Issue Date: 2013-11-07 Page 1 of 28 Report Reference # E341350-A29-UL

# **UL TEST REPORT AND PROCEDURE**

**Standard:** ANSI/AAMI ES60601-1 (2005 + C1:09 + A2:10)(Medical Electrical

Equipment - Part 1: General Requirements for Basic Safety and

**Essential Performance)** 

CAN/CSA-C22.2 No. 60601-1 (2008) (Medical Electrical Equipment -

Part 1: General Requirements for Basic Safety and Essential

Performance)

Certification Type: Component Recognition

CCN: QQHM2, QQHM8 (Power Supplies, Medical and Dental)

**Product:** Switching Power Adapter

**Model:** GTM91120-WWVV-X.X-AB series,

(M can be "M" or "-" for market identification and not related to saftey WW is the rated output wattage designation, with a maximum value of

"30";

VV is the standard rated output voltage designation, with a maximum

value of "48";

-X.X denotes the optional deviation, subtracted or added from

standard output voltage in 0.1 volt increments or blank to indicate the

no voltage different;

A:T is External/Desktop model, F is Open Frame, P is Encapsulated; when A=T, B can be 2 or 3A, 2 presents Class II, 3A presents Class I; when A=F, B can be Blank or W, W means class II equipment, Blank

means class I;

when A=P, B can be 2 or 3, 2 means class II equipment, 3 means

class I equipment.)

GTM91128LI1CEL, GTM91128LI2CEL, GTM91128LI3CEL, GT911203006PNIM(RV), GT911203006PWIM(RV), RA008A and

RA008B.

**Rating:** Input: 100-240Vac, 50-60 Hz, 1.5A.

Output:

Model GTM91120-WWVV-X.X-AB Output: Refer to enclosure 7-01;

Model GTM91128LI1CEL Output: 4.2V, 1000mA; Model GTM91128LI2CEL Output: 8.4V, 1000mA; Model GTM91128LI3CEL Output: 12.6V, 1000mA.

Model RA008A Output: 6V, 1.0A Model RA008B Output: 6V, 1.0A

Model GT911203006PNIM(RV) Output: 6V, 1.0A Model GT911203006PWIM(RV) Output: 6V, 1.0A

Applicant Name and Address: GLOBTEK (HONG KONG) LTD

UNIT 1402, BENSON TOWER

74 HUNG TO RD KWUN TONG

KOWLOON HONG KONG

Issue Date: 2013-11-07 Page 2 of 28 Report Reference # E341350-A29-UL

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

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UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Prepared by: Yena Zhuang Reviewed by: Calvin Tang

Issue Date: 2013-11-07 Page 3 of 28 Report Reference # E341350-A29-UL

## **Supporting Documentation**

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

- A. Authorization The Authorization page may include additional Factory Identification Code markings.
- B. Generic Inspection Instructions -
  - Part AC details important information which may be applicable to products covered by this Procedure.
     Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.
  - ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.
  - iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

Issue Date: 2013-11-07 Page 4 of 28 Report Reference # E341350-A29-UL

## **Product Description**

For model GTM91120-WWVV-X.X-AB series, Electronic components mounted to PWB, and housed in plastic enclosure, with Class II appliance inlet or Class I Inlet, with alternate construction of Open Frame or Encapsulated which intended to provide electrical power to medical electrical equipment.

For models GTM91128LI1CEL, GTM91128LI2CEL, GTM91128LI3CEL, Electronic components mounted to PWB, and housed in plastic enclosure, with Class II appliance inlet, which intended to provide electrical power to battery pack used in medical electrical equipment. Models GTM91128LI1CEL, GTM91128LI2CEL and GTM91128LI3CEL is External/Desktop model.

#### **Model Differences**

Model GTM91120-WWVV-X.X-T3A is identical to Model GTM91120-WWVV-X.X-T2 except the Class Type.

Model GTM91120-WWVV-X.X-PB is identical to Model GTM91120-WWVV-X.X-TB except the Enclosure Construction and with Encapsulation Construction.

Model GTM91120-WWVV-X.X-FB is identical to Model GTM91120-WWVV-X.X-TB except the Enclosure Construction and PWB Layout.

Models GTM91128LI1CEL, GTM91128LI2CEL, GTM91128LI3CEL are identical to Model GTM91120-WWVV-X.X-F2 except employ additional output battery charging circuit, output rating, PWB size and Plastic enclosure.

Models GT911203006PNIM(RV), GT911203006PWIM(RV), RA008A and RA008B are identical to Model GTM91120-3007.5-1.5-AB except model name.

#### **Technical Considerations**

- Classification of installation and use: N/A Recognized Power Supply
- Device type (component/sub-assembly/ equipment/ system): Component
- Intended use (Including type of patient, application location): Component to be evaluated in end product
- Mode of operation : Continuous
- Supply connection : Appliance coupler
- Accessories and detachable parts included : None
- Other options include : None
- The product was investigated to the following additional standards:: CAN/CSA-C22.2 No. 60601-1 (2008) (Medical Electrical Equipment Part 1: General Requirements for Basic Safety and Essential Performance) (includes National Differences for Canada), ANSI/AAMI ES60601-1 (2005 + C1:09 + A2:10) (Medical Electrical Equipment Part 1: General Requirements for Basic Safety and Essential Performance) (includes Deviations for United States)
- The product was not investigated to the following standards or clauses:: Electromagnetic Compatibility (IEC 60601-1-2), Clause 14, Programmable Electronic Systems, Biocompatibility (ISO 10993-1)
- The degree of protection against harmful ingress of water is:: Ordinary
- The mode of operation is:: Continuous
- The product is suitable for use in the presence of a flammable anesthetics mixture with air or oxygen or with nitrous oxide:: No
- The product is Recognized only to the following hazards: Casualty, Fire, Shock.

Issue Date: 2013-11-07 Page 5 of 28 Report Reference # E341350-A29-UL

# **Engineering Conditions of Acceptability**

For use only in or with complete equipment where the acceptability of the combination is determined by UL LLC. When installed in an end-product, consideration must be given to the following:

- The power supply was tested on a 20A branch circuit. If used on a branch circuit greater than this, additional testing may be necessary.
- The power supply was evaluated as 2 MOPP provided between Primary and Secondary, 2 MOPP provided between Primary and External Enclosure and 1 MOPP provided between Primary and Protective Earth; see insulation diagram and table for details.
- The power supply has been judged on the basis of the required creepage and clearances in the First Edition of the Standard for Medical Electrical Equipment, ANSI/AAMI ES 60601-1, Sub clause 8.9.
- The maximum ambient temperature of the product is 40°C.
- Consideration shall be given to measure the temperatures on power electronic components and transformer windings when the power supply is installed with the end-use equipment. The primary transformer (T1) incorporates a Class 130 (B) insulation system.
- The following tests shall be performed in the end-product evaluation: Earthing and Potential Equalization Test, Temperature Test, Dielectric Voltage Withstand Tests, Leakage Current Test and Fuse Short Circuit Test. "Voltage or charge limitation" may need to reconsider if additional EMC filter is provided between appliance inlet/ power cord to the product.
- The power supply is operated up to 3000m above sea level as declared by manufacturer.
- The power supply has not been evaluated for patient connected applications.
- The end-use product shall ensure that the power supply is used within its ratings.
- The appliance inlet used for Class II Power Supply is non-polarized type, the suitability shall be determined in end product application for the requirement of CAN/ CSA polarized type plug.
- The maximum working voltage for T1 present is 255 Vrms; 548 Vpk. The electric strength tests in the end-product shall be based on this value.
- This power supply has not been provided with a power supply cord; these items must be considered
  in the end use product.
- The Protective bonding wire should not be connected to other equipment as earthing protection.

#### **Additional Information**

#### Original:

- 1. The risk management requirements of the standard were addressed.
- 2. This power supply has been complied with UL 60601-1, 1st Edition and CAN/CSA-C22.2 No. 601.1-M90, 2005, refer to E341350-A3 for details. And the power supply is identical to the previous one except for adding a series CY1 cap between Primary and Secondary and alternating some components. See test record for details.

#### **Additional Standards**

The product fulfills the requirements of: ANSI/AAMI ES60601-1 (2005 + C1:09 + A2:10) (Medical Electrical Equipment - Part 1: General Requirements for Basic Safety and Essential Performance) - Edition 1 - Revision Date 2012/01/01 CAN/CSA-C22.2 No. 60601-1 (2008) (Medical Electrical Equipment - Part 1: General Requirements for Basic Safety and Essential Performance) Edition 2 - Revision Date 2011/06/01

### Markings and instructions

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Clause Title	Marking or Instruction Details
Company identification	Classified or Recognized company's name, Trade name, Trademark or File

Issue Date: 2013-11-07 Page 6 of 28 Report Reference # E341350-A29-UL

Model	Model number
Supply Connection	Voltage range, ac/dc, phases if more than single phase
Alternating current	$\sim$
Supply Frequency	Rated frequency range in hertz
Class II equipment	
Power Input	Amps, VA, or Watts
Output	Rated output voltage, power, frequency.
Fuses	Ratings (current and voltage) and type. (located adjacent to fuse OR as a diagram inside enclosure)
Protective earth ground	

## **Special Instructions to UL Representative**

7.2.6 Class II Symbol is only applicable for Class II product (T2 series), 7.3.5 Protective Earth Ground Symbol is only applicable for Class I product (T3 series), 7.2.8.2 For markings of output: only rated output voltage, current is applicable.

Production-Line Testing Requirements							
Test Exemptions - The fol	lowing models are exempt t	rom the indicated test					
Model	Grounding Continuity	Dielectric Voltage Withstand	Patient Circuit Dielectric Voltage Withstand				
No exemption	No exemption	No exemption	Exempted				
Solid-State Component Test Exemptions - The following solid-state components may be disconnected from the remainder of the circuitry during either Dielectric Voltage Withstand Test:  Component  N/A							
Sample and Test Specific	s for Follow-Up Tests at l	<u>JL</u>					
The following tests shall be conducted in accordance with the Generic Inspection Instructions							
Plastic Enclosure or Part	Test	Sample(s)	Test Specifics				
N/A							

Issue Date: 2013-11-07 Page 7 of 28 Report Reference # E341350-A29-UL

**TABLE: List of Critical Components** 

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
Enclosure (For Desktop construction and models GTM91128LI1CEL, GTM91128LI2CEL and GTM91128LI3CEL only)	Sabic Innovative Plastics B V	HF500R(f2)	Rated min V-0, 125 degC Overall 45.3 by 100.3 by 35.2 mm, min 2.0mm thickness.	QMFZ2 (E45329)	UL
Enclosure (For Encapsulation only)	Sabic Innovative Plastics B V	HF500R(f2)	Rated min V-0, 125 degC Overall 97 by 46 by 32 mm, min 2.0mm thickness.	QMFZ2 (E45329)	UL
Appliance –Inlet (For Class II Desktop construction and models GTM91128LI1CEL, GTM91128LI2CEL and GTM91128LI3CEL only)	Zhejiang Leci Electronics Co Ltd	DB-8	Rated 5A, 250Vac, 105 degC	AXUT2/8 (E302229)	UL
Appliance –Inlet – Alternate (For Class II Desktop construction and models GTM91128LI1CEL, GTM91128LI2CEL and GTM91128LI3CEL only)	Kunshan DLK Electronics Technology Co Ltd	CDJ-2	Rated 2.5A, 250Vac, 125 degC	AXUT2/8 (E317189)	UL
Appliance –Inlet – Alternate (For Class II Desktop construction and models GTM91128LI1CEL, GTM91128LI2CEL and GTM91128LI3CEL only)	Shenzhen Delikang Electronics Technology Co Ltd	CDJ-2	Rated 2.5A, 250Vac, 125 degC	AXUT2/8 (E217394)	UL
Appliance –Inlet – Alternate (For Class II Desktop construction and models GTM91128LI1CEL,	Rich Bay Co Ltd	R-201SN90	Rated 2.5A, 250Vac, 105 degC	AXUT2/8 (E184638)	UL

Issue Date: 2013-11-07 Page 8 of 28 Report Reference # E341350-A29-UL

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
GTM91128LI2CEL and GTM91128LI3CEL only)					
Appliance –Inlet – Alternate (For Class II Desktop construction and models GTM91128LI1CEL, GTM91128LI2CEL and GTM91128LI3CEL only)	Sun Fair Electric Wire & Cable (HK) Co Ltd	S-01	Rated 2.5A, 250Vac.	AXUT2/8 (E226643)	UL
Appliance –Inlet – Alternate (For Class II Desktop construction and models GTM91128LI1CEL, GTM91128LI2CEL and GTM91128LI3CEL only)	Inalways Corp	0721 series	Rated 2.5A, 250Vac, 105 degC	AXUT2/8 (E94191)	UL
Appliance –Inlet – Alternate (For Class II Desktop construction and models GTM91128LI1CEL, GTM91128LI2CEL and GTM91128LI3CEL only)	Tecx-unions Technology Corp	SO-222 series	Rated 2.5A, 250Vac, 75 degC	AXUT2 (E220004)	UL
Appliance –Inlet – Alternate (For Class I Desktop construction only)	Tecx-Unions Technology Corp	TU-333	Rated 2.5A, 250Vac, 105degC,	AXUT2/8 (E220004)	UL
Appliance –Inlet – Alternate (For Class I Desktop construction only)	Zhejiang Leci Electronics Co Ltd	DB-6	Rated 5A, 250Vac, 105DegC	AXUT2/8 (E302229)	UL
Appliance –Inlet – Alternate (For Class I	Rich Bay Co Ltd	R-30790	Rated 2.5A, 250Vac, 105 degC	AXUT2/8 (E184638)	UL

Issue Date: 2013-11-07 Page 9 of 28 Report Reference # E341350-A29-UL

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
Desktop construction only)					
Appliance –Inlet – Alternate (For Class I Desktop construction)	Sun Fair Electric Wire & Cable (HK) Co Ltd	S-02	Rated 2.5A, 250Vac,	AXUT2/8 (E226643)	UL
Appliance –Inlet – Alternate (For Class I Desktop construction only)	Kunshan DLK Electronics Technology Co Ltd	CDJ-2	Rated 2.5A, 250Vac, 105 degC	AXUT2/8 (E317189)	UL
Appliance –Inlet – Alternate (For Class I Desktop construction only)	Inalways Corp.	0724	Rated 2.5A, 250Vac, 65 degC	AXUT2/8 (E94191)	UL
Input connector (For Open Frame Construction only)	Various	Various	Rated min 240Vac, 1.5A, 85 degC.	ECBT2/8	UL,cUL
Input Lead Wire (For Encapsulation construction only)	Various	Various	Rated min 300V, 105DegC, min 18AWG, VW-1.	AVLV2/8	UL, cUL
Earthing Conductor ( For class I model only and except for Open Frame construction)	Various	Various	Yellow and Green in Color, provided between inlet and PWB secondary side. Rated min 300V, 105 degC, VW-1, min 18 AWG	AVLV2/8	UL, cUL
Fuse (F1) and (F2)	Walter Electronic Co Ltd.	ICP	Rated 3.15A, 250Vac, provided with tubing (YDPU2/8), marked with VW-1, min 300V, 105 degC.	JDYX/7 (E56092)	UL, cUL
Fuse (F1) and (F2) - Alternate	Zhong Shan Lanbao Electrical Co Ltd	RTI-10	Rated 3.15A, 250Vac, provided with tubing (YDPU2/8), marked with VW-1, min 300V, 105 degC.	JDYX/7 (E213695)	UL, cUL
Fuse (F1) and (F2) - Alternate	Various	Various	Rated 3.15A, 250Vac, provided with tubing (YDPU2/8), marked with VW-1, min 300V, 105 degC.	JDYX/7	UL, cUL
Varistor (MOV)	Thinking Electronic	TVR10471,	Rated 300Vac.	VZCA2/8	UL, cUL

Issue Date: 2013-11-07 Page 10 of 28 Report Reference # E341350-A29-UL

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
	Industrial Co Ltd	TVR07471, TVR14471		(E314979)	
Varistor (MOV) - Alternate (Optional)	Joyin Co Ltd	7N471K, 10N471K, 14N471K	Rated 300Vac.	VZCA2/8 (E325508)	UL, cUL
Varistor (MOV) - Alternate (Optional)	Centra Science Corp	CNR07D471K, CNR10D471K, CNR14D471K	Rated 300Vac.	VZCA2/8 (E316325)	UL, cUL
Varistor (MOv) - Alternate (Optional)	Success Electronics Co Ltd	SVR07D471K, SVR10D471K, SVR14D471K	Rated 300Vac.	VZCA2/8 (E330256)	UL, cUL
Varistor (MOv) - Alternate (Optional)	Brightking (Shenzhen) Co Ltd	471KD07, 471KD10, 471KD14	Rated 300Vac.	VZCA2/8 (E327997)	UL, cUL
Varistor (MOV) - Alternate (Optional)	Walsin Technology Corp.	VZ07D471K, VZ10D471K, VZ14D471K	Rated 300Vac.	VZCA2/8 (E309297)	UL, cUL
Varistor (MOV) - Alternate (Optional)	Lien Shun Electronics Co Ltd	07D471K, 10D471K, 14D471K	Rated 300Vac.	VZCA2/8 (E315524)	UL, cUL
Varistor (MOV) - Alternate (Optional)	Hongzhi Enterprises Ltd	HEL07D471K, HEL10D471K, HEL14D471K	Rated 300Vac.	VZCA2/8 (E324904)	UL, cUL
Varistor (MOV) - Alternate (Optional)	Guangxi New Future Information Industry Co Ltd	07D471K, 10D471K, 14D471K	Rated 300Vac.	VZCA2/8 (E323753)	UL, cUL
Bleeder Resistors (R1A, R1B)			Min. 0.499M ohm, Min. 1/4W	-	-
X-Capacitor (CX1) (Optional)	Cheng Tung Industrial Co., Ltd.	CTX	Rated 0.47uF max. Min 250Vac, 100degC, marked X1 or X2 (meets IEC 60384-14)	FOWX2/8 (E193049)	UL, cUL
X-Capacitor (CX1) - Alternate	Winday Electronic Industrial Co Ltd	MPX	Rated 0.47uF max. Min 250Vac, 100degC, marked X1 or X2 (meets IEC 60384-14)	FOWX2/8 (E302125)	UL, cUL

