable to impair the safety of the equipment of which it forms a part.		Р	
7.4	Resistance to white spirit test Sample shall be immersed in white spirit at room temperature for 2 min. The moulding shall not blister, warp or show any physical or chemical change to a degree that would be liable to impair the safety of the equipment of which it forms a part.		Р	



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Clause	Requirement + Test	Result - Remark	Verdict

# **Appendix: Photos of Australian plug portion**





The connector conduct part can't be touched by test finger. CI & CR are measured according to table 2.10.3 & 2.10.4.



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Clause	Requirement + Test	Result - Remark	Verdict



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C	Clause	Requirement + Test	Result - Remark	Verdict

## Appendix: Equipment combined with NEMA 1-15 plug portion.

#### KEY:

 $\sqrt{\phantom{a}}$  = Complies. G = General comment E = Further evaluation required N/A = Not applicable E $\sqrt{\phantom{a}}$  = Once "E" is found acceptable T = Testing required F = Non-compliance TF = Test failed

Section	Key	Comment			
FORWARD					
Introduction	Introduction				
1		Scope			
1.1-1.4	G	The device under evaluation is an integrated plug for model GT*41134*****input rating 100-240V~, 50-60Hz, 0.6A and model GT-41134-0606-W2-TAB input rating 100-240V~, 50-60Hz, 0.3A. The plug is evaluated according to rated input.			
2		Glossary			
2.1-2.38	G	Noted.			
3		Components			
3.1-3.4	G	Noted			
4		Units of Measurement			
4.1	G	Noted			
5		Reference			
5.1	G	Noted			
CONSTRUC	TION				
		ALL DEVICES			
6		General			
6.1	$\sqrt{}$	According to declared reasonable condition, 100-240VAC, 50-60Hz, has been considered in all following test.			
6.2	<b>√</b>	Plug for AC use only			
7		Configurations			
7.1	<b>V</b>	1-15P plug applied.			
8		Insulating Materials			
8.1		General			
8.1.1	<b>V</b>	All parts that act as the electrical insulation or enclosure are made of plastic material. See 8.2.1			
8.1.2	N/A	Vulcanized fiber is not provided			
8.2		Flammability			
8.2.1	√	The insulating material required HB or more. For detailed parts, see report of end product)			
8.3		Electrical properties			



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Clause	Requirement + Test		Result - Remark	Verdict

Section	Key	Comment	
8.3.1	1	Exception No. 1: No information according to above table info. The insulating material has a CTI 3 (Required 3), so it need NOT comply with Comparative Tracking Index Test, Section 55.	
8.3.2	Exception No. 2: The insulating material has a HWI 3, (required value is 4 when material class is V-0).  According to 8.1.2 (UL746D) and reasonable usage, reasonable occurs in normal use. We are of the opinion that it need NOT countries with Glow Wire Test, see Section 56.  Exception No. 3: The insulating material has a HAI 2. (required Fixalue is 4 when material class is V-0. or check if the thickness), no arcing in normal use, so it need not comply with High-Current Resistance to Ignition Test, Section 57.		
8.4		Thermal properties	
8.4.1	$\sqrt{}$	All the RTI rating of the insulating materials are higher than 80 degree (C)	
8.5		Vulcanized fiber	
8.5.1	N/A	No Vulcanized fiber is provided	
8.5.2	N/A	No Vulcanized fiber is provided	
8.6		Sealing compounds	
8.6.1- 8.6.2	N/A	Sealing compound is not provided, no need to comply with relevant requirement involved in ASTM 28.	
8.7		Fuse enclosures	
8.7.1- 8.7.2	N/A	Fuse is not provided	
9		Enclosure	
9.1		General	
9.1.1	<b>V</b>	Live parts of plug parts are protected against exposure to contact by persons when fully assembled using all essential parts.  Exception no. 2: for fixed wiring.	
9.1.2- 9.1.3	N/A	No accessible dead-metal parts	
9.1.4	√	The probe shown in Figure 9.1 is used to judge the accessibility of a live or dead-metal part. The applied force is not more than 13.3N.	
9.1.5- 9.1.7	N/A		
9.2		Male faces and wire terminations	
9.2.1	N/A	Not a 15 or 20A attachment plug or current tap	
9.2.2	N/A		
9.2.3	N/A		
9.2.4- 9.2.5	√	Probe not access to live parts. The cover is securely fixed for all acceptable wiring.	