Issue Date: 2013-11-07 Page 11 of 28 Report Reference # E341350-A29-UL

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
(Optional) X-Capacitor (CX1) - Alternate (Optional)	ULTRA TECH XIPHI ENTERPRISE CO LTD	HQX	Rated 0.47uF max. Min 250Vac, 100degC, marked X1 or X2 (meets IEC 60384-14)	FOWX2/8 (E183780)	UL, cUL
X-Capacitor (CX1) - Alternate (Optional)	Okaya Electric Industries Co. LTD	RE series	Rated 0.47uF max. Min 250Vac, 100degC, marked X1 or X2 (meets IEC 60384-14)	FOWX2/8 (E47474)	UL, cUL
X-Capacitor (CX1) - Alternate (Optional)	VISHAY Capacitors Belgium N V	F1772	Rated 0.47uF max. Min 250Vac, 100degC, marked X1 or X2 (meets IEC 60384-14)	FOWX2 (E100682)	UL, cUL
X-Capacitor (CX1) - Alternate (Optional)	Tenta Electric Industrial Co Ltd	MEX	Rated 0.47uF max. Min 250Vac, 100degC, marked X1 or X2 (meets IEC 60384-14)	FOKY2/8 (E186475)	UL, cUL
X-Capacitor (CX1) - Alternate (Optional)	DAIN ELECTRONICS CO LTD	MEX, MPX, NPX	Rated 0.47uF max. Min 250Vac, 100degC, marked X1 or X2 (meets IEC 60384-14)	FOWX2/8 (E147776)	UL, cUL
X-Capacitor (CX1) - Alternate (Optional)	Sinhua Electronics (Huzhou) Co. Ltd.	MPX	Rated 0.47uF max. Min 250Vac, 100degC, marked X1 or X2 (meets IEC 60384-14)	FOWX2/8 (E237560)	UL, cUL
X-Capacitor (CX1) - Alternate (Optional)	FOSHAN SHUNDE CHUANG GE ELECTRONIC INDUSTRIAL CO LTD	MKP-X2	Rated 0.47uF max. Min 250Vac, 100degC, marked X1 or X2 (meets IEC 60384-14)	FOWX2/8 (E308832)	UL, cUL
X-Capacitor (CX1) - Alternate (Optional)	SHUN DE DAHUA ELECTRIC CO LTD	HD	Rated 0.47uF max. Min 250Vac, 100degC, marked X1 or X2 (meets IEC 60384-14)	FOWX2/8 (E227157)	UL, cUL
X-Capacitor (CX1) - Alternate (Optional)	Jiangsu Xinghua Huayu Electronics Co., Ltd.	MPX	Rated 0.47uF max. Min 250Vac, 100degC, marked X1 or X2 (meets IEC 60384-14)	FOKY2/8 (E311166)	UL, cUL
X-Capacitor (CX1) - Alternate (Optional)	HongZhi Enterprises Ltd.	X2	Rated 0.47uF max. Min 250Vac, 100degC, marked X1 or X2 (meets IEC 60384-14)	FOWX2/8 (E192572)	UL, cUL

Issue Date: 2013-11-07 Page 12 of 28 Report Reference # E341350-A29-UL

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
X-Capacitor (CX1) - Alternate (Optional)	SHANTOU HIGH- NEW TECHNOLOGY DEVELOPMNT ZONE SONGTIAN ENTERPRISE CO LTD	MPX	Rated 0.47uF max. Min 250Vac, 100degC, marked X1 or X2 (meets IEC 60384-14)	FOWX2/8 (E208107)	UL, cUL
X-Capacitor (CX1) - Alternate (Optional)	Various	Various	Rated 0.47uF max. Min 250Vac, 100degC, marked X1 or X2 (meets IEC 60384-14)	FOWX2/8	UL, cUL
Y-Capacitors (CY1, CY2) –(Optional)	WELSON INDUSTRIAL CO LTD	WD	Rated 2200pF max. Min 250V, 105degC, marked with Y1 (meets IEC 60384-14)	FOWX2/8 (E104572)	UL
Y-Capacitors (CY1, CY2) – Alternate (Optional)	SUCCESS ELECTRONICS CO LTD	SE, SB	Rated 2200pF max. Min 250V, 105degC, marked with Y1 (meets IEC 60384-14)	FOWX2 (E114280)	
Y-Capacitors (CY1, CY2) - Alternate (Optional)	TDK CORP	CD	Rated 2200pF max. Min 250V, 105degC, marked with Y1 (meets IEC 60384-14)	FOWX2 (E37861)	UL
Y-Capacitors (CY1, CY2) - Alternate (Optional)	WALSIN TECHNOLOGY CORP	AH	Rated 2200pF max. Min 250V, 105degC, marked with Y1 (meets IEC 60384-14)	FOWX2/8 (E146544)	UL
Y-Capacitors (CY1, CY2) - Alternate (Optional)	JYA-NAY CO LTD	JN	Rated 2200pF max. Min 250V, 105degC, marked with Y1 (meets IEC 60384-14)	FOWX2/8 (E201384)	UL
Y-Capacitors (CY1, CY2) - Alternate (Optional)	KUNSHAN WANSHENG ELECTRONICS CO LTD	СТ7	Rated 2200pF max. Min 250V, 105degC, marked with Y1 (meets IEC 60384-14)	FOWX2/8 (E249006)	UL
Y-Capacitors (CY1, CY2) - Alternate (Optional)	MURATA MFG CO LTD	KX	Rated 2200pF max. Min 250V, 105degC, marked with Y1 (meets IEC 60384-14)	FOWX2 (E37921)	UL
Y-Capacitors (CY1, CY2) - Alternate	SHANTOU HIGH- NEW TECHNOLOGY	CD	Rated 2200pF max. Min 250V, 105degC, marked with Y1 (meets IEC 60384-14)	FOWX2/8 (E208107)	UL

Issue Date: 2013-11-07 Page 13 of 28 Report Reference # E341350-A29-UL

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
(Optional)	DEVELOPMNT ZONE SONGTIAN ENTERPRISE CO LTD				
Y-Capacitors (CY1, CY2) - Alternate (Optional)	ZHI WEI ELECTRONICS CO LTD	DJ	Rated 2200pF max. Min 250V, 105degC, marked with Y1 (meets IEC 60384-14)	FOWX2 (E330260)	UL
Y-Capacitors (CY1, CY2) - Alternate (Optional)	JERRO ELECTRONICS CORP	JX	Rated 2200pF max. Min 250V, 105degC, marked with Y1 (meets IEC 60384-14)	FOWX2 (E333001)	UL
Y-Capacitors (CY1, CY2) - Alternate (Optional)	HONGZHI ENTERPRISES LTD	Υ	Rated 2200pF max. Min 250V, 105degC, marked with Y1 (meets IEC 60384-14)	FOWX2 (E192572)	UL
Y-Capacitors (CY1, CY2) - Alternate (Optional)	Various	Various	Rated 2200pF max. Min 250V, 105degC, marked with Y1 (meets IEC 60384-14)	FOWX2	UL
Line Filter (LF1)	Various	Various	Open-type construction with ferrite core.  Copper wire (OBMW2), rated min. 130degC.  See enclosure 4-01 for details	-	-
Diode (D1, D2, D3, D4)			Rated min 2A, min 1000V	-	-
Transistor (Q1)			Rated min 7A, min600V	-	-
Electrolytic Capacitor (C2)			Rated max. 68uF, Min 400V	-	-
Transformer (T1)	Top Nation Electronic Ltd	GT-3005001 for 5-7.5V GT-3009001 for 7.6V to 10.5V GT-3012001 for 10.6V to 14.5V GT-3015001 for 14.6V to 19.5V	(OBJY2) Class B insulation system, (E212542), designated M7A90.  Open type construction with ferrite core.  See enclosure 4-05 to 4-10 for details	-	-

Issue Date: 2013-11-07 Page 14 of 28 Report Reference # E341350-A29-UL

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
		GT-3024001 for 19.6V to 24V GT-3048001 for 24.1V to 48V			
- Primary winding used in T1	Various	Various	Polyurethane with or without overcoat Polyamide, 130 degC min. MW -75 Type.	OBMW2	UL
- Secondary winding used in T1	Furukawa Electric Co Ltd.	TEX-E	Rated 130 degC Triple insulated wire	OBJT2 (E206440)	UL
- Bobbin used in T1	HITACHI CHEMICAL CO LTD	CP-J-8800	Phenolic, rated V-0, 150 degC, min 0.39 mm thick	QMFZ2 (E42956)	UL
- Insulation Tape used in T1	3M COMPANY  ELECTRICAL  MARKETS DIV  (EMD)	1350F	Rated 130 degC	OANZ2 (E17385)	UL
- Insulation Tape wrapping over transformer	3M COMPANY  ELECTRICAL  MARKETS DIV  (EMD)	1350F	Rated 130 degC. Min. two layers, minimum 22 mm width.	OANZ2 (E17385)	UL
- Varnish used in T1	KYOCERA CHEMICAL CORP	TVB-2180T++	Rated 130 degC	OBOR2 (E83702)	UL
- Varnish used in T1 - Alternate	HITACHI CHEMICAL CO LTD	WP-2952F-2G	Rated 130 degC	OBOR2 (E72979)	UL
- Tube	NIKKAN INDUSTRIES CO LTD	S-693-600	Rated 600V, 200 Degree C,	UZFT2 (E72406)	UL
Transformer (T1) - Alternate	Shan Dong Boam Electric Co Ltd	GT-3005001 for 5-7.5V GT-3009001 for 7.6V to 10.5V GT-3012001 for 10.6V to 14.5V	(OBJY2) Class B insulation system, (E252329), designated BOAM-01. Open type construction with ferrite core.  See enclosed illustration ID 4-12 for construction.	-	-

Issue Date: 2013-11-07 Page 15 of 28 Report Reference # E341350-A29-UL

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
		GT-3015001 for 14.6V to 19.5V GT-3024001 for 19.6V to 24V GT-3048001 for 24.1V to 48V			
- Primary winding used in T1	Various	Various	Polyurethane with or without overcoat Polyamide, 130 degC min. MW -75 or MW28 Type.	OBMW2	UL
- Secondary winding used in T1	Furukawa Electric Co Ltd.	TEX-E	Rated 130 degC Triple insulated wire	OBJT2 (E206440)	UL
- Bobbin used in T1	HITACHI CHEMICAL CO LTD	CP-J-8800	Phenolic, rated V-0, 150 degC, min 0.39 mm thick	QMFZ2 ( E42956)	UL
- Bobbin used in T1 – Alternate	Chang Chun Plastics Co., Ltd.	PBT-4130	Phenolic, rated V-0, 150 degC, min 0.39 mm thick	QMFZ2 (E59481)	UL
- Bobbin used in T1 – Alternate	CHANG CHUN PLASTICS CO LTD	T375J, T375HF	Phenolic, rated V-0, 150 degC, min 0.39 mm thick	QMFZ2 (E59481)	UL
- Bobbin used in T1 – Alternate	SUMITOMO BAKELITE CO LTD	PM-9820	Phenolic, rated V-0, 150 degC, min 0.39 mm thick	QMFZ2 (E41429)	UL
- Insulation Tape used in T1	3M COMPANY  ELECTRICAL  MARKETS DIV  (EMD)	1350F(#), (#) is replaced with suffix B-1, B-2, W- 1, W-2, Y-1 or Y-2	Rated 130 degC	OANZ2 ( E17385)	UL
- Insulation Tape used in T1 – Alternate	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	PZ, CT, WF	Rated 130 degC	OANZ2 (E165111)	UL
- Insulation Tape wrapping over transformer	3M COMPANY  ELECTRICAL  MARKETS DIV  (EMD)	1350F(#), (#) is replaced with suffix B-1, B-2, W- 1, W-2, Y-1 or Y-2	Rated 130 degC. Min. two layers, minimum 22 mm width.	OANZ2 (E17385)	UL93947
- Varnish used in T1	Noroo Paint &	DVB-2085(1);	Rated 130 degC	OBOR2 (E93947)	UL

Issue Date: 2013-11-07 Page 16 of 28 Report Reference # E341350-A29-UL

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
	Coatings Co Ltd	DVB-2085(C)			
- Tube in T1	Great Holding Industrial Co Ltd	TFL	Rated 150V, 200 Degree C, VW-1	YDTU2 (E156256)	UL
Transformer (T1) - Alternate	GLOBTEK INC	GT-3005001 for 5-7.5V GT-3009001 for 7.6V to 10.5V GT-3012001 for 10.6V to 14.5V GT-3015001 for 14.6V to 19.5V GT-3024001 for 19.6V to 24V GT-3048001 for 24.1V to 48V	(OBJY2) Class B insulation system, (E243347), designated GTX-130-TM. Open type construction with ferrite core. See enclosure 4-05 to 4-10 for details	-	-
- Primary winding used in T1	Various	Various	Polyurethane with or without overcoat Polyamide, min 130 degC. Type MW-75 or MW-28.	OBMW2	UL
- Secondary winding used in T1	GREAT LEOFLON INDUSTRIAL CO LTD	TRW(B)	Rated 130 degC Triple insulated wire	OBJT2 (E315275)	UL
- Secondary winding used in T1	COSMOLINK CO LTD	TIW-M	Rated 130 degC Triple insulated wire	OBJT2 (E213764)	UL
- Secondary winding used in T1	TOTOKU ELECTRIC CO LTD	TIW-2	Rated 130 degC Triple insulated wire	OBJT2 (E166483)	UL
- Bobbin used in T1	CHANG CHUN PLASTICS CO LTD	T375J, T375HF	Phenolic, rated V-0, 150 degC, min 0.39 mm thick	QMFZ2 (E59481)	UL
- Bobbin used in T1 - Alternate	SUMITOMO BAKELITE CO LTD	PM-9820	Phenolic, rated V-0, 150 degC, min 0.39 mm thick	QMFZ2 (E41429)	UL
- Insulation Tape used in T1	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	PZ, CT, WF	Rated 130 degC	OANZ2 (E165111)	UL
- Insulation Tape used in	JINGJIANG JINGYI	JY25-A	Rated 130 degC	OANZ2	UL

Issue Date: 2013-11-07 Page 17 of 28 Report Reference # E341350-A29-UL

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
T1 - Alternate	ADHESIVE PRODUCT CO LTD			(E246950)	
<ul><li>Insulation Tape used in T1 - Alternate</li></ul>	SYMBIO INC	35660Y	Rated 130 degC	OANZ2 (E50292)	UL
- Insulation Tape used in T1 - Alternate	CHANG SHU LIANG YI TAPE INDUSTRY CO LTD	LY-XX	Rated 130 degC	OANZ2 (E246820)	UL
- Varnish used in T1	SUZHOU TAIHU ELECTRIC ADVANCED MATERIAL CO LTD	T-4260(a)	Rated 130 degC	OBOR2 (E228349)	UL
- Tube	GREAT HOLDING INDUSTRIAL CO LTD	TFL, TFT	VW-1. Rated 150V, 200 degC for TFL; Rated 300V, 200 degC for TFT	YDPU2 (E156256)	UL
- Tube – Alternate	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	WF	VW-1. Rated 600V, 200 degC	YDPU2 (E203950)	UL
- Tube – Alternate	CHANGYUAN ELECTRONICS (SHENZHEN) CO LTD	CB-TT-L, CB-TT- S, CB-TT-T	VW-1. Rated 150V, 200 degC for CB-TT-L; Rated 300V, 200 degC for CB-TT-S; Rated 600V, 200 degC for CB-TT-L	YDPU2 (E180908)	UL
Transformer (T1) - Alternate	WUXI ZHONGTONG ELECTRONICS CO LTD	GT-3005001 for 5-7.5V GT-3009001 for 7.6V to 10.5V GT-3012001 for 10.6V to 14.5V GT-3015001 for 14.6V to 19.5V GT-3024001 for 19.6V to 24V GT-3048001 for 24.1V to 48V	(OBJY2) Class B insulation system, (E315275), designated ZT-130. Open type construction with ferrite core. See enclosure 4-05 to 4-10 for details	-	-

Issue Date: 2013-11-07 Page 18 of 28 Report Reference # E341350-A29-UL

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
- Primary winding used in T1	Various	Various	Polyurethane with or without overcoat Polyamide, min 130 degC. Type MW-75 or MW-28.	OBMW2	UL
- Secondary winding used in T1	GREAT LEOFLON INDUSTRIAL CO LTD	TRW(B)	Rated 130 degC Triple insulated wire	OBJT2 (E315275)	UL
- Secondary winding used in T1	COSMOLINK CO LTD	TIW-M	Rated 130 degC Triple insulated wire	OBJT2 (E213764)	UL
- Secondary winding used in T1	TOTOKU ELECTRIC CO LTD	TIW-2	Rated 130 degC Triple insulated wire	OBJT2 (E166483)	UL
- Bobbin used in T1	CHANG CHUN PLASTICS CO LTD	T375J, T375HF	Phenolic, rated V-0, 150 degC, min 0.39 mm thick	QMFZ2 (E59481)	UL
- Bobbin used in T1 - Alternate	SUMITOMO BAKELITE CO LTD	PM-9820	Phenolic, rated V-0, 150 degC, min 0.39 mm thick	QMFZ2 (E41429)	UL
- Insulation Tape used in T1	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	PZ, CT, WF	Rated 130 degC	OANZ2 (E165111)	UL
- Insulation Tape used in T1 - Alternate	JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD	JY25-A	Rated 130 degC	OANZ2 (E246950)	UL
- Insulation Tape used in T1 - Alternate	SYMBIO INC	35660Y	Rated 130 degC	OANZ2 (E50292)	UL
- Insulation Tape used in T1 - Alternate	CHANG SHU LIANG YI TAPE INDUSTRY CO LTD	LY-XX	Rated 130 degC	OANZ2 (E246820)	UL
- Varnish used in T1	SUZHOU TAIHU ELECTRIC ADVANCED MATERIAL CO LTD	T-4260(a)	Rated 130 degC	OBOR2 (E228349)	UL
- Tube	GREAT HOLDING INDUSTRIAL CO LTD	TFL, TFT	VW-1. Rated 150V, 200 degC for TFL; Rated 300V, 200 degC for TFT	YDPU2 (E156256)	UL