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Clause	Requirement + Test		Result - Remark	Verdict

Section	Key	Comment
9.2.6	√ √	The face plate is secure with the back part.
10		Current-carrying Parts
10.1		General
10.1.1	V	Iron or steel is not used for current-carrying parts.
10.1.2	V	The current-carrying parts are not able to be turned by means of general tools due to the appliance shroud mounted on Evaluated appliance.
10.1.3	N/A	No such uninsulated live parts except for female contact of connector
10.2		Contacts (applying to the connector)
10.2.1	N/A	Female contacts of the connector cannot be touched by the probe.  Others parts are covered by exception no. 3
11		Grounding and Dead Metal Parts
11.1- 11.10	N/A	No grounding parts
12		Terminals
12.1-12.4		No terminals for end user
13		Cord Entry and Strain Relief
13.1-13.5	N/A	Flexible cord part are considered in the end appliances.
14		Spacings
14.1	$\sqrt{}$	The spacing through air between uninsulated live parts of opposite polarity and between uninsulated live parts and exposed external surface is measured more than 2mm (required 3/36 inch, 1,2mm) for a device rated 250V or less.
14.2	N/A	No such isolated dead-metal part
15		Assembly
15.1		General
15.1.1	V	Pre-wired in factory
15.1.2	V	Electrical contact is reliably maintained at any point
15.1.3	V	Live parts is protected against exposure to persons
15.1.4	N/A	Not multiple outlet device
15.1.5	N/A	Female contacts of the connector can be mated with the inlet in right way without exposure of the blades
15.2		Grounding and polarization
15.2.1- 15.2.4	N/A	No grounding
15.3		Mating and interchangeability
15.3.1		The electrical continuity is automatically established.
15.3.2- 15.3.6	$\sqrt{}$	1-15P receptacles ensuring.
15.4		Fuseholders



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Clause	Requirement + Test	Result - Remark	Verdict

Section	Key	Comment	
15.4.1-			
15.4.8	N/A	Fuseholder is not provided	
15.5		Switches	
15.5.1	N/A	The switch is provided between coupler 1 and coupler 2. but it is a	
		information	
	NT PLU	GS AND INLETS (for plug only)	
16		Insulating material	
16.1	√	The enclosure is measured min. 2.1 mm.	
17		Enclosure	
17.1		General	
17.1.1	N/A	Not a general use plug.	
17.1.2	V	Measured 44 mm.	
17.1.3	N/A	Not a 50A plug	
17.2		Grip	
17.2.1	N/A	See section 69	
17.3		Face size	
17.3.1		Larger than figure 17.1	
18		Current carrying parts	
18.1	N/A	Not a folded-over plug.	
18.2	$\sqrt{}$	Dimensional requirements fulfilled.	
19		Grounding and dead metal parts	
19.1-19.4	N/A	No grounding or dead metal parts.	
20		Terminals and leads	
20.1-20.5	N/A	All the assembly are pre-wired in factory	
21		Assembly	
21.1		The blades are held securely in place	
21.2	N/A	Not a inlet	
21.3-21.4	N/A	The device under evaluate is a plug part not inlet or surface mounting.	
21.5	N/A	Not for radio antenna or ground.	
22		Weatherproof type	
22.1-22.2	N/A	Not weatherproof type	
23-26	N/A	CONNECTORS	
27-37	N/A	RECEPTACLES	
		SELF-CONTAINED RECEPTACLES FOR USE WITHOUT A	
		SEPARATE OUTLET BOX	
38-44	N/A	These sections are applicable for self-contained receptacles.	
		CURRENT TAPS	
45	N/A	The section is applicable for current taps only	
		FLATIRON AND APPLIANCE PLUGS	



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Clause Requirement + Test			Result - Remark	Verdict

Section	Key	Comment		
46-53	N/A	These sections are applicable for flatiron and appliance plugs.		
PERFORMANCE				
		GENERAL		
54		Representative Devices		
54.1-54.7	G	Noted.		
		ALL DEVICES		
55		Comparative Tracking Index Test		
55.1	N/A	Refer to Exception No. 2 of 8.3.2. Not main tests but the test is considered		
56		Glow Wire Test		
56.1-56.2	N/A	Refer to Exception No. 2 of 8.3.2, Not main tests but the test is considered		
57		High-Current Arc Resistance to Ignition Test		
57.1-57.6	G	Refer to Exception No. 3 of 8.3.2		
58		Mold Stress Relief		
58.1-58.2	Т	All devices are placed in air oven maintained at a 80oC for 7 hours.		
		After 58.2, there is not any warpage, shrinkage or other distortion.  Refer to data sheet. Repeat dielectric voltage-withstand test as		
58.3	Т	described in section 60. Not required to be subjected to the humidity		
00.0	•	conditioning described in 60.1.2.		
59		Moisture Absorption Resistance		
59.1-59.2	Т	Refer to data sheet		
60		Dielectric Withstand Test		
60.1-60.2	Т	Refer to data sheet		
61		Accelerated Aging Tests		
61.1		General		
61.1.1	G	Exception to 8.4.1 for other material is not applicable for the devices under evaluation		
61.2		Rubber, EPDM, and TEE compounds		
61.2.1- 61.2.4	N/A	Not a rubber , EPDM, and TEE compounds		
61.3		PVC compounds and copolymers		
61.3.1-	G	See 61.1.1 shown as above		
61.3.2		Inculation Projetance Test		
62 1 62 6	<del></del>	Insulation Resistance Test		
62.1-62.6	Т	Refer to data sheet		
63	N1/A	Conductor Secureness Test		
63.1-63.2	N/A	No wire leads provided.		
64	N 1 / A	Tightening Torque Test		
64.1-64.2	N/A	Not provide any wire-binding screw		



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Clause	Requirement + Test		Result - Remark	Verdict

Oladoo				
Section	Key			
	N/A	ATTACHMENT PLUGS		
65		General		
65.1	G	Noted.		
66		Security of blades test		
66.1-66.2	Т	Refer to data sheet		
67		Secureness of cover test		
67.1-67.2	Т	Refer to data sheet		
68		Crushing test		
68.1-68.2	Т	Refer to data sheet		
69		Attachment plug grip test		
69.1-69.9	Т	Refer to data sheet		
70		Integrity of assembly test		
70.1-70.2	N/A	Cord part shall be considered in the end appliance.		
71		Self-hinge Flexing test		
71.1-71.3	N/A	Not self-hinge type		
72		Terminal temperature test		
72.1-72.4	N/A	No terminal for end user.		
73		Fuse-holder temperature test		
73.1-73.8	N/A	No fuse-holder applied.		
74-79	N/A	Pin type terminal		
80-85	N/A			
86-103	N/A	CONNECTORS		
104-150	N/A	RECEPTACLES		
		CURRENT-TAPS		
		All devices		
151-152	N/A	These sections are for current-taps		
		Flatiron and appliance plugs.		
153-161	N/A	These sections are applicable for flatiron and appliance plugs.		
RATINGS				
162		Details		
		According to exception no. 2, rating is not required. The special-use		
162.1	G	device is not intended to ship out solely. (Note: plug is mounted in		
	,	evaluated appliance).		
162.2	V	Rating of 1A 120V~ is evaluated		
162.3	$\sqrt{}$	0.5HP rated.		
162.4- 162.7	N/A	Not have the specified devices		
	AND IN	STRUCTIONS		
163		General		