Issue Date: 2013-11-07 Page 19 of 28 Report Reference # E341350-A29-UL

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
- Tube – Alternate	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	WF	VW-1. Rated 600V, 200 degC	YDPU2 (E203950)	UL
- Tube – Alternate	CHANGYUAN ELECTRONICS (SHENZHEN) CO LTD	CB-TT-L, CB-TT- S, CB-TT-T	VW-1. Rated 150V, 200 degC for CB-TT-L; Rated 300V, 200 degC for CB-TT-S; Rated 600V, 200 degC for CB-TT-L	YDPU2 (E180908)	UL
Opto-couplers (U2)	Everlight Electronics Co Ltd	EL817	Rated min. 110degC Provide min 5000Vac isolation test voltage rating.	FPQU2/8 (E214129)	UL
Opto-couplers (U2) - Alternate	Cosmo Electroncis Corp	K1010, KP1010	Rated min. 115degC Provide min 5000Vac isolation test voltage rating.	(E169586)	UL
Opto-couplers (U2) - Alternate	Lite-On Technology Corp.	LTV-357T , LTV357, LTV-817	Rated min. 115degC Provide min 3750Vac isolation test voltage rating.	FPQU2/8 (E113898)	UL
Opto-couplers (U2) - Alternate	Fairchild	H11A817B,F0D81 7B	Rated min. 110degC Provide min 5000Vac isolation test voltage rating.	FPQU2/8 (E90700)	UL
Opto-couplers (U2) - Alternate	BRIGHT LED ELECTRONICS CORP	BPC-817, BPC-817M, BPC-817S	Rated min. 100degC Provide min 5000Vac isolation test voltage rating.	FPQU2/8 (E236324)	UL
Heat Sink - HS1			Aluminium. Shaped as shown. Secured to PWB by soldering. See enclosure 4-02 for details	-	-
Heat Sink - HS1 – Alternate			Nickel-plated iron or iron. Shaped as shown. Secured to PWB by soldering. See enclosure 4-02 for details	-	-
Heat Sink - HS2 (For Desktop Construction only)			Aluminium. Shaped as shown. Secured to PWB by soldering. See enclosure 4-03 for details	-	-
Heat Sink - HS2 (For Desktop Construction			Nickel-plated iron or iron. Shaped as shown.	-	-

Issue Date: 2013-11-07 Page 20 of 28 Report Reference # E341350-A29-UL

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
only) – Alternate			Secured to PWB by soldering. See enclosure 4-03 for details		
Heat Sink – HS2 (For Open Frame and Encapsulation construction and model GTM91128LI1CEL, GTM91128LI2CEL and GTM91128LI3CEL only)			Aluminium. Shaped as shown. Secured to PWB by soldering. See enclosure 4-04 for details	-	-
Heat Sink – HS2 (For Open Frame and Encapsulation construction and model GTM91128LI1CEL, GTM91128LI2CEL and GTM91128LI3CEL only) – Alternate			Nickel-plated iron or iron. Shaped as shown. Secured to PWB by soldering. See enclosure 4-04 for details	-	-
Insulation tape provided on HS2 (For Desktop Construction only)	3M COMPANY  ELECTRICAL  MARKETS DIV  (EMD)	1350T-1	Provided between primary component C2, C7, CX1, U2 and HS2. Overall measured 50mm by 40mm. Min 2 layers or 2 wraps.	OANZ2 (E17385)	UL
Insulation tape provided on HS2 (For Desktop Construction only) - Alternate	3M COMPANY  ELECTRICAL  MARKETS DIV  (EMD)	1350F, 1350-1	Provided between primary component C2, C7, CX1, U2 and HS2. Overall measured 50mm by 40mm. Min 2 layers or 2 wraps.	OANZ2 (E17385)	UL
Insulation tape provided on HS2 (For Desktop Construction only) - Alternate	Symbio Inc	35660Y	Provided between primary component C2, C7, CX1, U2 and HS2. Overall measured 50mm by 40mm. Min 2 layers or 2 wraps.	OANZ2 (E50292)	UL
Insulation tape provided on HS2 (For Desktop	Shang Shu Liang Yi Tape Industry Co Ltd	LY-XX	Provided between primary component C2, C7, CX1, U2 and HS2. Overall measured 50mm by	OANZ2 (E246820)	UL

Issue Date: 2013-11-07 Page 21 of 28 Report Reference # E341350-A29-UL

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
Construction only) - Alternate			40mm. Min 2 layers or 2 wraps.		
Insulation tape provided on HS2 (For Desktop Construction only) - Alternate	DONGGUAN SHIN YAHUA ELECTRONIC MATERIAL CO LTD	PZ, CT, WF	Provided between primary component C2, C7, CX1, U2 and HS2. Overall measured 50mm by 40mm. Min 2 layers or 2 wraps.	OANZ2 (E324093)	UL
Insulation tape provided on HS2 (For Desktop Construction only) - Alternate	JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD	JY25-A	Provided between primary component C2, C7, CX1, U2 and HS2. Overall measured 50mm by 40mm. Min 2 layers or 2 wraps.	OANZ2 (E246950)	UL
Insulation tape provided on HS2 (For Desktop Construction only) - Alternate	BONDTEC PACIFIC CO LTD	370\$	Provided between primary component C2, C7, CX1, U2 and HS2. Overall measured 50mm by 40mm. Min 2 layers or 2 wraps.	OANZ2 (E175868)	UL
Insulation tape provided on HS2 (For Open Frame and Encapsulation and models GTM91128LI1CEL, GTM91128LI2CEL and GTM91128LI3CEL only)	3M COMPANY ELECTRICAL MARKETS DIV (EMD)	1350T-1	Provided between primary component C2, C7, CX1, U2 and HS2. Composed of two parts, measured 25mm by 20mm and 15mm by 10mm. Min 2 layers or 2 wraps.	OANZ2 (E17385)	UL
Insulation tape provided on HS2 (For Open Frame and Encapsulation and models GTM91128LI1CEL, GTM91128LI2CEL and GTM91128LI3CEL only) - Alternate	3M COMPANY ELECTRICAL MARKETS DIV (EMD)	1350F, 1350-1	Provided between primary component C2, C7, CX1, U2 and HS2. Composed of two parts, measured 25mm by 20mm and 15mm by 10mm. Min 2 layers or 2 wraps.	OANZ2 (E17385)	UL
Insulation tape provided on HS2 (For Open	Symbio Inc	35660Y	Provided between primary component C2, C7, CX1, U2 and HS2. Composed of two parts,	OANZ2 (E50292)	UL

Issue Date: 2013-11-07 Page 22 of 28 Report Reference # E341350-A29-UL

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
Frame and Encapsulation and models GTM91128LI1CEL, GTM91128LI2CEL and GTM91128LI3CEL only) - Alternate			measured 25mm by 20mm and 15mm by 10mm. Min 2 layers or 2 wraps.		
Insulation tape provided on HS2 (For Open Frame and Encapsulation and models GTM91128LI1CEL, GTM91128LI3CEL and GTM91128LI3CEL only) - Alternate	Shang Shu Liang Yi Tape Industry Co Ltd	LY-XX	Provided between primary component C2, C7, CX1, U2 and HS2. Composed of two parts, measured 25mm by 20mm and 15mm by 10mm. Min 2 layers or 2 wraps.	OANZ2 (E246820)	UL
Insulation tape provided on HS2 (For Open Frame and Encapsulation and models GTM91128LI1CEL, GTM91128LI2CEL and GTM91128LI3CEL only) - Alternate	DONGGUAN SHIN YAHUA ELECTRONIC MATERIAL CO LTD	PZ, CT, WF	Provided between primary component C2, C7, CX1, U2 and HS2. Composed of two parts, measured 25mm by 20mm and 15mm by 10mm. Min 2 layers or 2 wraps.	OANZ2 (E324093)	UL
Insulation tape provided on HS2 (For Open Frame and Encapsulation and models GTM91128LI1CEL, GTM91128LI2CEL and GTM91128LI3CEL only)	JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD	JY25-A	Provided between primary component C2, C7, CX1, U2 and HS2. Composed of two parts, measured 25mm by 20mm and 15mm by 10mm. Min 2 layers or 2 wraps.	OANZ2 (E246950)	UL

Issue Date: 2013-11-07 Page 23 of 28 Report Reference # E341350-A29-UL

Object/part or Description - Alternate	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
Insulation tape provided on HS2 (For Open Frame and Encapsulation and models GTM91128LI1CEL, GTM91128LI2CEL and GTM91128LI3CEL only) - Alternate	BONDTEC PACIFIC CO LTD	370S	Provided between primary component C2, C7, CX1, U2 and HS2. Composed of two parts, measured 25mm by 20mm and 15mm by 10mm. Min 2 layers or 2 wraps.	OANZ2 (E175868)	UL
Tube used on HS2 (Alternate) instead of tape (For Open Frame and Encapsulation and models GTM91128LI1CEL, GTM91128LI2CEL and GTM91128LI3CEL only) - Alternate	Various	Various	Provided between primary component C2, C7, CX1, U2 and HS2. Composed of two parts, measured 25mm by 20mm and 15mm by 10mm. Min.105°C Min. 300V	YDPU2	UL
DC output cord (For Desktop construction only)	Various	Various	Rated min 60V, 24AWG min, min. 80degC marked with VW-1	AVLV2/8 or ZJCZ	UL, cUL
DC output cord (For models GTM91128LI1CEL, GTM91128LI2CEL and GTM91128LI3CEL only)	Various	Various	Rated min 60V, 24AWG min, min. 80degC marked with VW-1	ZJCZ2/8	UL, cUL
Input connector (For Open Frame Construction only)	Various	Various	Constructed with thermoplastic (QMFZ2), rated min V-2.		
Label (Provided if not using engraving or silkscreen)	Dongguan Xianquan Printing Co Ltd	Type XQ03	Rated min 80 deg C Suitable for use on the plastic enclosure	PGDQ2 (MH27594)	UL

Issue Date: 2013-11-07 Page 24 of 28 Report Reference # E341350-A29-UL

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
Label (Provided if not using engraving or Silkscreen) - Alternate	Fan JA Paper Printing Co Ltd	Type FJ-03-1, FJ- 03-3	Rated min 80 deg C Suitable for use on the plastic enclosure	PGDQ2 (MH19546)	UL
Label (Provided if not using engraving or Silkscreen) - Alternate	Fan JA Paper Printing Co Ltd	Type FJ07	Rated min 80 deg C Suitable for use on the plastic enclosure	PGDQ2 (MH19546)	UL
Label (Provided if not using engraving or Silkscreen) - Alternate	Dongguan Xianquan Printing Co Ltd	Type XQ004-B	Rated min 80 deg C Suitable for use on the plastic enclosure	PGJI2 (MH47303)	UL
Label (Provided if not using engraving) - Alternate	E-Lin Adhesive Label Co Ltd	Type EL-15	Rated min 80 deg C Suitable for use on the plastic enclosure	PGDQ2 (MH45549)	UL
Label (Provided if not using engraving or Silkscreen) - Alternate	YUEN CHANG SPECIAL PRINTING (SHENZHEN) CO LTD	JL-08, JL-02	Rated min 80 deg C Suitable for use on the plastic enclosure	PGJI2 (MH29752)	UL
Label (Provided if not using engraving) - Alternate	SHENZHEN CORWIN PRINTING CO LTD	CW-01	Rated min 80 deg C Suitable for use on the plastic enclosure	PGDQ2 (MH47077)	UL
Label (Provided if not using engraving) - Alternate	SUZHOU HAIRONG PACKING PRODUCTION CO LTD	HR-01, HR-04	Rated min 60 deg C Suitable for use on the plastic enclosure	PGDQ2 (MH48692)	UL
Label (Provided if not using engraving) - Alternate	DONGGUAN SHANGMAO PRINTING CO LTD	C-019, C-004	Rated min 60 deg C Suitable for use on the plastic enclosure	PGDQ2 (MH17427)	UL
PWB	Various	Various	Min V-1, 130 degC.	ZPMV2/8	UL
Thermal Pad (For Desktop construction only)	Various	Various	Provided between Transformer and Heatsink. Rated V-0, 150 degC. Overall measured 50mm by 38 mm, 1.5 mm thick	QMFZ2	UL
Insulator (Optional) (For Desktop construction only)	SKC Co LTD	SH71S	Provided between PWB and Enclosure. Rated VTM-2, 105 degC. Overall measured 91.07mm by 39.72 mm, 0.43 mm thick	QMFZ2 (E74359)	UL

Issue Date: 2013-11-07 Page 25 of 28 Report Reference # E341350-A29-UL

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
Insulator (Optional) (For Desktop construction only) - Alternate	TORAY INDUSTRIES INC	Lumirror H10	Provided between PWB and Enclosure. Rated VTM-2, 105 degC. Overall measured 91.07mm by 39.72 mm, 0.43 mm thick	QMFZ2 (E86511)	UL
Insulator (Optional) (For Desktop construction only) - Alternate	FORMEX, DIV OF ILLINOIS TOOL WORKS INC, FORMERLY	FORMEX GK	Provided between PWB and Enclosure. Rated VTM-2, 105 degC. Overall measured 91.07mm by 39.72 mm, 0.43 mm thick	QMFZ2 (E121855)	UL
Insulator (Optional) (For Desktop construction only) - Alternate	SABIC INNOVATIVE PLASTICS JAPAN L L C	FR60 (GG1), FR63 (GG1), FR65 (GG1), FR7 (GG1), FR700	Provided between PWB and Enclosure. Rated VTM-2, 105 degC. Overall measured 91.07mm by 39.72 mm, 0.43 mm thick	QMFZ2 (E207780)	UL
Insulator (Optional) (For Desktop construction only) - Alternate	CHENGDU KANGLONGXIN PLASTICS CO LTD	KLX PP BK-10 series	Provided between PWB and Enclosure. Rated VTM-2, 105 degC. Overall measured 91.07mm by 39.72 mm, 0.43 mm thick	QMFZ2 (E315185)	UL
Insulator (Optional) (For Desktop construction only) - Alternate	MIANYANG LONGHUA FILM CO LTD	PP-(i)(j)	Provided between PWB and Enclosure. Rated VTM-2, 105 degC. Overall measured 91.07mm by 39.72 mm, 0.43 mm thick	QMFZ2 (E254551)	UL
Encapsulation (For Encapsulation construction only)	Dong Guan Shi Pai Hua Chuang Material FTY	808A/B	Rated V-0, 90 degC.	QMFZ2	UL

Issue Date: 2013-11-07 Page 26 of 28 Report Reference # E341350-A29-UL

# **Enclosures**

<u>Type</u>	Supplement Id	<u>Description</u>
Collateral		
Particular		
Photographs	3-01	External View of Model GTM91120-WWVV-X.X-T2 series
Photographs	3-02	Bottom View of Model GTM91120-WWVV-X.X-T2 series
Photographs	3-03	Internal View of Model GTM91120-WWVV-X.X-T2 series
Photographs	3-04	PWB Component Side 1 of Model GTM91120-WWVV-X.X-T2 series
Photographs	3-05	PWB Component Side 2 of Model GTM91120-WWVV-X.X-T2 series
Photographs	3-06	PWB Layout Side of Model GTM91120-WWVV-X.X-T2 series
Photographs	3-07	External View of Model GTM91120-WWVV-X.X-T3A series
Photographs	3-08	Internal View of Model GTM91120-WWVV-X.X-T3A series
Photographs	3-09	PWB Component Side of Model GTM91120-WWVV-X.X-FW series
Photographs	3-10	PWB Layout side of Model GTM91120-WWVV-X.X-FW series
Photographs	3-11	Overalll review of Models GTM91128LI1CEL, GTM91128LI2CEL and GTM91128LI3CEL
Diagrams	4-01	Specification of Choke LF1
Diagrams	4-02	Dimension Drawing of Heatsink 1
Diagrams	4-03	Dimension Drawing of Heatsink 2 (for Desktop Construction only)
Diagrams	4-04	Dimension Drawing of Heatsink 2 (for Open frame and Encapsulation for struction and models GTM91128LI1CEL, GTM91128LI2CEL and GTM91128LI3CEL only)
Diagrams	4-05	Specification for Transformer T1 (GT-3005001)
Diagrams	4-06	Specification for Transformer T1 (GT-3009001)
Diagrams	4-07	Specification for Transformer T1 (GT-3012001)
Diagrams	4-08	Specification for Transformer T1 (GT-3015001)
Diagrams	4-09	Specification for Transformer T1 (GT-3024001)
Diagrams	4-10	Specification for Transformer T1 (GT-3048001)
Schematics + PWB	5-01	PWB Layout of model GTM91120-WWVV-X.X-AB series (Component Side)
Schematics + PWB	5-02	PWB Layout of model GTM91120-WWVV-X.X-AB series (Trace Side)
Manuals		
Miscellaneous	7-01	Output List GTM91120-WWVV-X.X-AB series
Miscellaneous	7-02	Label Artwork for output <=36V T2 SERIES

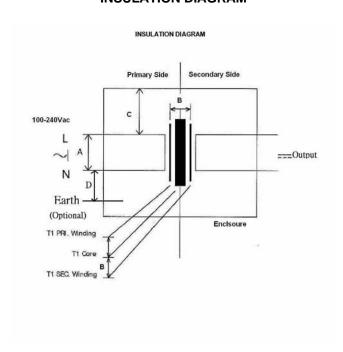
Issue Date: 2013-11-07 Page 27 of 28 Report Reference # E341350-A29-UL

Miscellaneous	7-03	Label Artwork for output <=36V T3(A) SERIES
Miscellaneous	7-04	Label Artwork for output >36V T2 SERIES
Miscellaneous	7-05	Label Artwork for output >36V T3(A) SERIES

Issue Date: 2013-11-07 Page 1 of 112 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict

## **INSULATION DIAGRAM**



Issue Date: 2013-11-07 Page 2 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict

Table	e: to insulation d	liagram							
			Overvoltage Category	Altitude		Additional details on parts considered as applied parts (See clause 4.6 for details)			
2			II	3000		None			
Area	Number and type of Means of Protection (MOOP/MOPP)	CTI (IIIb, unless is known)	Working Voltage Vrms	Working Voltage, Vpk	•	Required Clearance (mm)	Measured Creepage (mm)		Remarks
Α	ВОР	IIIb	240	340	3	1.6	7.7	7.7	Desktop Type: L to N before fuse (Inlet)
Α	ВОР	IIIb	240	340	3	1.6	3.4	3.4	Desktop Type: L to N before fuse (After Inlet)
A	ВОР	IIIb	240	340	3	1.6	4.3	4.3	Desktop Type: L to N before fuse (Nearest Trace)
A	ВОР	IIIb	240	340	3	1.6	6.6	6.6	Open-frame Type: L to N before fuse (Input Connector)
A	ВОР	IIIb	240	340	3	1.6	4.7	4.7	Open-frame Type: L to N before fuse (Nearest Trace)
В	2 MOPP	IIIb	255	548	8.2	7	8.3	8.0	Desktop Type: Pri to Sec (Nearest Trace)
В	2 MOPP	IIIb	255	548	8.2	7	13.1	8.2	Open-frame Type: Pri to Sec (Nearest Trace)
В	2 MOPP	IIIb	255	548	8.2	7	21.3	14.5	Transformer

Issue Date: 2013-11-07 Page 3 of 112 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict

									T1 Pri to Sec
B1	1 MOPP	IIIb	255	548	4.1	3.5	7.5	7.5	CY1
B2	1 MOPP	IIIb	255	548	4.1	3.5	7.3	7.3	CY2
С	2 MOPP	IIIb	240	340	8	5	20.0	6.0	Desktop Type: Pri to Enclosure
D	1 MOPP	IIIb	240	340	4	2.5	4.4	4.4	Desktop Type: Pri to Earth (Inlet)
D	1 MOPP	IIIb	240	340	4	2.5	6.6	6.6	Open-frame Type: Pri to Earth (Input Connector)
D	1 MOPP	IIIb	240	340	4	2.5	8.3	8	Pri to Earth
* : Li	near interpolation	n is used	for calcula	tion of cree	page.	•	•	<u> </u>	

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.