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Clause	Requirement + Test	Result - Remark	Verdict

Section	Key	Comment	
163.1-	G	The location of the catalog number is not prohibited from appearing	
163.2		according to exceptions of table 163.1 and 163.2	
164		Identification and marking of terminals	
164	G	No any grounding parts and terminals	
SUPPLE MENT SA		(reserved for future use)	
SUPPLE MENT SB		ENCLOSURE TYPES FOR ENVIRONMENTAL PROTECTION	
SB1-SB7	N/A	The requirements of SB don't apply to the device under evaluation for it's intended for indoor use only (refer to SB1.1)	
SUPPLE MENT SC		MARINE SHORE POWER INLETS	
SC1- SC12	N/A	These sections are for marine shore power inlets	
SUPPLE MENT SD		HOSPITAL GRADE DEVICES	
SD1- SD30	N/A	These sections are for hospital grade devices	

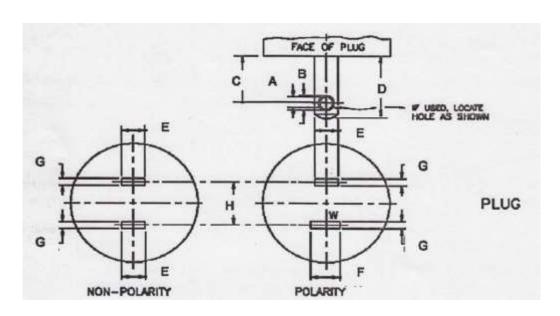


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Clause	Requirement + Test	Result - Remark	Verdict

## Appendix: Dimensions of NEMA 1-15 plug portion



Symbol	Requirement (inch)	Measured (inch)		Symbol	Requirement (inch)	Measured (inch)
Α	0.120 - 0.130	0.123		Е	0.240 - 0.260	0.248
В	0.151 – 0.161	0.157		F	0.307 - 0.322	
С	0.449 - 0.479	0.466		G	0.055 - 0.065	0.057
D	0.625 - 0.718	0.656		Н	0.495 - 0.505	0.498
Perimeter faces to the plug blades shall not be less than 7.9 mm (intended for use with children's toys) or 5.1 mm from any point of either blade						12.39

## For model GT-41134-0606-W2-TAB

Symbol	Requirement (inch)	Measured (inch)		Symbol	Requirement (inch)	Measured (inch)
Α	0.120 - 0.130	0.124		Е	0.240 - 0.260	0.251
В	0.151 - 0.161	0.159		F	0.307 - 0.322	
С	0.449 - 0.479	0.465		G	0.055 - 0.065	0.058
D	0.625 - 0.718	0.676		Н	0.495 - 0.505	0.498
Perimeter faces to the plug blades shall not be less than 7.9 mm (intended for use with						9.9
children's	children's toys) or 5.1 mm from any point of either blade					



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Clause	Requirement + Test	Result - Remark	Verdict

# Appendix: Photos for NEMA 1-15 plug portion.







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Clause	Requirement + Test	Result - Remark	Verdict

The connector conduct part can't be touched by test finger. CI & CR are measured according to table 2.10.3 & 2.10.4.



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Clause	Requirement + Test	Result - Remark	Verdict

## Appendix: Equipment combined with BS-plug portion

# <u>Supplementary tests on plug portion according to BS1363: Part 3 + Amd 9543 + Amd 14225 + Amd 14540 + Amd 17437 + Amd A4</u>

Clause	Requirement - Test	Result-Remark	Verdict
12.1	Dimensions (Checked according to figure 4)	See appendix no. 1 & 2	Р
12.2	Outline of plug shall not exceed the dimension shown in Figure 4 for a distance of not less than 6.35 mm from the engagement surface	8.90 mm	Р
	Pin disposition, length and body outline shall be checked by use of the gauge shown in Figure 5		Р
12.3	L/N pin was more than 9.5 mm from the periphery of the plug measured along the engagement surface	9.60 mm	Р
12.7	The base and cover of rewirable plugs shall be adaptor plugs having the cover fixed by screws shall be firmly secured to each other. It shall not be possible to remove the cover unless the adaptor is completely withdrawn from the socket-outlet. Fixing screws shall be captive. The test is carried out using apparatus similar to that shown in Figure 6		N/A
12.9	After the temperature rise test (clause 16). Use test probe 11 of BS EN 61032:1998 is applied a force 30 -5/0 N.  During and after the test, it was not possible to touch the live parts.		Р
12.11	Adaptor plug pins shall be constructed of brass, except for sleeves of pins as specified in 12.18		Р
	All exposed surfaces of the adaptor plug pins shall be smooth and free from burrs or sharp edges and other irregularities which could cause damage or excessive wear to corresponding socket contacts or shutters.		Р
	Those surfaces of the non-solid adaptor plug pins which are visible when the adaptor is correctly assembled shall be free of apertures.		Р
	All seams and joints of non-solid adaptor plug pins shall be closed over their entire length.		Р



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Clause	Requirement + Test	Result - Remark	Verdict

Clause	Requirement - Test	Result-Remark	Verdict
	For solid pins, conformity shall be checked by 12.11.4.1.		Р
	For non-solid pins, compliance shall be checked by 12.11.4.2.		N/A
	Adaptors with non-solid pins shall not cause excessive wear to socket contacts or shutters of socket-outlets in accordance with BS 1363-2:1995.		N/A
	Adaptor plug pins shall have adequate mechanical strength to ensure that they cannot be distorted by twisting. Apply a torque $1N.m \pm 10\%$ for $60 + 5/0$ S. After each pin has been separately twisted, the plug was fit the gauge in fig. 5. Repeated with opposite direction.		Р
12.13	Adaptors shall be so designed that when fully assembled the pins are adequately retained in position such that there is no likelihood of them becoming detached from the adaptor during normal use.		Р
	Each pin is subjected for 60 +5/0 S to a pull of 100 -2/0 N without jerks in the direction of the major axis.  The plug is mounted using the steel plate shown in fig.7. The apparatus is placed within an oven and the pull is applied at least 1 h after the plug body has attained the test temperature of 70°C ± 5°C while maintained at this temperature.  After the test, the plug pin shall fit into the gauge and comply with 12.2.1.		Р
12.14	The degree of flexibility of mounting of the plug pins or the angular movement of the pins in the base shall be not greater than 3° 30'. See fig. 8.		Р
	Test procedure refers to standard.  During each test, the declination from the horizontal measured on the scale shall not exceed 3° 30' and comply with 12.2.1.		Р
12.18	Live and neutral adaptor plug pins shall be fitted with insulating sleeves. See fig.4. Sleeves shall not be fitted to any earthing adaptor plug pin.		Р



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Clause	Requirement + Test	Result - Remark	Verdict

Clause	Requirement - Test	Result-Remark	Verdict
12.19.3	Abrasion test – 10 000 times in each direction (20 000 movements) at a rate of 25 movements to 30 movements per min. (fig. 9).  After the test, the sleeve shall show no damage and also shall not have been penetrated or creased, satisfy the tests in 12.19.2.		P
13.10	The total mass of the equipment with all specified connectors shall not exceed 800 g. The torque exerted on a socket shall not exceed 0.7 N·m.  The test apparatus as Figure 37	Compliance with the main standard	N/A
	Additional: Products with torque exceeding 0.25Nm do not comply with the main standard hence full compliance with the main standard cannot be claimed		N/A
Additional	test for ISODs according to BS1363: Part 1 + Amd 95	541 + Amd 14539 + Amd 17435	+ Amd A4
12.9.1	All exposed surfaces of plug pins shall be smooth and free from burrs or sharp edges and other irregularities which could cause damage or excessive wear to corresponding socket contacts or shutters.		P
12.9.4	Apply a force of 1100 -10/0N at a rate not exceeding 10 mm/min.  After this test the plug should fit the gauge to fig. 5.		Р
	Apply a force of 400 +10/0N at a rate 10 ± 2 mm/min.  Deflection shall not exceed 1.5 mm.  After this test the plug should fit the gauge to fig. 5.		Р
12.9.6	ISODs shall have adequate mechanical strength to ensure that they cannot be distorted by twisting.  Apply a torque 1N.m ± 10% for 60 +5/0 S.  After each pin has been separately twisted, the plug shall fit the gauge in fig. 5.  Repeated with opposite direction.		Р