Issue Date: 2013-11-07 Page 4 of 112 Report Reference # E341350-A29-UL

	IEC 60	601	
Clause	Requirement + Test	Result - Remark	Verdict

4	GENERAL REQUIREMENTS		Pass
4.1	Requirements of this standard applied in NORMAL USE and reasonably foreseeable misuse		Pass
4.2	A RISK MANAGEMENT PROCESS complying with ISO 14971 was performed:	See Appended RM Results Table 4.2	Pass
4.3	ESSENTIAL PERFORMANCE functions identified according to MANUFACTURER'S policy for RISK acceptability in RISK MANAGEMENT FILE:	No identified essential performance	N/A
	ESSENTIAL PERFORMANCE functions maintained following particular tests as applicable	No identified essential performance	N/A
1.4	EXPECTED SERVICE LIFE stated in RISK MANAGEMENT FILE:	5 years.	Pass
4.5	Alternative means of addressing particular RISKS considered acceptable based on MANUFACTURER'S justification that RESIDUAL RISKS resulting from application of alternative means equal to or less than RESIDUAL RISKS resulting from requirements of this standard:	Not apply with this approach	N/A
1.6	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 parts in contact with patient	N/A
4.7	ME EQUIPMENT remained SINGLE FAULT SAFE, or the RISK remained acceptable as determined by Clause 4.2		Pass
	Failure of any one component at a time that could result in a HAZARDOUS SITUATION, including those in 13.1, simulated physically or theoretically:		N/A
	RISK associated with failure of component during EXPECTED SERVICE LIFE of ME EQUIPMENT taken into account to evaluate if a component should be subjected to failure simulation	See appended Table 13.1.2	Pass
4.8	All components and wiring whose failure could result in a HAZARDOUS SITUATION used according to their applicable ratings, except as specified, or by RISK MANAGEMENT PROCESS:	All components are used within their specified ratings.	Pass
	Reliability of components used as MEANS OF PROTECTION assessed for conditions of use in ME EQUIPMENT, and they complied with one of the following:		Pass

Issue Date: 2013-11-07 Page 5 of 112 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict

	a) Applicable safety requirements of a relevant IEC or ISO standard	See Critical Component List for details	Pass
	b) Requirements of this standard applied in the absence of a relevant IEC or ISO standard	See Critical Component List for details	Pass
4.9	A COMPONENT WITH HIGH-INTEGRITY CHARACTERISTICS provided because a fault in a particular component can generate an unacceptable RISK	Component power supply, to be determined as part of the end product.	N/A
	COMPONENTS WITH HIGH-INTEGRITY CHARACTERISTICS selected and evaluated consistent with their conditions of use and reasonable foreseeable misuse during EXPECTED SERVICE LIFE of ME EQUIPMENT by reviewing RISK MANAGEMENT FILE		N/A
4.10	Power supply		Pass
4.10.1	ME EQUIPMENT is suitable for connection to a SUPPLY MAINS, specified to be connected to a separate power supply, can be powered by an INTERNAL ELECTRICAL POWER SOURCE, or a combination of the three	100-240Vac. Suitable for connection to a supply mains.	Pass
4.10.2	Maximum rated voltage for ME EQUIPMENT intended to be connected to SUPPLY MAINS is 250 V for HAND-HELD ME EQUIPMENT (V):		N/A
	- 250 V d.c. or single-phase a.c., or 500 V polyphase a.c. for ME EQUIPMENT and ME SYSTEMS with a RATED input ≤ 4 kVA (V):	100-240Vac, Singe phase mains supply	Pass
	- 500 V for all other ME EQUIPMENT and ME SYSTEMS		N/A
4.11	Power input		Pass
	Steady-state measured input of ME EQUIPMENT or ME SYSTEM at RATED voltage and at operating settings indicated in instructions for use did not exceed marked rating by more than 10%:	See Appended Table 4.11	Pass
	- Measurements on ME EQUIPMENT or a ME SYSTEM marked with one or more RATED voltage ranges made at both upper and lower limits of the range:	See Appended Table 4.11	Pass
	Measurements made at a voltage equal to the mean value of the range when each marking of RATED input was related to the mean value of relevant voltage range		N/A
	Power input, expressed in volt-amperes, measured with a volt-ampere meter or calculated as the	Expressed in "A"	Pass

Issue Date: 2013-11-07 Page 6 of 112 Report Reference # E341350-A29-UL

IEC 60601					
Clause	Requirement + Test	Result - Remark	Verdict		
	-				
	product of steady state current (measured as				

Issue Date: 2013-11-07 Page 7 of 112 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict

5	GENERAL REQUIREMENTS FOR TESTING ME EQUIPMENT				
5.1	TYPE TESTS determined in consideration of Clause 4, in particular 4.2		Pass		
	Test not performed when analysis indicated condition being tested was adequately evaluated by other tests or methods:	All test were conducted.	N/A		
	Results of RISK ANALYSIS used to determine combination(s) of simultaneous faults to be tested		N/A		
5.2	TYPE TESTS conducted on one representative sample under investigation; multiple samples used simultaneously when validity of results was not significantly affected:	Multiple samples used	Pass		
5.3	a) Tests conducted within the environmental conditions specified in technical description		Pass		
	Temperature (°C), Relative Humidity (%):	0-40°C, 0-93%RH	-		
	Atmospheric Pressure (kPa)	70-106	-		
	b) ME EQUIPMENT shielded from other influences that might affect the validity of tests		Pass		
	c) Test conditions modified and results adjusted accordingly when ambient temperature could not be maintained:		N/A		
5.4	a) ME EQUIPMENT tested under least favourable working conditions specified in instructions for use and identified during RISK ANALYSIS, except as noted	See Appended RM Results Table 5.4a The least favourable working conditions were determined as highest rated voltage and max normal load.	Pass		
	b) ME EQUIPMENT with adjustable or controlled operating values by anyone other than SERVICE PERSONNEL adjusted to values least favourable for the relevant test per instructions for use	No such part	N/A		
	c) When test results influenced by inlet pressure and flow or chemical composition of a cooling liquid, tests performed within the limits in technical description	No such part.	N/A		
	d) Potable water used for cooling		N/A		
5.5	Supply voltage during tests was the least favourable of the voltages specified in 4.10 or voltages marked on ME EQUIPMENT (V):	Rated voltage: 100-240Vac Tested at 90/100/240/264Vac	Pass		
	ME EQUIPMENT marked with a RATED frequency range tested at the least favourable frequency within the range (Hz):	50-60Hz	Pass		

Issue Date: 2013-11-07 Page 8 of 112 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict

ME EQUIPMENT tested with alternative ACCESSORIES and components specified in ACCOMPANYING DOCUMENTS to result in the least favourable conditions	Pass
Supply as specified in instructions for use  When failure occurred or probability of future failure detected during sequence of tests, per agreement with manufacturer, all tests affecting results conducted on a new sample  Alternatively, upon repair and modification of the sample, only the relevant tests conducted  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  Manually detachable parts removed and treated concurrently with major parts and manually removable ACCESS COVERS were opened and detached  ME EQUIPMENT heated to a temperature between T and T + 4 °C for at least 4 h and placed in a humidity chamber with a relative humidity of 93 % ± 3 % and an ambient within 2 °C of T in the range of + 20 °C to + 32 °C for 48 h  When RISK MANAGEMENT PROCESS indicated ME EQUIPMENT can be exposed to high humidity for extended periods (i.e., out-door use), test time extended proportionally (h)	N/A
detected during sequence of tests, per agreement with manufacturer, all tests affecting results conducted on a new sample  Alternatively, upon repair and modification of the sample, only the relevant tests conducted  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	N/A
Sample, only the relevant tests conducted  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	Pass
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	Pass
concurrently with major parts and manually removable ACCESS COVERS were opened and detached  ME EQUIPMENT heated to a temperature between T and T + 4 °C for at least 4 h and placed in a humidity chamber with a relative humidity of 93 % ± 3 % and an ambient within 2 °C of T in the range of + 20 °C to + 32 °C for 48 h  When RISK MANAGEMENT PROCESS indicated ME EQUIPMENT can be exposed to high humidity for extended periods (i.e., out-door use), test time extended proportionally (h)	Pass
T and T + 4 °C for at least 4 h and placed in a humidity chamber with a relative humidity of 93 % ± 3 % and an ambient within 2 °C of T in the range of + 20 °C to + 32 °C for 48 h  When RISK MANAGEMENT PROCESS indicated ME EQUIPMENT can be exposed to high humidity for extended periods (i.e., out-door use), test time extended proportionally (h)	N/A
ME EQUIPMENT can be exposed to high humidity for extended periods (i.e., out-door use), test time extended proportionally (h)	Pass
sequenced as in Annex B to prevent results of one test on a subsequent test	N/A
5.9 Determination of APPLIED PARTS and ACCESSIBLE PARTS	Pass
	N/A
APPLIED PARTS identified by inspection and reference to ACCOMPANYING DOCUMENTS:	N/A
5.9.2 ACCESSIBLE PARTS	N/A
5.9.2.1 Accessibility, when necessary, determined using standard test finger of Fig 6 applied in a bent or	N/A

Issue Date: 2013-11-07 Page 9 of 112 Report Reference # E341350-A29-UL

	IEC	60601	
Clause	Requirement + Test	Result - Remark	Verdict

	straight position	
	Openings preventing entry of test finger of Fig. 6 mechanically tested with a straight un-jointed test finger of the same dimensions with a force of 30 N	N/A
	When the straight un-jointed test finger entered, test with the standard test finger (Fig 6) was repeated, if necessary, by pushing the finger through the opening	N/A
5.9.2.2	Test hook of Fig. 7 inserted in all openings of ME EQUIPMENT and pulled with a force of 20 N for 10 s	N/A
	All additional parts that became accessible checked using standard test finger and by inspection	N/A
5.9.2.3	Conductive parts of actuating mechanisms of electrical controls accessible after removal of handles, knobs, levers and the like regarded as ACCESSIBLE PARTS:	N/A
	Conductive parts of actuating mechanisms not considered ACCESSIBLE PARTS when removal of handles, knobs, etc. required use of a TOOL, and inspection of RISK MANAGEMENT FILE indicated the relevant part is unlikely to detach unintentionally during EXPECTED SERVICE LIFE of ME EQUIPMENT	N/A

Issue Date: 2013-11-07 Page 10 of 112 Report Reference # E341350-A29-UL

	IEC	60601	
Clause	Requirement + Test	Result - Remark	Verdict

6	CLASSIFICATION OF ME EQUIPMENT AND ME	SYSTEMS	Pass
6.2	CLASS I ME EQUIPMENT, externally powered	GTM91120-WWVV-X.X-AB series, when A=T, B can be 2 or 3A, 2 presents Class II, 3A presents Class IS, when A=F, B can be Blank or W, W means class II equipment, Blank means class I; when A=P, B can be 2 or 3, 2 means class II equipment, 3 means class I equipment.	Pass
	CLASS II ME EQUIPMENT, externally powered	GTM91120-WWVV-X.X-AB series, when A=T, B can be 2 or 3A, 2 presents Class II, 3A presents Class IS, when A=F, B can be Blank or W, W means class II equipment, Blank means class I; when A=P, B can be 2 or 3, 2 means class II equipment, 3 means class I equipment.	Pass
	INTERNALLY POWERED ME EQUIPMENT		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 parts	N/A
	TYPE BF APPLIED PART		N/A
	TYPE CF APPLIED PART		N/A
	DEFIBRILLATION-PROOF APPLIED PARTS	No applied parts	N/A
6.3	ENCLOSURES classified according to degree of protection against ingress of water and particulate matter (IPN1N2) as per IEC 60529	Ordinary	N/A
6.4	ME EQUIPMENT or its parts intended to be sterilized classified according to method(s) of sterilization in instructions for use:		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		N/A
6.6	CONTINUOUS or Non-CONTINUOUS	Continuous	Pass

Issue Date: 2013-11-07 Page 11 of 112 Report Reference # E341350-A29-UL

		IEC 60601	
Clause	Requirement + Test	Result - Remark	Verdict
	·	J	
	OPERATION		

Issue Date: 2013-11-07 Page 12 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict

7	ME EQUIPMENT IDENTIFICATION, MARKING, AI	ND DOCUMENTS	Pass
7.1.1	RISK of poor USABILITY associated with the design of ME EQUIPMENT'S identification and marking addressed in a USABILITY ENGINEERING PROCESS:		N/A
7.1.2	Legibility of Markings Test for Markings specified in Clause 7.2-7.6:	Component power supply, to be determined as part of the end product.	N/A
7.1.3	Required markings can be removed only with a TOOL or by appreciable force, are durable and remain CLEARLY LEGIBLE during EXPECTED SERVICE LIFE of ME EQUIPMENT in NORMAL USE		Pass
	a) After tests, adhesive labels didn't loosen up or curl up at edges and markings complied with requirements in Clause 7.1.2:	See Appended Tables 7.1.3 and 8.10	Pass
	b) Markings required by 7.2-7.6 remained CLEARLY LEGIBLE after marking durability test:	See Appended Tables 7.1.3 and 8.10	Pass
7.2	Marking on the outside of ME EQUIPMENT or ME EQUIPMENT parts		Pass
7.2.1	At least markings in 7.2.2, 7.2.5, 7.2.6 (not for PERMANENTLY INSTALLED ME EQUIPMENT), 7.2.10, and 7.2.13 were applied when size of EQUIPMENT, its part, an ACCESSORY, or ENCLOSURE did not permit application of all required markings	See Enclosure 7-02	Pass
	Remaining markings fully recorded in ACCOMPANYING DOCUMENTS:	All required markings were provided on the equipment	N/A
	Markings applied to individual packaging when impractical to apply to ME EQUIPMENT		N/A
	A material, component, ACCESSORY, or ME EQUIPMENT intended for a single use, or its packaging marked "Do Not Reuse" or with symbol 28 of Table D.1 (ISO 7000-1051, DB:2004-01):		N/A
7.2.2	MANUFACTURER's name or trademark marked on ME EQUIPMENT and detachable components:	GlobTek, Inc. or E341350	Pass
	Misidentification does not present an unacceptable risk	See Appended RM Results Table 7.2.2	Pass
	MODEL OR TYPE REFERENCE also marked, except when misidentification would not present an unacceptable RISK:	See Cover Page	Pass
	Software forming part of a PEMS identified with a unique identifier, such as revision level or date of release/issue, and identification are available to	No such part.	N/A

Issue Date: 2013-11-07 Page 13 of 112 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict

	designated persons:		
7.2.3	Symbol 11 on Table D.1 (ISO 7000-1641, DB: 2004-01) used, optionally, advice to OPERATOR to consult ACCOMPANYING DOCUMENTS	Component power supply, to be determined as part of the end product.	N/A
	Safety sign 10 on Table D.2 (safety sign IEC 60878 Safety 01) used, advising OPERATOR that ACCOMPANYING DOCUMENTS must be consulted		N/A
7.2.4	ACCESSORIES marked with name or trademark of MANUFACTURER or supplier, and with a MODEL or TYPE REFERENCE:	No such part	N/A
	Markings applied to individual packaging when not practical to apply to ACCESSORIES		N/A
7.2.5	MODEL or TYPE REFERENCE of equipment to be connected to ME EQUIPMENT to provide power, is marked adjacent to the relevant connection point when this connection could result in an unacceptable RISK		N/A
7.2.6	Connection to the Supply Mains		Pass
	Except for PERMANENTLY INSTALLED ME EQUIPMENT, marking appearing on the outside of part containing SUPPLY MAINS connection and, adjacent to connection point		Pass
	For PERMANENTLY INSTALLED ME EQUIPMENT, NOMINAL supply voltage or range marked inside or outside of ME EQUIPMENT, preferably, adjacent to supply connection terminals	Not permanently installed ME equipment	N/A
	- RATED supply voltage(s) or RATED voltage range(s) with a hyphen (-) between minimum and maximum voltages (V, V-V):	100-240Vac	Pass
	Multiple RATED supply voltages or multiple RATED supply voltage ranges are separated by (V/V):		N/A
	- Nature of supply (e.g., No. of phases, except single-phase) and type of current:	Single	Pass
	Symbols 1-5, Table D.1 (symbols of IEC 60417-5032, 5032-1, 5032-2, 5031, and 5033, all DB: 2002-10) used, optionally, for same parameters:	Symbol 1 of Table D.1 used	Pass
	- RATED supply frequency or RATED frequency range in hertz:	50-60Hz	Pass
	- Symbol 9 of Table D.1 (symbol IEC 60417-5172, DB: 2003-02) used for CLASS II ME EQUIPMENT:	Symbol 9 of Table D.1 used for Class II device	N/A