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C	Clause	Requirement + Test		Result - Remark	Verdict

## Appendix: Dimensions of BS1363 plug portion

Position	Requirement (mm)	Measured (mm)	Verdict
1	25.37max	24.02	P
2	25.37max	24.02	P
3	R15min	Measured by gauge	P
4	R9.5min	9.60	P
5	R9.5min	9.60	P
6	11.05-11.18	11.12	P
7	11.05-11.18	11.12	P
	34.6max		
8	22.23-23.23	30.50	P
9		22.60	P
10	1.35-1.85	1.55	Р
11	7.80-8.05	8.03	Р
12	58°-62° inclusive	60°	Р
13	3.90-4.05	3.99	Р
14	9.2max	8.88	Р
15	17.2-18.2	18.05	Р
16	9.5max	9.17	Р
17	22.10-22.36	22.21	Р
18	6.22-6.48	6.26	Р
19	3.90-4.05	4.03	Р
20	6.22-6.48	6.26	Р
21	1.35-1.85	1.81	Р
22	3.90-4.05	3.98	Р
23	1.2-2.0	1.24	Р
24	R0.1-R1.0	R0.55	Р
25	60°-80° inclusive	68°	Р
	the plug not exceed the dimension shown in least 6.35mm from the engagement surface	8.90	Р



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Clause	Requirement + Test	Result - Remark	Verdict

Appendix: BS1363-3 Fig 4

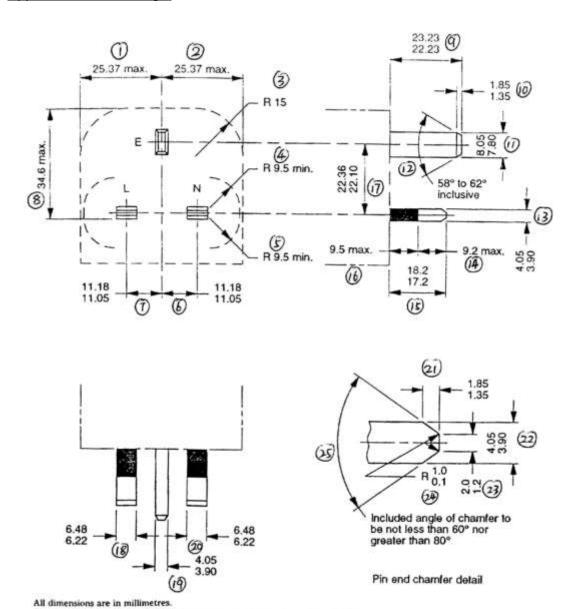


Figure 4. Dimensions and disposition of pins (see clause 12)



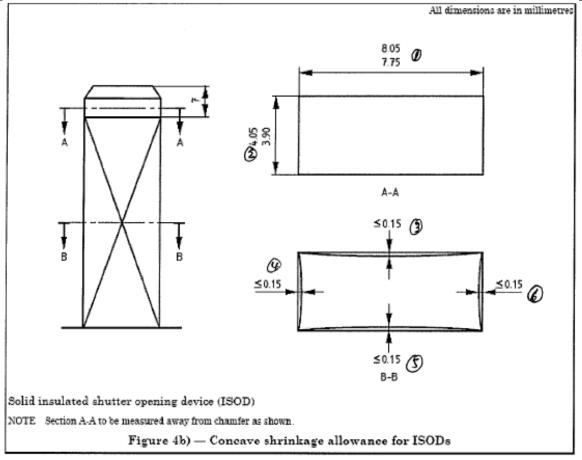
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Clause	Requirement + Test		Result - Remark	Verdict