Issue Date: 2013-11-07 Page 14 of 112 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict

7.2.7	RATED input in amps or volt-amps, or in watts when power factor exceeds 0.9 (A, VA, W):	In amps. See cover page	Pass
	RATED input for one or more RATED voltage ranges provided for upper and lower limits of the range or ranges when the range(s) is/are greater than ± 10 % of the mean value of specified range (A, VA,W)		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):		N/A
	Marking includes long-time and most relevant momentary volt-ampere ratings when provided, each plainly identified and indicated in ACCOMPANYING DOCUMENTS (VA):		N/A
	Marked input of ME EQUIPMENT provided with means for connection of supply conductors of other electrical equipment includes RATED and marked output of such means (A, VA, W):	See enclosure 7-02	Pass
7.2.8	Output connectors		Pass
7.2.8.1	See 16.9.2.1 b) for MULTIPLE SOCKET-OUTLETS integral with ME EQUIPMENT	No MSO	N/A
7.2.8.2	Output connectors are marked, except for MULTIPLE SOCKET-OUTLETS or connectors intended for specified ACCESSORIES or equipment	See cover page and enclosure 7-01	Pass
	Rated Voltage (V), Rated Current (A):	See cover page	-
	Rated Power (W), Output Frequency (Hz):		-
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):		N/A
7.2.10	Degrees of protection against electric shock as classified in 6.2 for all APPLIED PARTS marked with relevant symbols as follows (not applied to parts identified according to 4.6):	No applied parts	N/A
	TYPE B APPLIED PARTS with symbol 19 of Table D.1 (IEC 60417-5840, DB: 2002-10), not applied in such a way as to give the impression of being inscribed within a square in order to distinguish it from symbol IEC 60417-5333:		N/A
	TYPE BF APPLIED PARTS with symbol 20 of Table D.1 (IEC 60417-5333, DB: 2002-10):		N/A
	TYPE CF APPLIED PARTS with symbol 21 of Table D.1 (IEC 60417-5335, DB: 2002-10):		N/A

Issue Date: 2013-11-07 Page 15 of 112 Report Reference # E341350-A29-UL

IEC 60601			
Clause	Requirement + Test	Result - Remark	Verdict
	DEFIBRILLATION-PROOF APPLIED PARTS marked with symbols 25-27 of Table D.1 (IEC 60417-5841, IEC 60417-5334, or IEC 60417-5336, all DB: 2002-10)		N/A
	Proper symbol marked adjacent to or on connector for APPLIED PART, except marked on APPLIED PART when there is no connector, or connector used for more than one APPLIED PART and different APPLIED PARTS with different classifications		N/A
	Safety sign 2 of Table D.2 (ISO 7010-W001) placed near relevant outlet when protection against effect of discharge of a cardiac defibrillator is partly in the PATIENT cable:		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 not marked to the contrary assumed to be suitable for CONTINUOUS OPERATION	Continuous	Pass
	DUTY CYCLE for ME EQUIPMENT intended for non-CONTINUOUS OPERATION appropriately marked to provide maximum "on" and "off" time:		N/A
7.2.12	Type and full rating of a fuse marked adjacent to ACCESSIBLE fuse-holder	No accessible fuse-holder	N/A
	Fuse type		-
	Voltage (V) and Current (A) rating:		-
	Operating speed (s) and Breaking capacity:		-
7.2.13	A safety sign CLEARLY LEGIBLE and visible after INSTALLATION in NORMAL USE applied to a prominent location of EQUIPMENT that produce physiological effects capable of causing HARM to PATIENT or OPERATOR not obvious to OPERATOR	Component power supply, to be determined as part of the end product.	N/A
	Nature of HAZARD and precautions for avoiding or minimizing the associated RISK described in instructions for use		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 (symbol IEC 60417-5036, DB: 2002-10)	No HV	N/A
7.2.15	Requirements for cooling provisions marked (e.g.,	No cooling	N/A

Issue Date: 2013-11-07 Page 16 of 112 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict

	supply of water or air):		
7.2.16	ME EQUIPMENT with limited mechanical stability		N/A
7.2.17	Packaging marked with special handling instructions for transport and/or storage	Component power supply, to be determined as part of the end product.	N/A
	Permissible environmental conditions for transport and storage marked on outside of packaging:	Component power supply, to be determined as part of the end product.	N/A
	Packaging marked with a suitable safety sign indicating premature unpacking of ME EQUIPMENT could result in an unacceptable RISK		N/A
	Packaging of sterile ME EQUIPMENT or ACCESSORIES marked sterile		N/A
7.2.18	RATED maximum supply pressure from an external source marked on ME EQUIPMENT adjacent to each input connector:	Component power supply, to be determined as part of the end product.	N/A
7.2.19	Symbol 7 of Table D.1 (IEC 60417-5017, DB:2002-10) marked on FUNCTIONAL EARTH TERMINAL	No FE	N/A
7.2.20	Protective means, required to be removed to use a particular function of ME EQUIPMENT with alternate applications, marked to indicate the necessity for replacement when the function is no longer needed:		N/A
	No marking applied when an interlock provided		N/A
7.3	Marking on the inside of ME EQUIPMENT or ME EC	QUIPMENT parts	Pass
7.3.1	Maximum power loading of heating elements or lamp-holders designed for use with heating lamps marked near or in the heater (W):	No heating elements	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 (symbol IEC 60417-5036, DB: 2002-10), or safety sign 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 when applicable is marked:	No battery	N/A
	An identifying marking provided referring to instructions in ACCOMPANYING DOCUMENTS for batteries intended to be changed only by SERVICE		N/A

Issue Date: 2013-11-07 Page 17 of 112 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict

	PERSONNEL using a TOOL:		
	A warning provided indicating replacement of lithium batteries or fuel cells when incorrect replacement by inadequately trained personnel would result in an unacceptable RISK (e.g., excessive temperatures, fire or explosion):		N/A
	An identifying marking also provided referring to instructions in ACCOMPANYING DOCUMENTS:		N/A
7.3.4	Fuses, replaceable THERMAL CUT-OUTS and OVER-CURRENT RELEASES, accessible by use of a TOOL, marked by type and full rating at the component or by reference to ACCOMPANYING DOCUMENTS	Provided on PWB	Pass
	Type:		-
	Voltage (V) and Current (A) rating:	3.15A, 250Vac	-
	Operating speed (s) and Breaking capacity:		-
7.3.5	PROTECTIVE EARTH TERMINAL marked with symbol 6 of Table D.1 (IEC 60417-5019, DB: 2002-10), except for the PROTECTIVE EARTH TERMINAL in an APPLIANCE INLET according to IEC 60320-1	Provided on internal enclosure	Pass
	Markings on or adjacent to PROTECTIVE EARTH TERMINALS not applied to parts requiring removal to make the connection, and remained visible after connection made		Pass
7.3.6	Symbol 7 of Table D.1 (IEC 60417-5017, DB: 2002 -10) marked on FUNCTIONAL EARTH TERMINALS	No FE	N/A
7.3.7	Terminals for supply conductors marked adjacent to terminals, except when no HAZARD would result when interchanging connections	Recognized AC inlet provided	N/A
	Terminal markings included in ACCOMPANYING DOCUMENTS when ME EQUIPMENT too small to accommodate markings		N/A
	Terminals exclusively for neutral supply conductor in PERMANENTLY INSTALLED ME EQUIPMENT marked with Code 1 of Table D.3 (Code in IEC 60445)		N/A
	Marking for connection to a 3-phase supply, if necessary, complies with IEC 60445		N/A
	Markings on or adjacent to electrical connection points not applied to parts requiring removal to make connection, and remained visible after		N/A

Issue Date: 2013-11-07 Page 18 of 112 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict

	connection made	
7.3.8	For supply connections, use wiring materials suitable for at least X °C (where X > than max temperature measured in terminal box or wiring compartment under NORMAL USE), or equivalent, marked at the point of supply connections	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 or its parts, including mains switch, marked with symbols 12 and 13 of Table D.1 (IEC 60417-5007, DB: 2002-10, and IEC 60417-5008, DB: 2002-10), or	N/A
	- indicated by an adjacent indicator light, or	N/A
	- indicated by other unambiguous means	N/A
	The "on/off" positions of push button switch with bistable positions marked with symbol 14 of Table D.1 (IEC 60417-5010 DB: 2002-10), 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 (symbol 60417-5011 DB: 2002-10), 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	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, or	N/A
	- 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 31 except the base quantities listed in Table 1 expressed in the indicated units	N/A
	ISO 1000 applied for application of SI units, their multiples, and certain other units	N/A

Issue Date: 2013-11-07 Page 19 of 112 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict

	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
	Markings used to convey a warning, prohibition or mandatory action mitigating a RISK not obvious to OPERATOR are safety signs from ISO 7010	Component power supply, to be determined as part of the end product.	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
7.6	Symbols		Pass
7.6.1	Meanings of symbols used for marking described in instructions for use:	Component power supply, to be determined as part of the end product.	N/A
7.6.2	Symbols required by this standard conform to IEC or ISO publication referenced		Pass
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		Pass
7.7.1	PROTECTIVE EARTH CONDUCTOR identified by green and yellow insulation		Pass
7.7.2	Insulation on conductors inside ME EQUIPMENT forming PROTECTIVE EARTH CONNECTIONS identified by green and yellow at least at terminations		Pass
7.7.3	Green and yellow insulation identify only following conductors:		Pass
	- PROTECTIVE EARTH CONDUCTORS		Pass
	- 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" specified in IEC 60227-1 or IEC 60245-1	No power supply cord provided.	N/A

Issue Date: 2013-11-07 Page 20 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict
7.7.5	Colours of conductors in POWER SUPPLY CORDS in accordance with IEC 60227-1 or IEC 60245-1	No power supply cord provided.	N/A
7.8	Indicator lights and controls		N/A
7.8.1	Red indicator lights mean: Warning (i.e., immediate response by OPERATOR required)	To be evaluated in end product.	N/A
	Yellow indicator lights mean: Caution (i.e., prompt response by OPERATOR required)		N/A
	Green indicator lights mean: Ready for use		N/A
	Other colours, if used: Meaning other than red, yellow, or green (colour, meaning):		N/A
7.8.2	Red used only for emergency control		N/A
7.9	ACCOMPANYING DOCUMENTS		N/A
7.9.1	ME EQUIPMENT accompanied by documents containing at least instructions for use, and a technical description	To be determined in end- product evaluation.	N/A
	ACCOMPANYING DOCUMENTS identify ME EQUIPMENT by the following, as applicable:		N/A
	- Name or trade-Name of MANUFACTURER and an address the RESPONSIBLE ORGANIZATION can be referred to:		N/A
	- MODEL or TYPE REFERENCE		N/A
	When ACCOMPANYING DOCUMENTS provided electronically (e.g., on CDROM), RISK MANAGEMENT PROCESS includes instructions as to what is required in hard copy or as markings on ME EQUIPMENT (for emergency operation)		N/A
	ACCOMPANYING DOCUMENTS specify special skills, training, and knowledge required of OPERATOR or RESPONSIBLE ORGANIZATION and environmental restrictions on locations of use		N/A
	ACCOMPANYING DOCUMENTS written at a level consistent with education, training, and other needs of individuals for whom they are intended		N/A
7.9.2	Instructions for use include the required information		N/A
7.9.2.1	- intended use of ME EQUIPMENT,		N/A
	- frequently used functions, and		N/A
	- known contraindication(s) to use of ME EQUIPMENT		N/A
	Classifications as in Clause 6, all markings per Clause 7.2, and explanation of safety signs and		N/A

Issue Date: 2013-11-07 Page 21 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict

	symbols marked on ME EQUIPMENT	
	Instructions for use are in a language acceptable to the intended operator	N/A
7.9.2.2	Instructions for use include all warning and safety notices	N/A
	Warning statement for CLASS I ME EQUIPMENT indicating: "WARNING: To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth"	N/A
	Warnings regarding significant RISKS of reciprocal interference posed by ME EQUIPMENT during specific investigations or treatments	N/A
	Information on potential electromagnetic or other interference and advice on how to avoid or minimize such interference	N/A
	Warning statement for ME EQUIPMENT supplied with an integral MULTIPLE SOCKET-OUTLET indicating, "connecting electrical equipment to MSO effectively leads to creating an ME SYSTEM, and can result in a reduced level of safety"	N/A
	The RESPONSIBLE ORGANIZATION is referred to this standard for the requirements applicable to ME SYSTEMS	N/A
7.9.2.3	Statement on ME EQUIPMENT for connection to a separate power supply indicating "power supply is specified as a part of ME EQUIPMENT or combination is specified as a ME SYSTEM"	N/A
7.9.2.4	Warning statement for mains- operated ME EQUIPMENT with additional power source not automatically maintained in a fully usable condition indicating the necessity for periodic checking or replacement of power source	N/A
	Warning to remove primary batteries when ME EQUIPMENT is not likely to be used for some time when leakage from battery would result in an unacceptable RISK	N/A
	Specifications of replaceable INTERNAL ELECTRICAL POWER SOURCE when provided.:	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	N/A
	unaccoptable reserve	

Issue Date: 2013-11-07 Page 22 of 112 Report Reference # E341350-A29-UL

	IEC 60601	1	
Clause	Requirement + Test	Result - Remark	Verdict
	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		
	Information provided on materials and ingredients PATIENT or OPERATOR is exposed to when such exposure can constitute an unacceptable RISK		N/A
	Restrictions specified on other equipment or NETWORK/DATA COUPLINGS, other than those forming part of an ME SYSTEM, to which a SIGNAL INPUT/OUTPUT PART may be connected		N/A
	APPLIED PARTS specified		N/A
7.9.2.6	Information provided indicating where the installation instructions may be found or information on qualified personnel who can perform the installation		N/A
7.9.2.7	Instructions provided indicating not to position ME EQUIPMENT to make it difficult to operate the disconnection device when an APPLIANCE COUPLER or separable plug is used as isolation means to meet 8.11.1 a)		N/A
7.9.2.8	Necessary information provided for OPERATOR to bring ME EQUIPMENT into operation including initial control settings, and connection to or positioning of PATIENT prior to use of ME EQUIPMENT, its parts, or ACCESSORIES		N/A
7.9.2.9	Information provided to operate ME EQUIPMENT including explanation of controls, displays and signals, sequence of operation, connection of detachable parts or ACCESSORIES, replacement of material consumed during operation		N/A
	Meanings of figures, symbols, warning statements, abbreviations and indicator lights described in instructions for use		N/A
7.9.2.10	A list of all system messages, error messages, and fault messages provided with an explanation of messages including important causes and possible action(s) to be taken to resolve the problem indicated by the message		N/A
7.9.2.11	Information provided for the OPERATOR to safely terminate operation of ME EQUIPMENT		N/A
7.9.2.12	Information provided on cleaning, disinfection, and sterilization methods, and applicable parameters		N/A

Issue Date: 2013-11-07 Page 23 of 112 Report Reference # E341350-A29-UL

	I	EC 60601		
Clause	Requirement + Test		Result - Remark	Verdict

	that can be tolerated by ME EQUIPMENT parts or ACCESSORIES specified	
	Components, ACCESSORIES or ME EQUIPMENT marked for single use, except when required by MANUFACTURER to be cleaned, disinfected, or sterilized prior to use	N/A
7.9.2.13	Instructions provided on preventive inspection, calibration, maintenance and its frequency	N/A
	Information provided for safe performance of routine maintenance necessary to ensure continued safe use of ME EQUIPMENT	N/A
	Parts requiring preventive inspection and maintenance to be performed by SERVICE PERSONNEL identified including periods of application	N/A
	Instructions provided to ensure adequate maintenance of ME EQUIPMENT containing rechargeable batteries to be maintained by anyone other than SERVICE PERSONNEL	N/A
7.9.2.14	A list of ACCESSORIES, detachable parts, and materials for use with ME EQUIPMENT provided	N/A
	Other equipment providing power to ME SYSTEM sufficiently described (e.g. part number, RATED VOLTAGE, max or min power, protection class, intermittent or continuous service)	N/A
7.9.2.15	RISKS associated with disposal of waste products, residues, etc., and of ME EQUIPMENT and ACCESSORIES at the end of their EXPECTED SERVICE LIFE are identified, and instructions provided on minimizing these RISKS:	N/A
7.9.2.16	Instructions for use include information specified in 7.9.3 or identify where it can be found (e.g. in a service manual)	N/A
7.9.3	Technical description	N/A
7.9.3.1	All essential data provided for safe operation, transport, storage, and measures or conditions necessary for installing ME EQUIPMENT, and preparing it for use including the following:	N/A
	- information as in clause 7.2	N/A
	- permissible environmental conditions of use including conditions for transport and storage	N/A
	- all characteristics of ME EQUIPMENT including range(s), accuracy, and precision of displayed	N/A

Issue Date: 2013-11-07 Page 24 of 112 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict

	values or where they can be found	
	- special installation requirements such as max. permissible apparent impedance of supply MAINS	N/A
	- permissible range of values of inlet pressure and flow, and chemical composition of cooling liquid used for cooling	N/A
	- a description of means of isolating ME EQUIPMENT from supply MAINS, when such means not in ME EQUIPMENT	N/A
	- a description of means for checking oil level in partially sealed oil filled ME EQUIPMENT or its parts when applicable	N/A
	- a warning statement addressing HAZARDS that can result from unauthorized modification of ME EQUIPMENT according to following examples	N/A
	WARNING: No modification of this equipment is allowed	N/A
	WARNING: Do not modify this equipment without authorization of the manufacturer	N/A
	WARNING: If this equipment is modified, appropriate inspection and testing must be conducted to ensure continued safe use of equipment	N/A
	Technical description separable from instructions for use contains required information, as follows	N/A
	- information as in clause 7.2	N/A
	- all applicable classifications in Clause 6, warning and safety notices, and explanation of safety signs marked on ME EQUIPMENT	N/A
	- a brief description of ME EQUIPMENT, how it functions, and its significant physical and performance characteristics	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, when TYPE and rating of fuses are not apparent from information on RATED current and mode of operation of ME EQUIPMENT	N/A
	- a statement for ME EQUIPMENT with a non-	N/A

Issue Date: 2013-11-07 Page 25 of 112 Report Reference # E341350-A29-UL

IEC 60601				
Clause	Requirement + Test	Result - Remark	Verdict	
	DETACHABLE POWER SUPPLY CORD if POWER SUPPLY CORD is replaceable by SERVICE PERSONNEL, and if so, instructions for correct connection and anchoring to ensure compliance with 8.11.3			
	- instructions for correct replacement of interchangeable or DETACHABLE parts specified by MANUFACTURER as replaceable by SERVICE PERSONNEL, and		N/A	
	- warnings identifying Nature of HAZARD when replacement of a component could result in an unacceptable RISK, and when replaceable by SERVICE PERSONNEL all information necessary to safely replace the component		N/A	
7.9.3.3	Technical description indicates, MANUFACTURER will provide circuit diagrams, component part lists, descriptions, calibration instructions to assist to SERVICE PERSONNEL in parts repair		N/A	
7.9.3.4	Means used to comply with requirements of 8.11.1 clearly identified in technical description		N/A	

Issue Date: 2013-11-07 Page 26 of 112 Report Reference # E341350-A29-UL

	IEC	60601	
Clause	Requirement + Test	Result - Remark	Verdict

8	PROTECTION AGAINST ELECTRICAL HAZARDS	FROM ME EQUIPMENT	Pass
8.1	Limits specified in Clause 8.4 not exceeded for ACCESSIBLE PARTS and APPLIED PARTS in NORMAL or SINGLE FAULT CONDITIONS		Pass
	NORMAL CONDITION considered as simultaneous occurrence of situations identified in 8.1a)		Pass
	SINGLE FAULT CONDITION considered to include the occurrences as specified in Clause 8.1b):	S.F.C. were conducted base on the circuit evaluation from client, and complied by inspecting the evaluation. Additional fault condition see Appended RM Results Tables 8.1b(2)	Pass
	ACCESSIBLE PARTS determined according to 5.9	To be evaluated in end product.	N/A
	LEAKAGE CURRENTS measured according to 8.7	See appended Table 8.7	Pass
8.2	Requirements related to power sources		N/A
8.2.1	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	No such situation	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	No HAZARDOUS SITUATION other than absence of ESSENTIAL PERFORMANCE developed when a connection with wrong polarity made for ME EQUIPMENT from an external d.c. source		N/A
	ME EQUIPMENT connected with correct polarity did not present an unacceptable RISK		N/A
	Protective devices that can be reset by anyone without a TOOL restore correct operation on reset		N/A
8.3	Classification of APPLIED PARTS		N/A
	a) APPLIED PART specified in ACCOMPANYING DOCUMENTS as suitable for DIRECT CARDIAC APPLICATION is TYPE CF	No applied part	N/A
	b) An APPLIED PART provided with a PATIENT CONNECTION intended to deliver electrical energy		N/A

Issue Date: 2013-11-07 Page 27 of 112 Report Reference # E341350-A29-UL

	IEC 60601	1	I
Clause	Requirement + Test	Result - Remark	Verdict
	or an electrophysiological signal to or from PATIENT is TYPE BF or CF APPLIED PART		
	c) An APPLIED PART not covered by a) or b) is a TYPE B, BF, or CF		N/A
	d) Requirements of a TYPE B APPLIED PART applied to a part in 4.6 to be subjected to requirements for an APPLIED PART (except marking)		N/A
	Requirements for a TYPE BF or CF APPLIED PART applied as in RISK MANAGEMENT PROCESS		N/A
8.4	Limitation of voltage, current or energy		Pass
8.4.1	PATIENT CONNECTIONS intended to deliver Curre	ent	N/A
	Limits in 8.4.2 not applied to currents intended to flow through body of PATIENT to produce a physiological effect during NORMAL USE	No patient connection	N/A
8.4.2	ACCESSIBLE PARTS including APPLIED PARTS		Pass
	a) Currents from, to, or between PATIENT CONNECTIONS did not exceed limits for PATIENT LEAKAGE CURRENT and PATIENT AUXILIARY CURRENT per Tables 3 and 4 when measured according to Clause 8.7.4	No such parts	N/A
	b) LEAKAGE CURRENTS from, to, or between ACCESSIBLE PARTS did not exceed limits for TOUCH CURRENT in Cl. 8.7.3 c) when measured per Clause 8.7.4 (mA)	See appended Table 8.7	Pass
	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	Unit complies with 8.4.2b)	N/A
	- accessible contacts of connectors		N/A
	- contacts of fuseholders accessible during replacement of fuse		N/A
	- contacts of lampholders accessible after removal of lamp		N/A
	<ul> <li>parts inside an ACCESS COVER that can be opened without a TOOL, or where a TOOL is needed but the instructions for use instruct an OPERATOR other than SERVICE PERSONNEL to open the relevant ACCESS COVER</li> </ul>		N/A
	Voltage to earth or to other ACCESSIBLE PARTS	See appended Table 8.4.2	Pass

Issue Date: 2013-11-07 Page 28 of 112 Report Reference # E341350-A29-UL

IEC 60601				
Clause	Requirement + Test	Result - Remark	Verdict	
	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.):			
	Limit of 60 V d.c. applied with no more than 10% peak-to-peak ripple, and when ripple larger than specified value, 42.4 V peak limit applied (V d.c.).:	See appended Table 8.4.2	Pass	
	Energy did not exceed 240 VA for longer than 60 s or stored energy available did not exceed 20 J at a potential up to 2 V (VA or J):	See appended Table 8.4.2	Pass	
	LEAKAGE CURRENT limits referred to in 8.4.2 b) applied when voltages higher than limits in 8.4.2 c) were present (mA)		N/A	
	d) Voltage and energy limits specified in c) above also applied to the following:	To be evaluated in end product.	N/A	
	- internal parts, other than contacts of plugs, connectors and socket-outlets, touchable by test pin in Fig 8 inserted through an opening in an ENCLOSURE; and		N/A	
	- internal parts touchable by a metal test rod with a diameter of 4 mm and a length of 100 mm, inserted through any opening on top of ENCLOSURE or through any opening provided for adjustment of pre-set controls using a TOOL		N/A	
	Test pin or the test rod inserted through relevant openings with minimal force of no more than 1 N		N/A	
	Test rod inserted in every possible position through openings provided for adjustment of pre-set controls that can be adjusted in NORMAL USE, with a force of 10 N		N/A	
	Test repeated with a TOOL specified in instructions for use		N/A	
	Test rod freely and vertically suspended through openings on top of ENCLOSURE		N/A	
_	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	To be evaluated in end system.	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	See appended Table 8.4.3	Pass	

Issue Date: 2013-11-07 Page 29 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause Re	equirement + Test	Result - Remark	Verdict

		1	
	not exceed 60 V one s after disconnecting the plug of ME EQUIPMENT or its parts (V)		
	A triggering circuit used to ensure disconnection occurred at peak of supply voltage waveform		N/A
	When voltage exceeded 60 V, calculated or measured stored charge didn't exceed 45 uC:		N/A
3.4.4	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 45uC:		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 (IEC 60417-5036, DB: 2002-10), and manual discharging device specified in technical description:		N/A
3.5	Separation of parts		Pass
3.5.1	MEANS OF PROTECTION (MOP)		
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	2 MOPP provided	Pass
	Each MEANS OF PROTECTION categorized as a MEANS OF PATIENT PROTECTION or a MEANS OF OPERATOR PROTECTION, taking into account Clause 4.6, and flow chart in Fig A.12	MOPP provided	Pass
	Varnishing, enameling, oxidation, and similar protective finishes and coatings with sealing compounds replasticizing at temperatures expected during operation and sterilization disregarded as MEANS OF PROTECTION	No such situation.	N/A
	Coatings and other insulation intended as a MEANS OF PROTECTION complying with IEC 60950-1:2001 considered acceptable as a MEANS OF OPERATOR PROTECTION but not automatically as a MEANS OF PATIENT PROTECTION		N/A
	RISK MANAGEMENT PROCESS taken into consideration for MEANS OF PATIENT PROTECTION	MOPP was taken into consideration. See Risk Management Report for details.	Pass

Issue Date: 2013-11-07 Page 30 of 112 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict

	Components and wiring forming a MEANS OF PROTECTION comply with 8.10		Pass
	Insulation, CREEPAGE, CLEARANCES, components or earth connections not complying with 8.5.1.2 and 8.5.1.3 not considered as MEANS OF PROTECTION, and failure of these parts regarded as NORMAL CONDITION	No such situation	N/A
3.5.1.2	MEANS OF PATIENT PROTECTION (MOPP)		Pass
	Solid insulation forming a MEANS OF PATIENT PROTECTION complied with dielectric strength test of Clause 8.8 at test voltage of Table 6	See Appended Tables 8.8.3. Enclosure was considered as solid insulation, min 2.0mm thick.	Pass
	CREEPAGE and CLEARANCES forming a MEANS OF PATIENT PROTECTION complied with Table 12	See Table to insulation diagram	Pass
	PROTECTIVE EARTH CONNECTIONS forming a MEANS OF PATIENT PROTECTION complied with Cl. 8.6	No accessible earthing part	N/A
	A Y1 capacitor complying with IEC 60384-14 and having passed dielectric strength test for two MEANS OF PATIENT PROTECTION considered equivalent to one MEANS OF PATIENT PROTECTION	See Appended Tables 8.8.3 and List of Critical Components.	Pass
	Two capacitors used in series, each RATED for total WORKING VOLTAGE across the pair and have the same NOMINAL capacitance	See Appended Tables 8.8.3 and List of Critical Components.	Pass
	Voltage Total Working (V) and C Nominal (uF):	Max. 2200pF, Min 250V	-
3.5.1.3	MEANS OF OPERATOR PROTECTION (MOOP)	No MOOP provided.	N/A
	Solid insulation forming a MEANS OF OPERATOR PROTECTION complied with:		N/A
	- dielectric strength test of 8.8 at test voltage of Table 6; or		N/A
	- requirements of IEC 60950-1 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 for INSULATION CO-ORDINATION		N/A
	PROTECTIVE EARTH CONNECTIONS forming a MEANS OF OPERATOR PROTECTION complied		N/A

Issue Date: 2013-11-07 Page 31 of 112 Report Reference # E341350-A29-UL

	IEC 60601				
Clause	Requirement + Test	Result - Remark	Verdict		
	with Cl. 8.6, or				
	- requirements and tests of IEC 60950-1 for protective earthing:		N/A		
	A Y2 capacitor complying with IEC 60384-14 and passing dielectric strength test for one MEANS OF OPERATOR PROTECTION considered equivalent to one MEANS OF OPERATOR PROTECTION:		N/A		
	A Y1 capacitor complying with IEC 60384-14 and having passed dielectric strength test for two MEANS OF OPERATOR PROTECTION considered equivalent to 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 Total Working (V) and C Nominal (uF):		-		
	Points at which impedances of components, CREEPAGE, CLEARANCES, PROTECTIVE EARTH CONNECTIONS or insulation, prevent ACCESSIBLE PARTS from exceeding limits in 8.4 examined whether a failure at any of these points is to be regarded as a NORMAL or SINGLE FAULT CONDITION		N/A		
	A MEANS OF PROTECTION protecting APPLIED PARTS, or parts identified by 4.6 as parts subject to the same requirements, considered MEANS OF PATIENT PROTECTION		N/A		
	A MEANS OF PROTECTION protecting other parts considered MEANS OF OPERATOR PROTECTION:		N/A		
8.5.2	Separation of PATIENT CONNECTIONS		N/A		
8.5.2.1	PATIENT CONNECTIONS of F-TYPE APPLIED PART separated from all other parts by equivalent to one MEANS OF PATIENT PROTECTION for a WORKING VOLTAGE equal to maximum MAINS VOLTAGE and complied with limit for PATIENT LEAKAGE CURRENT at 110 % of max. MAINS VOLTAGE	No patient connection	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		N/A		

Issue Date: 2013-11-07 Page 32 of 112 Report Reference # E341350-A29-UL

	IEC 60601					
Clause	Requirement + Test		Result - Remark	Verdict		

	same or another function	
	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 per 8.9 and Tables 11 to 16 as applicable	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
3.5.2.2	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	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 per 8.9 and Tables 11 to 16 as applicable	N/A
	The RISK MANAGEMENT FILE reviewed	N/A
8.5.2.3	A connector on a PATIENT lead located at the end of the lead remote from PATIENT, with conductive part not separated from all PATIENT CONNECTIONS by one MEANS OF PATIENT PROTECTION for a WORKING VOLTAGE equal to MAXIMUM MAINS VOLTAGE	N/A
	- 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	N/A

Issue Date: 2013-11-07 Page 33 of 112 Report Reference # E341350-A29-UL

	IEC 60601					
Clause	Requirement + Test		Result - Remark	Verdict		

	100 mm diameter		
	- 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 making contact with 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, except when RISK MANAGEMENT PROCESS indicated no unacceptable RISK existed from contact with objects other than a mains:		N/A
3.5.3	MAXIMUM MAINS VOLTAGE		Pass
	- MAXIMUM MAINS voltage determined to be the highest RATED supply voltage for single-phase or d.c. supply MAINS powered ME EQUIPMENT, as well as INTERNALLY powered ME EQUIPMENT with a means of connection to a supply MAINS (V)	240V	Pass
	When less than 100 V, MAXIMUM MAINS VOLTAGE was 250 V		N/A
	- MAXIMUM MAINS voltage was the highest RATED phase to neutral supply voltage for polyphase ME EQUIPMENT (V)		N/A
	- for other INTERNALLY POWERED ME EQUIPMENT, maximum mains voltage was 250 V		N/A
8.5.4	WORKING VOLTAGE		Pass
	- Input supply voltage to ME EQUIPMENT was RATED voltage or voltage within RATED range resulting in highest measured value (V):	240V	Pass
	- WORKING VOLTAGE for d.c. voltages with superimposed ripple was average value when peak-to-peak ripple less than 10% of average value or peak voltage when peak-to-peak ripple exceeding 10% of average value (V):	AC	N/A
	- WORKING voltage for each means of PROTECTION forming DOUBLE insulation was voltage DOUBLE insulation, as a whole, subjected to (V)	See Insulation Diagram and Insulation Table.	Pass
	- Intentional or accidental earthing of PATIENT regarded as a NORMAL CONDITION for WORKING voltage involving a PATIENT	_	N/A

Issue Date: 2013-11-07 Page 34 of 112 Report Reference # E341350-A29-UL

	IEC 60601				
Clause	Requirement + Test		Result - Remark	Verdict	

	connection not connected to EARTH		
	- 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)		N/A
	<ul> <li>WORKING voltage for DEFIBRILLATION-PROOF APPLIED parts determined disregarding possible presence of DEFIBRILLATION voltages</li> </ul>		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)		N/A
3.5.5	DEFIBRILLATION-PROOF APPLIED PARTS	No applied part	N/A
8.5.5.1	Classification "DEFIBRILLATION-PROOF APPLIED PART" applied to one APPLIED PART in its entirety, but not separate functions of same APPLIED PART		N/A
	Possibility of an OPERATOR receiving a shock from such parts taken into consideration in RISK MANAGEMENT PROCESS		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
3.5.5.2	Means provided to limit energy delivered to a 100 Ohm load to at least 90% of energy delivered to this load with ME EQUIPMENT disconnected:		N/A
3.6	Protective and functional earthing and potential equ	alization of ME EQUIPMENT	Pass
3.6.1	Requirements of 8.6.2 to 8.6.8 applied		Pass
	Parts complying with IEC 60950-1 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

Issue Date: 2013-11-07 Page 35 of 112 Report Reference # E341350-A29-UL

	IEC 60601				
Clause	Requirement + Test		Result - Remark	Verdict	

8.6.2	PROTECTIVE EARTH TERMINAL is suitable for connection to an external protective earthing system by a PROTECTIVE EARTH CONDUCTOR in a POWER SUPPLY CORD and a suitable plug or by a FIXED PROTECTIVE EARTH CONDUCTOR	Class I unit provided with Class I Appliance Inlet. (IEC 60320-1)	Pass
	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	No power supply cords provided	N/A
	Screws for internal PROTECTIVE EARTH CONNECTIONS completely covered or protected against accidental loosening from outside:		N/A
	Earth pin of APPLIANCE INLET forming supply connection to ME EQUIPMENT regarded as PROTECTIVE EARTH TERMINAL		Pass
	PROTECTIVE EARTH TERMINAL not used for mechanical connection between different parts of ME EQUIPMENT or securing components not related to protective or functional earthing		Pass
8.6.3	PROTECTIVE EARTH CONNECTION not used for a moving part, 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	No accessible earthing part	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
8.6.5	Surface coatings		N/A
	Poorly conducting surface coatings on conductive elements removed at the point of contact		N/A
	Coating not removed when requirements for impedance and current-carrying capacity met		N/A
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	Class I inlet provided only. To be determined in end product.	N/A