## Appendix: Concave shrinkable allowance for ISODs

	Dimensions Checked by means	of measurement according to BS1363-1 Fig. 4b	
Position	Requirement (mm)	Measured (mm)	Verdict
1	7.75-8.05	8.03	Р
2	3.90-4.05	3.99	Р
3	≤ 0.15	0.01	Р
4	≤ 0.15	0.01	Р
5	≤ 0.15	0.01	Р
6	≤ 0.15	0.01	Р





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Clause	Requirement + Test	Result - Remark	Verdict

## Appendix: Photo for BS1363 plug





The connector conduct part can't be touched by test finger. CI & CR are measured according to table 2.10.3 & 2.10.4.

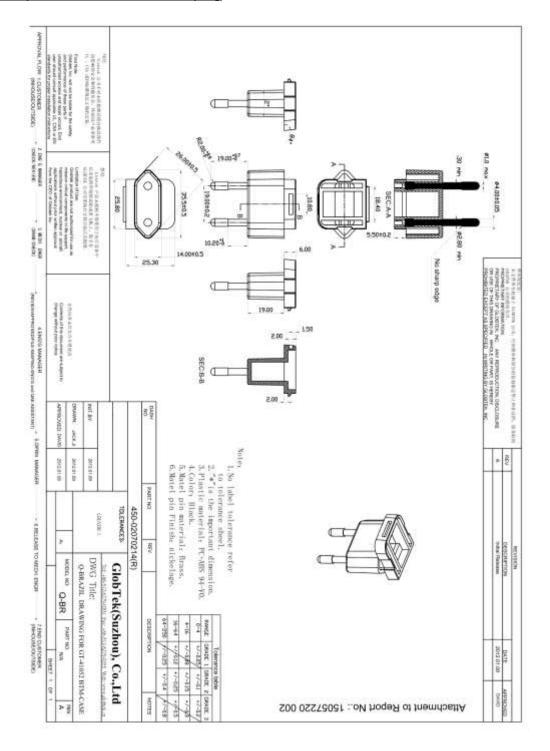


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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict

## Appendix: Specification of NBR 14136 plug



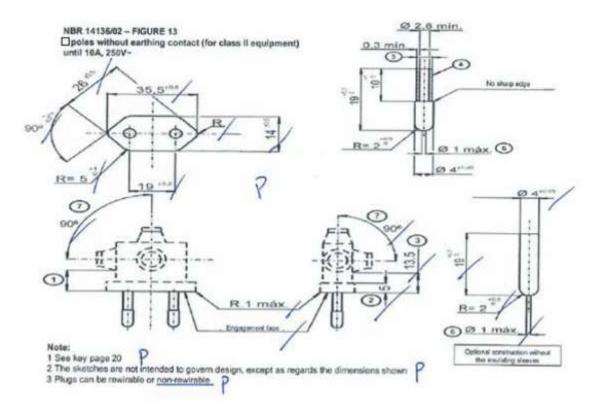


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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict

#### Appendix: Evaluation sheet of NBR 14136 Figure 13 plug



#### Key of page 20:

- 1- The distance between the engagement face and the cord or cord guard, if any, shall be at least 14 mm
- 2- Within this distance, the outline shall be not smaller than the engagement face.
- 3- Within this distance, the outline shall be not larger than the engagement face. P
- 4- Insulating sleeves on the current-carrying pins are optional M/A
- If the insulating sleeves are separate parts, they shall enter the plug by at least 3mm measured from the engagement face.
- 5. The external diameter of the insulating sleeves shall not be larger than the diameter of the uninsulated part of the pins.
- 6- To avoid damage to shutters, the ends of the pins shall show neither sharp edges nor burrs. They shall be of rounded shape as shown.
- 7- The angle of 90° represents the maximum permissible area for the orientation of the entry of the flexible cable or cord.