Issue Date: 2013-11-07 Page 36 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict
	EQUIPMENT made via a plug and socket was made before and interrupted after supply connections		
	- APPLIED also where interchangeable parts are PROTECTIVELY EARTHED		N/A
8.6.7	Terminal for connection of a POTENTIAL EQUALIZ	ATION CONDUCTOR	N/A
	- terminal is accessible to OPERATOR with ME EQUIPMENT in any position of NORMAL use	No such conductor	N/A
	- RISK of accidental disconnection minimized 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 (i.e., symbol IEC 60417-5021)		N/A
	- instructions for use contain information on function and use of POTENTIAL EQUALIZATION conductor together with a REFERENCE to requirements of this standard		N/A
	POWER SUPPLY CORD does not incorporate a POTENTIAL EQUALIZATION CONDUCTOR		N/A
8.6.8	FUNCTIONAL EARTH TERMINAL not used to provide a PROTECTIVE EARTH CONNECTION		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	No FE	N/A
	Two MEANS OF PROTECTION provided by insulation of internal screens and all internal wiring connected to them with a related explanation in technical description		N/A
8.7	LEAKAGE CURRENTS and PATIENT AUXILIARY	CURRENTS	Pass
8.7.1	a) Electrical isolation providing protection against electric shock limits currents to values in 8.7.3:	See appended Table 8.7	Pass
	b) Specified values of EARTH LEAKAGE, TOUCH, PATIENT LEAKAGE, and PATIENT AUXILIARY CURRENTS applied in combination of conditions in appended Table 8.7		Pass

Issue Date: 2013-11-07 Page 37 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict
8.7.2	Allowable values specified in 8.7.3 applied under SINGLE FAULT CONDITIONS of 8.1 b), except		Pass
	- where insulation used in conjunction with a PROTECTIVE EARTH CONNECTION, insulation short circuited only under conditions in 8.6.4 b)		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		N/A
	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		Pass
8.7.3	Allowable Values		Pass
	a) Allowable values in 8.7.3 b), c), and d) measured based on, and are relative to currents in Fig 12 a), or by a device measuring frequency contents of currents as in Fig 12 b:	See appended Table 8.7	Pass
	b) Allowable values of PATIENT LEAKAGE and AUXILIARY CURRENTS are according to Tables 3 & 4, and values of a.c. are relative to currents having a frequency not less than 0.1Hz:	No patient connections	N/A
	c) TOUCH CURRENT did not exceed 100 μA in NORMAL CONDITION and 500 μA in SINGLE FAULT CONDITION (ITNC, ITSFC):	See appended Table 8.7	Pass
	d) EARTH LEAKAGE CURRENT did not exceed 5 mA in NORMAL CONDITION and 10 mA in SINGLE FAULT CONDITION (IENC, IESFC)	See appended Table 8.7	Pass
	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:	Not permanently installed ME equipment	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:	See appended Table 8.7	Pass
3.7.4	LEAKAGE and PATIENT AUXILIARY CURRENTS measurements:	See appended Table 8.7	Pass
3.8	Insulation		Pass

Issue Date: 2013-11-07 Page 38 of 112 Report Reference # E341350-A29-UL

	IEC 60601	T	•
Clause	Requirement + Test	Result - Remark	Verdict
8.8.1	Insulation relied on as MEANS OF PROTECTION, including REINFORCED INSULATION and insulation between parts of opposite polarity of MAINS PART on SUPPLY MAINS side of mains fuse or OVER-CURRENT RELEASE		Pass
	Insulation exempted from test (complies with clause 4.8)		N/A
	Insulation forming MEANS OF OPERATOR PROTECTION and complying with IEC 60950-1 for INSULATION CO-ORDINATION not tested as in 8.8	No MOOP	N/A
3.8.2	Distance through solid insulation or use of thin shee	t material	Pass
	Solid insulation forming SUPPLEMENTARY or REINFORCED INSULATION for a PEAK WORKING VOLTAGE greater than 71 V provided with:		Pass
	a) 0.4 mm, min, distance through insulation, or	Enclosure was considered as solid insulation, min 2.0mm thick.	Pass
	b) does not form part of an ENCLOSURE and not subject to handling or abrasion during NORMAL USE, and comprised of:	Insulation tape and TIW evaluated. See appended Table 8.8.3	Pass
	- at least two layers of material, each passed the appropriate dielectric strength test, or	Insulation tape	N/A
	- three layers of material, for which all combinations of two layers together passed the appropriate dielectric strength test	Triple insulated wire used in T1	Pass
	Dielectric strength test for one or two layers was same as for one MEANS OF PROTECTION for SUPPLEMENTARY INSULATION		Pass
	Dielectric strength test for one or two layers was same as for two MEANS OF PROTECTION for REINFORCED INSULATION		Pass
	BASIC, SUPPLEMENTARY, and REINFORCED INSULATION required between windings of wound components separated by interleaved insulation complying with a) or b), or both, except when		Pass
	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		Pass

Issue Date: 2013-11-07 Page 39 of 112 Report Reference # E341350-A29-UL

	IEC 60601				
Clause	Requirement + Test		Result - Remark	Verdict	

	extruded insulation, complying with Annex L		
	- BASIC insulation: minimum two wrapped layers or one extruded layer		N/A
	- SUPPLEMENTARY insulation: minimum two layers, wrapped or extruded		N/A
	- REINFORCED insulation: minimum three layers, wrapped or extruded		Pass
	In d) and e), for spirally wrapped insulation with CREEPAGE DISTANCES between layers less than in Table 12 or 16 (Pollution Degree 1) depending on type of insulation, path between layers sealed as a cemented joint in 8.9.3.3 and test voltages of TYPE TESTS in L.3 equal 1.6 times of normal values		N/A
	Protection against mechanical stress provided where two insulated wires or one bare and one insulated wire are in contact inside wound component, crossing at an angle between 45° and 90° and subject to winding tension		N/A
	Finished component complied with routine dielectric strength tests of 8.8.3:		N/A
	Tests of Annex L not repeated since material data sheets confirm compliance:		N/A
3.8.3	Dielectric Strength		Pass
	Solid insulating materials with a safety function withstood dielectric strength test voltages:	See appended Table 8.8.3	Pass
3.8.4	Insulation other than wire insulation		Pass
3.8.4.1	Resistance to heat retained by all insulation and insulating partition walls during EXPECTED SERVICE LIFE of ME EQUIPMENT	See appended Table 8.8.4.1	Pass
	ME EQUIPMENT and RISK MANAGEMENT FILE examined in conjunction with resistance to moisture, dielectric strength, and mechanical strength tests:	See Appended RM Results Table 8.8.4.1	Pass
	Satisfactory evidence of compliance provided by manufacturer for resistance to heat:	Ball pressure performed.	N/A
	Tests conducted in absence of satisfactory evidence for resistance to heat	See appended Table 8.8.4.1	Pass
	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 apparatus of Fig 21	See appended Table 8.8.4.1	Pass

Issue Date: 2013-11-07 Page 40 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict
	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 Table 8.8.4.1	Pass
	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		Pass
8.8.4.2	Resistance to environmental stress		N/A
	Insulating characteristics and mechanical strength of all MEANS OF PROTECTION not likely to be impaired by environmental stresses including deposition of dirt resulting from wear of parts within EQUIPMENT, potentially reducing CREEPAGE and CLEARANCES below 8.9	To be determined in end product	N/A
	Ceramic and similar materials not tightly sintered, and beads alone not used as SUPPLEMENTARY or REINFORCED INSULATION		N/A
	Insulating material with embedded heating conductors considered as one MEANS OF PROTECTION but not two MEANS OF PROTECTION		N/A
	Parts of natural latex rubber aged by suspending samples freely in an oxygen cylinder containing commercial oxygen to a pressure of 2.1 MPa ± 70 kPa, with an effective capacity of at least 10 times volume of samples		N/A
	There were no cracks visible to naked eyes after samples kept in cylinder at 70 °C ± 2 °C for 96h, and afterwards, left at room temperature for at least 16h		N/A
8.9	CREEPAGE DISTANCES and AIR CLEARANCES		Pass
8.9.1.1	CREEPAGE DISTANCES and AIR CLEARANCES are to values in Tables 11 to 16 (inclusive), except as specified in Clauses 8.9.1.2 to 8.9.1.15		Pass
8.9.1.2	Tables 11 to 16 (inclusive) not applied to CREEPAGE and CLEARANCES forming MEANS OF OPERATOR PROTECTION per IEC 60950-1 for INSULATION CO-ORDINATION and used under conditions compliance was tested	MOPP provided	N/A
8.9.1.3	Specified min CLEARANCE applied as min CREEPAGE for CREEPAGE DISTANCES across	No such material	N/A

Issue Date: 2013-11-07 Page 41 of 112 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict

	glass, mica, ceramic and other inorganic insulating		
8.9.1.4	materials with similar tracking characteristics  When min CREEPAGE derived from Tables 11 to 16 (inclusive) was less than min applicable CLEARANCE, value of min CLEARANCE applied as min CREEPAGE DISTANCE		Pass
8.9.1.5	ME EQUIPMENT RATED to operate at an altitude of 2000 m	Up to 3000m	N/A
	ME EQUIPMENT RATED to operate at an altitude specified by MANUFACTURER (m):	Up to 3000m	Pass
	Operating altitude corresponding to actual air pressure for ME EQUIPMENT intended for pressurized environments (e.g., aircraft) used to determine multiplication factor from Table 8, and AIR CLEARANCE was multiplied by this factor	See Insulation Diagram/Table.	Pass
	CREEPAGE DISTANCES not subjected to multiplication factors, but were at least as large as the resulting value for AIR CLEARANCE	See Insulation Diagram/Table.	Pass
8.9.1.6	When WORKING VOLTAGE was between those in Tables 11 to 16 (inclusive), CREEPAGE and CLEARANCES calculated as follows:	See Insulation Diagram/Table.	Pass
	- CREEPAGE DISTANCES determined by linear interpolation between the nearest two values, and the calculated spacing rounded off to the next higher 0.1 mm increment (mm):	See Insulation Diagram/Table.	Pass
	- CLEARANCES for PEAK WORKING VOLTAGES above 2800 V peak or d.c. determined by linear interpolation between the nearest two values, and the calculated spacing rounded off to the next higher 0.1 mm increment (mm):		N/A
	- for AIR CLEARANCES corresponding to PEAK WORKING VOLTAGE up to 2800 V peak or d.c., the higher of the two values applied		Pass
8.9.1.7	Material groups classified in accordance with Table 9 (Material Group):	IIIb	Pass
	Material group evaluated using 50 drops of solution A based on test data for material according to IEC 60112:		N/A
	Material of unknown group considered IIIb		Pass
8.9.1.8	- Pollution degree 1: Micro-environment sealed to exclude dust and moisture		N/A
	- Pollution degree 2: Micro-environment with non- conductive pollution, except occasional conductivity		Pass

Issue Date: 2013-11-07 Page 42 of 112 Report Reference # E341350-A29-UL

IEC 60601				
Clause	Requirement + Test		Result - Remark	Verdict
				·

	caused by condensation		
	- Pollution degree 3: Micro-environment subject to conductive pollution, or dry non-conductive pollution that could become conductive due to expected condensation		N/A
	- Pollution degree 4: Micro-environment where continuous conductivity occurs due to conductive dust, rain, or other wet conditions		N/A
	Pollution degree 4 not used for insulation providing a MEANS OF PROTECTION		N/A
	Where insulation between MAINS PART and earth might be compromised, measures such as maintenance ensure that micro-environment is mitigated to a lower pollution degree		N/A
8.9.1.9	Overvoltage category classification; value of MAINS TRANSIENT VOLTAGE determined from overvoltage category per IEC60664-1 and NOMINAL a.c. MAINS VOLTAGE using Table 10	II	Pass
	V MT Peak (V):	2500	-
	V MN r.m.s. (V):	250	-
8.9.1.10	AIR CLEARANCE for MAINS PARTS (operating on RATED MAINS VOLTAGES up to 300 V) were values for r.m.s. or d.c. RATED MAINS VOLTAGE in Table 13 plus additional CLEARANCE in Table 14 for PEAK WORKING VOLTAGE		Pass
3.9.1.11	SUPPLY MAINS overvoltage category II applied according to IEC 60664-1	Client declares the device to be used in overvoltage category II. The suitability to be considered in end application.	Pass
	For ME EQUIPMENT intended for overvoltage category III, Tables 13 to 15 (inclusive) not used for clearance, instead values in the next MAINS TRANSIENT VOLTAGE column upwards used		N/A
	When PATIENT protection (Table 12) is required for use of ME EQUIPMENT on overvoltage category III SUPPLY MAINS, guidance provided on values required in the rationale for CI. 8.9 used		N/A
3.9.1.12	A SECONDARY CIRCUIT derived from a SUPPLY MAINS, normally, considered to be overvoltage category I according to IEC 60664-1 when the MAINS PART is overvoltage category II (Table 15)		N/A
	Table 15 applied to earthed SECONDARY		N/A

Issue Date: 2013-11-07 Page 43 of 112 Report Reference # E341350-A29-UL

	IEC 606	01	
Clause	Requirement + Test	Result - Remark	Verdict
			<u>.</u>

	CIRCUIT or INTERNALLY POWERED ME EQUIPMENT		
	Requirements for primary circuits in Tables 13 and 14 used for an unearthed SECONDARY CIRCUIT derived from a SUPPLY MAINS		N/A
	Table 15 applied when SECONDARY CIRCUIT was separated from MAINS PART by a functionally earthed or PROTECTIVELY EARTHED metal screen or transients in SECONDARY CIRCUIT were below the levels expected for overvoltage category I		N/A
	Table 15 column for circuits not subject to transient overvoltages applied to:		N/A
	- d.c. SECONDARY CIRCUITS reliably connected to earth and have capacitive filtering limiting peak-to-peak ripple to 10 % of d.c. voltage, and		N/A
	- CIRCUITS in INTERNALLY powered ME EQUIPMENT		N/A
8.9.1.13	For PEAK WORKING VOLTAGES above 1400 V peak or d.c. Table 15 not applied since all the following conditions were met:	Max working voltage less than 1400V	N/A
	- CLEARANCE was at least 5 mm		N/A
	- insulation complied with dielectric strength test of 8.8.3 using an a.c. test voltage with an r.m.s. value equal to 1.06 times PEAK WORKING VOLTAGE, or		N/A
	- a d.c. test voltage equal to peak value of a.c. test voltage with an r.m.s. value equal to 1.06 times PEAK WORKING VOLTAGE, and		N/A
	- CLEARANCE path was partly or entirely through AIR or along the surface of an insulating material of material group I		N/A
	Dielectric strength test conducted only across part(s) of the path that are through air when CLEARANCE path was also partly along surface of a non- group I material		N/A
8.9.1.14	Minimum CREEPAGE DISTANCES for two MEANS OF OPERATOR PROTECTION obtained by doubling values in Table 16 for one MEANS OF OPERATOR PROTECTION		N/A
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		N/A

Issue Date: 2013-11-07 Page 44 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict
8.9.2	a) Short circuiting of each single one of CREEPAGE DISTANCES and CLEARANCES in turn did not result in a HAZARDOUS SITUATION for insulation in MAINS PART between parts of opposite polarity, therefore, min CREEPAGE and CLEARANCES not applied	Sufficient BOP spacing provided.	N/A
	b) Contribution to CREEPAGE DISTANCES of grooves or air gaps less than 1 mm wide limited to widths		Pass
	c) Relative positioning of CLEARANCE providing a MEANS OF PROTECTION is such that the relevant parts are rigid and located by molding, or there is no reduction of a distance below specified value by deformation or movement of parts		Pass
	Normal or likely limited movements of relevant parts taken into consideration when calculating minimum AIR CLEARANCE		Pass
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 were such that CLEARANCES and CREEPAGE DISTANCES don't exist	No insulating compound provided.	N/A
	Thermal cycling, humidity preconditioning, and dielectric strength tests in 8.9.3.2 and 8.9.3.4 or 8.9.3.3 and 8.9.3.4 conducted		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 (clause 8.8.3), test voltage multiplied by 1.6:		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 enameled 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		N/A

Issue Date: 2013-11-07 Page 45 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict
	cycling, it was subjected to dielectric strength test of 8.8.3 except at 1.6 times the test voltage:		
	- The other two samples subjected to humidity preconditioning of 5.7, except for 48 hours only followed by a dielectric strength test of 8.8.3 at 1.6 times the test voltage		N/A
8.9.3.4	One sample containing the cemented joint subjected to a sequence of temperature cycling tests for 10 times		N/A
8.10	Components and wiring		Pass
8.10.1	Components of ME EQUIPMENT likely to result in an unacceptable RISK by their movements mounted securely as indicated in RISK MANAGEMENT FILE	See Appended RM Results Table 8.10.1	Pass
8.10.2	Conductors and connectors of ME EQUIPMENT adequately secured or insulated to prevent accidental detachment in a HAZARDOUS SITUATION	See Appended RM Results Table 8.10.2	Pass
	Conductors and connectors of ME EQUIPMENT when breaking free at their joint are not capable of touching circuit points resulting in a HAZARDOUS SITUATION as indicated in RISK MANAGEMENT FILE		Pass
	Breaking free of one means of mechanical restraint considered a SINGLE FAULT CONDITION	No mechanical restraint	N/A
	Stranded conductors are not solder-coated when secured by clamping means to prevent HAZARDOUS SITUATIONS due to poor contact		N/A
8.10.3	Flexible cords detachable without a TOOL used to interconnect different parts of ME EQUIPMENT provided with means for connection to comply with requirements for metal ACCESSIBLE PARTS of 8.4 when a connection is loosened or broken as shown by measurement or using test finger		N/A
8.10.4	Cord-connected HAND-HELD parts and cord-connected devices	ected foot-operated control	N/A
8.10.4.1	Control devices of ME EQUIPMENT and their connection cords contain only conductors and components operating at 42.4 V peak a.c., max, or 60 V d.c. in circuits isolated from MAINS PART by two MEANS OF PROTECTION	No such device	N/A
	d.c. limit of 60 V applied to d.c. with no more than 10 % peak-to-peak ripple		N/A

Issue Date: 2013-11-07 Page 46 of 112 Report Reference # E341350-A29-UL

	IEC 60601					
Clause	Requirement + Test		Result - Remark	Verdict		
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	42.4 V peak limit applied when ripple exceeded 10 % peak-to-peak limit		N/A
8.10.4.2	Connection and anchorage of a flexible cord to a HAND-HELD or foot-operated control device of ME EQUIPMENT at both ends of cable to control device complied with 8.11.3 when breaking free or shorting between conductors could result in a HAZARDOUS SITUATION		N/A
	This requirement applied to other HAND-HELD parts when disturbance or breaking of one or more of connections could result in a HAZARDOUS SITUATION		N/A
8.10.5	Mechanical protection of wiring		Pass
	a) Internal cables and wiring adequately protected against contact with a moving part or from friction at sharp corners and edges where damage to insulation could result in a HAZARDOUS SITUATION	See Appended RM Results Table 8.10.5	Pass
	b) Wiring, cord forms, or components are not likely to be damaged during assembly or during opening or closing of ACCESS COVERS where such damage could result in a HAZARDOUS SITUATION as shown by manual tests and RISK MANAGEMENT FILE	Component, to be determined in end-product evaluation.	N/A
8.10.6	Guiding rollers of insulated conductors prevent bending of movable insulated conductors around a radius of less than five times the outer diameter of the lead concerned in NORMAL USE		N/A
8.10.7	a) Insulating sleeve that can only be removed by breaking or cutting, or secured at both ends, is used on internal wiring of when needed:	See appended Table 8.10	Pass
	b) Sheath of a flexible cord not used as a MEANS OF PROTECTION inside ME EQUIPMENT when it is subject to mechanical or thermal stresses beyond its RATED characteristics		N/A
	c) Insulated conductors subject to temperatures > 70 °C in NORMAL USE provided with insulation of heat-resistant material when compliance is likely to be impaired due to deterioration of insulation:		N/A
8.11	MAINS PARTS, components and layout		Pass
8.11.1	a) ME EQUIPMENT provided with means of electrically isolating its circuits from SUPPLY MAINS simultaneously on all poles:	Inlet provided only, to be determined in end product.	N/A
	PERMANENTLY INSTALLED ME EQUIPMENT	Not Permanently installed ME	N/A

Issue Date: 2013-11-07 Page 47 of 112 Report Reference # E341350-A29-UL

IEC 60601				
Clause	Requirement + Test	Result - Remark	Verdict	
	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)	equipment.		
	b) Means of isolation incorporated in ME EQUIPMENT, and external means described in technical description:	Inlet provided only, to be determined in end product.	N/A	
	c) A SUPPLY MAINS switch used to comply with 8.11.1 a) complies with CREEPAGE and CLEARANCES in IEC 61058-1 for a MAINS TRANSIENT VOLTAGE of 4 kV	No switches	N/A	
	d) A SUPPLY MAINS switch not incorporated in a POWER SUPPLY CORD or external flexible lead	No switches	Pass	
	e) Direction of movement of 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 such as an APPLIANCE COUPLER or a flexible cord with a MAINS PLUG used in non-PERMANENTLY INSTALLED ME EQUIPMENT to isolate it from SUPPLY MAINS considered to comply with 8.11.1 a)		N/A	
	g) A fuse or a semiconductor device not used as an isolating means		Pass	
	h) ME EQUIPMENT not provided with a device causing disconnection of ME EQUIPMENT from SUPPLY MAINS by producing a short circuit resulting in operation of an overcurrent protection device		Pass	
	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		N/A	
	A clear warning notice is marked on outside of ME EQUIPMENT to indicate it exceeds allowable touch voltage (symbol 10 of Table D.1 is insufficient)		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 of Fig 6 applied		N/A	
3.11.2	MULTIPLE SOCKET-OUTLETS integral with ME	No MSO	N/A	

Issue Date: 2013-11-07 Page 48 of 112 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict

	EQUIPMENT complied with 16.2 d), second dash; and 16.9.2		
3.11.3	POWER SUPPLY CORDS		N/A
8.11.3.1	MAINS PLUG not fitted with more than one POWER SUPPLY CORD	To be evaluated in end product.	N/A
8.11.3.2	POWER SUPPLY CORDS are no less robust than ordinary tough rubber sheathed flexible cord (IEC 60245-1:2003, Annex A, designation 53) or ordinary polyvinyl chloride sheathed flexible cord (IEC 60227-1:1993, Annex A, design. 53)		N/A
	Only polyvinyl chloride insulated POWER SUPPLY CORD with appropriate temperature rating used for ME EQUIPMENT having external metal parts with a temperature > 75 °C touchable by the cord in NORMAL USE		N/A
3.11.3.3	NOMINAL cross-sectional area of conductors of POWER SUPPLY CORDS of ME EQUIPMENT is not less than in Table 17 (mm2 Cu):		N/A
3.11.3.4	APPLIANCE COUPLERS complying with IEC 60320-1 are considered to comply with 8.11.3.5 and 8.11.3.6	IEC 60320-1 Appliance Inlet is used.	Pass
3.11.3.5	Cord anchorage (for APPLIANCE COUPLERS not complying with IEC 60320-1)		
	a) Conductors of POWER SUPPLY CORD provided with strain relieve and insulation protected from abrasion at point of entry to ME EQUIPMENT or a MAINS CONNECTOR by a cord anchorage		N/A
	b) Cord anchorage of POWER SUPPLY CORD is made of and arranged as follows when a total insulation failure of POWER SUPPLY CORD caused conductive non-PROTECTIVELY EARTHED ACCESSIBLE PARTS to exceed limits of 8.4:		N/A
	- insulating material, or		N/A
	- metal, insulated from conductive accessible parts non-PROTECTIVELY EARTHED by a means of PROTECTION, or		N/A
	- metal provided with an insulating lining affixed to cord anchorage, except when it is a flexible bushing forming part of the cord guard in 8.11.3.6, and complying with the requirements for one MEANS OF PROTECTION		N/A
	c) Cord anchorage prevents cord from being clamped by a screw bearing directly on cord		N/A

Issue Date: 2013-11-07 Page 49 of 112 Report Reference # E341350-A29-UL

	IEC 60601				
Clause	Requirement + Test		Result - Remark	Verdict	

	insulation	
	d) Screws to be operated when replacing POWER SUPPLY CORD do not serve to secure any components other than parts of cord anchorage	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 when cord anchorage fails	N/A
	f) Cord anchorage prevents POWER SUPPLY CORD from being pushed into ME EQUIPMENT or MAINS CONNECTOR	N/A
	Conductors of POWER SUPPLY CORD supplied by MANUFACTURER disconnected from terminals or from MAINS CONNECTOR and cord subjected 25 times to a pull applied with no jerks, each time for 1 s, on sheath of the value in Table 18:	N/A
	Cord subjected to a torque in Table 18 for 1 min 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 other than for STATIONARY ME EQUIPMENT protected against excessive bending at inlet opening of equipment or of MAINS CONNECTOR by means of an insulating cord guard or by means of an appropriately shaped opening	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	N/A

Issue Date: 2013-11-07 Page 50 of 112 Report Reference # E341350-A29-UL

	IEC 60601				
Clause	Requirement + Test	Result - Remark	Verdict		

	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 replaceable by SERVICE PERSONNEL provided with MAINS TERMINAL DEVICES ensuring reliable connection	N/A	
	Terminals alone are not used to keep conductors in position, except when barriers are provided such that CREEPAGE and CLEARANCES cannot be reduced below 8.9 if any conductor breaks away	ded N/A	
	Terminals of components other than terminal blocks complying with requirements of this Clause and marked according to 7.3.7 used as terminals intended for external conductors	N/A	
	Screws and nuts clamping external conductors do not serve to secure any other component, except they also clamp internal conductors when unlikely to be displaced when fitting the supply conductors	N/A	
3.11.4.2	Arrangement of MAINS TERMINAL DEVICES		
	a) Terminals provided for connection of external cords or POWER SUPPLY CORDS together with PROTECTIVE EARTH TERMINAL grouped to provide convenient means of connection	N/A	
	b) PROTECTIVE EARTH CONDUCTOR connections complied with 8.6	N/A	
	c) Marking of MAINS TERMINAL DEVICES complied with 7.3	N/A	
	d) MAINS TERMINAL DEVICES not accessible without use of a TOOL	N/A	
	e) A 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	
3.11.4.3	Internal wiring not subjected to stress and CREEPAGE and CLEARANCES not reduced below 8.9 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 rewirable flexible cord did not require special preparation of conductors and conductors were not damaged and	N/A	

Issue Date: 2013-11-07 Page 51 of 112 Report Reference # E341350-A29-UL

IEC 60601				
Requirement + Test	Result - Remark	Verdict		
did not slip out when clamping means tightened as verified by test of 8.11.3.4				
Adequate space provided inside ME EQUIPMENT designed for FIXED wiring or a re-wirable POWER SUPPLY CORD to allow for connection of conductors, and covers fitted without damage to conductors or their insulation		N/A		
Correct connection and positioning of conductors before ACCESS COVER was fitted verified by an installation test		N/A		
Mains fuses and OVER-CURRENT RELEASES		Pass		
A fuse or OVER-CURRENT RELEASE provided in each supply lead for CLASS I and CLASS II ME EQUIPMENT with a functional earth connection per clause 8.6.9, and in at least one supply lead for other single-phase CLASS II ME EQUIPMENT:	2 identical fuses provided in line and neutral	Pass		
- neutral conductor not fused for PERMANENTLY INSTALLED ME EQUIPMENT		N/A		
- fuses or OVER-current RELEASES omitted due to provision of two means of PROTECTION between all parts of opposite polarity within MAINS PART, and between all parts of MAINS PART and EARTH, and such provisions continued within all components		N/A		
Effect of short-circuit fault conditions in other circuits taken into consideration before eliminating fuses or OVER-CURRENT RELEASES		N/A		
Protective devices have adequate breaking capacity to interrupt the maximum fault current including the available short-circuit:	See List of Critical Components	Pass		
A fuse or OVER-CURRENT RELEASE not provided in a PROTECTIVE EARTH CONDUCTOR		Pass		
Fuses complying with IEC 60127 have high breaking capacity (1 500 A) and prospective short-circuit current > 35 A or 10 times current rating of the fuse, whichever is greater	Component power supply intended for use on 20A branch. UL Listed fuses used.	N/A		
Justification for omission of fuses or OVER- CURRENT RELEASES is in RISK MANAGEMENT FILE		N/A		
Internal wiring of the MAINS PART	<u></u>	Pass		
a) Cross-sectional area of internal wiring in a     MAINS PART between MAINS TERMINAL		N/A		
	did not slip out when clamping means tightened as verified by test of 8.11.3.4  Adequate space provided inside ME EQUIPMENT designed for FIXED wiring or a re-wirable POWER SUPPLY CORD to allow for connection of conductors, and covers fitted without damage to conductors or their insulation  Correct connection and positioning of conductors before ACCESS COVER was fitted verified by an installation test  Mains fuses and OVER-CURRENT RELEASES  A fuse or OVER-CURRENT RELEASE provided in each supply lead for CLASS I and CLASS II ME EQUIPMENT with a functional earth connection per clause 8.6.9, and in at least one supply lead for other single-phase CLASS II ME EQUIPMENT:  - neutral conductor not fused for PERMANENTLY INSTALLED ME EQUIPMENT  - fuses or OVER-current RELEASES omitted due to provision of two means of PROTECTION between all parts of opposite polarity within MAINS PART, and between all parts of MAINS PART and EARTH, and such provisions continued within all components  Effect of short-circuit fault conditions in other circuits taken into consideration before eliminating fuses or OVER-CURRENT RELEASES  Protective devices have adequate breaking capacity to interrupt the maximum fault current including the available short-circuit  A fuse or OVER-CURRENT RELEASE not provided in a PROTECTIVE EARTH CONDUCTOR  Fuses complying with IEC 60127 have high breaking capacity (1 500 A) and prospective short-circuit current > 35 A or 10 times current rating of the fuse, whichever is greater  Justification for omission of fuses or OVER-CURRENT RELEASES is in RISK MANAGEMENT FILE  Internal wiring of the MAINS PART  a) Cross-sectional area of internal wiring in a	Requirement + Test		

Issue Date: 2013-11-07 Page 52 of 112 Report Reference # E341350-A29-UL

IEC 60601				
Clause	Requirement + Test	Result - Remark	Verdict	
	DEVICE and protective devices is not less than minimum required for POWER SUPPLY CORD as in clause 8.11.3.3 (mm2 Cu)			
	b) Cross-sectional area of other wiring in MAINS PART and sizes of tracks on printed wiring circuits sufficient to prevent fire in case of fault currents:		N/A	
	When necessary, ME EQUIPMENT connected to a SUPPLY MAINS with max available short-circuit fault, and subsequent simulation of a fault in a single insulation in MAINS PART did not result in any of the HAZARDOUS SITUATIONS in 13.1.2		N/A	

Issue Date: 2013-11-07 Page 53 of 112 Report Reference # E341350-A29-UL

	IEC 60601				
Clause	Requirement + Test		Result - Remark	Verdict	

9	PROTECTION AGAINST MECHANICAL HAZARDS OF ME EQUIPMENT AND ME SYSTEMS		
9.1	ME EQUIPMENT complies with Clause 4 for design and manufacture, and mechanical strength (15.3)		Pass
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:	No moving part	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 function		N/A
	Warnings marked on ME EQUIPMENT or included in instructions for use when HAZARDS persisted after implementing all reasonable protective measures:		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 protective measures in 9.2.2.4, or		N/A
	- Continuous activation in Clause 9.2.2.5		N/A
	Control of relevant motion complied with 9.2.2.6 when implementation of above protective measures were inconsistent with INTENDED USE of ME EQUIPMENT or ME SYSTEM		N/A
9.2.2.2	A TRAPPING ZONE considered not to present a MECHANICAL HAZARD when gaps of TRAPPING ZONE complied with dimensions per Table 20:		N/A
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 13852		N/A

Issue Date: 2013-11-07 Page 54 of 112 Report Reference # E341350-A29-UL

IEC 60601					
Clause	Requirement + Test	Result - Remark	Verdict		
	Distances measured from expected positions of OPERATOR, PATIENT, and others near EQUIPMENT in NORMAL USE or under foreseeable misuse		N/A		
9.2.2.4	GUARDS and protective measures		N/A		
9.2.2.4.1	A TRAPPING ZONE considered not to present a MECHANICAL HAZARD when GUARDS and protective measures were of robust construction, not easy to bypass or render non-operational, and did not introduce additional unacceptable RISK based on results of applicable tests in 15.3 for ENCLOSURES		N/A		
9.2.2.4.2	FIXED GUARDS held in place by systems that cannot be dismantled without 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 all applicable tests as confirmed by review of RISK MANAGEMENT FILE		N/A		
9.2.2.4.4	Protective measures provided in control system prevented moving parts from starting to move while in reach of persons		N/A		
	- PROTECTIVE measures prevented TRAPPING ZONE from reach, or, when it was reached, SYSTEM movement stopped once ME EQUIPMENT started to move, and in the latter case, no HAZARD or damage resulted		N/A		
	- when PROTECTIVE measure was in a single FAULT CONDITION, and an unacceptable RISK could arise, one or more emergency stopping device(s) provided		N/A		
	RISK MANAGEMENT FILE reviewed and all conditions confirmed		N/A		
9.2.2.5	Continuous activation		N/A		
	TRAPPING ZONE not considered to present a MECHANICAL HAZARD where impractical to make TRAPPING ZONE inaccessible when:		N/A		

Issue Date: 2013-11-07 Page 55 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict
	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 as long as OPERATOR response to deactivate device relied upon to prevent HARM		N/A
	Manually operated movements complied with this clause since mass and velocity allowed adequate control of positioning without causing an unacceptable RISK		N/A
	c) when in a SINGLE FAULT CONDITION of continuous activation system an unacceptable RISK could arise, one or more emergency stopping device(s) provided in ME EQUIPMENT:		N/A
9.2.2.6	Speed of movement(s) positioning parts of ME EQUIPMENT or PATIENT, when contact with ME EQUIPMENT could result in a HAZARDOUS SITUATION, limited to allow OPERATOR control of positioning without resulting in an unacceptable RISK		N/A
	Over travel (stopping distance) 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 HAZARDS associated with moving parts		N/A
9.2.3.1	Controls positioned, recessed, or protected by other means and could not be accidentally actuated to result in unacceptable RISK, except when ergonomic considerations for a PATIENT with special needs require otherwise	No moving part	N/A
9.2.3.2	RISK due to over travel (past range limits) of ME EQUIPMENT parts reduced to an acceptable level, and stops or other means with mechanical strength to withstand intended loading in NORMAL USE and foreseeable misuse provided limiting measure in NORMAL and SINGLE FAULT CONDITION:		N/A
9.2.4	Emergency stopping devices	-	N/A
	Where necessary to have one or more emergency	No emergency stop	N/A

N/A

N/A

stopping device(s), emergency stopping device complied with all the following, except for actuating switch capable of interrupting all power ............:

a) Emergency stopping device reduced RISK to an

b) Proximity and response of OPERATOR to

actuate emergency stopping device could be relied

acceptable level

upon to prevent HARM

Issue Date: 2013-11-07 Page 56 of 112 Report Reference # E341350-A29-UL

IEC 60601				
Clause	Requirement + Test	Result - Remark	Verdict	
	c) Emergency stopping device actuator was readily accessible to OPERATOR		N/A	
	d) Emergency stopping device(s) are not part of normal operation of ME EQUIPMENT		N/A	
	e) Emergency switching operation or stopping means neither introduced further HAZARD nor interfered with operation necessary to remove original 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 (symbol IEC 60417-5638, DB:2002-10) 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 protective measure, or emergency stopping, and	No such means	N/A	
	<ul> <li>Uncontrolled or unintended movement of ME EQUIPMENT that could result in an unacceptable RISK prevented</li> </ul>		N/A	
	- Situations where PATIENT is subjected to unacceptable RISKS due to proximity of moving parts, removal of NORMAL exit routes, or other HAZARDS prevented		N/A	
	- measures provided to reduce RISK to an acceptable level when after removal of counterbalanced parts, other parts of ME EQUIPMENT can move in a hazardous way		N/A	
9.3	Rough surfaces, sharp corners and edges of ME	Recognized component. To be	Pass	

Issue Date: 2013-11-07 Page 57 of 112 Report Reference # E341350-A29-UL

	IEC 60601				
Clause	Requirement + Test		Result - Remark	Verdict	

	EQUIPMENT that could result in an unacceptable consider in end installation.	system
9.4	Instability HAZARDS	N/A
9.4.1	ME EQUIPMENT