#### Plug Marking for the 10A 250V- Plug:

Cable section of 0.5mm\* - 2.5A 250VCable section of 0.75mm\* - 10A 250VCable section of 1.5mm\* - 10A 250VCable section of 1.5mm\* - 10A 250VCable section of 2.5mm\* - 10A 250V-



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Clause	Requirement + Test	Result - Remark	Verdict

# Appendix: Evaluation sheet of IRAM 2063 plug

25	RESISTANCE TO HEAT		ĺ
25.2	Parts of insulating material of fixed socket-outlets necessary to retain current-carrying parts and parts of the earthing circuit in position, as well as parts of the front surface zone of 2 mm wide surrounding the phase and neutral pin entry holes: ball-pressure test at (125 ± 2)°C for 1 h		P
	After the test: diameter of impression ≤ 2 mm:	0.67 mm	Р
25.3	For parts not necessary to retain current-carrying pa circuit in position, even though in contact with them:		-
	Test temperature (°C)	(70 ± 2 °C) / (40 ± 2) °C + highest temperature rise determined during the test of clause 19	400
	After the test: diameter of impression ≤ 2 mm:		
28	RESISTANCE OF INSULATING MATERIAL TO AB AND TO TRACKING	BNORMAL HEAT, TO FIRE	Р
28.1	Resistance to abnormal heat and to fire		P
28.1.1	Glow-wire test		
	For parts of fixed accessories necessary to retain current-carrying parts and parts of the earthing circuit in position: test temperature 850 °C		Р
	No visible flame and no sustained glowing		Р
	Flame and glowing extinguish within 30 s:		Р
	No ignition of the tissue paper		Р
	For parts of fixed accessories needed to retain the earth terminal in position in a box: test temperature 650 °C		
	No visible flame and no sustained glowing		
	Flame and glowing extinguish within 30 s		25775
	No ignition of the tissue paper		***
	For parts of portable accessories necessary to retain parts of the earthing circuit in position: test temperate		Р
	No visible flame and no sustained glowing		Р
	Flame and glowing extinguish within 30 s		Р
	No ignition of the tissue paper		Р
	For parts not necessary to retain current-carrying parts and parts of the earthing circuit in position, even though in contact with them: test temperature 650 °C		5 <u>211</u> 63
	No visible flame and no sustained glowing		:::::
	Flame and glowing extinguish within 30 s:		***
	No ignition of the tissue paper		



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Clause	Requirement + Test	Result - Remark	Verdict

# Appendix: Evaluation sheet of IRAM 2063 plug

6.4	PLUG PINS MEASUREMENT			
NI/V	Measured in mm	Allowed in mm	Verdict	
- Phase Pin:				
Length:	18.03,18.05,18.04	18,2 ± 0,2 (18.0/18.4)	Р	
Wide:	6.25,6.26,6.25	6,25 ± 0,1 (6.15/6.35)	Р	
Thickness:	1.57,1.55,1.56	1,55 ± 0,07 (1.48/1.62)	P	
- Neutral Pin:				
Length:	18.10,18.09,18.08	18,2 ± 0,2 (18.0/18.4)	Р	
Wide:	6.23, 6.25,6.23	6,25 ± 0,1 (6.15/6.35)	Р	
Thickness:	1.51,1.51,1.52	1,55 ± 0,07 (1.48/1.62)	Р	
- Pin of earth				
Length:	-	21,4 ± 0,2 (21.2/21.6)	-	
Wide:		6,25 ± 0,1 (6.15/6.35)		
Thickness:		1,55 ± 0,07 (1.48/1.62)	1	
Perimeter:	11.86.11.86, 11.85	≥ 8mm	P	

## Photo:

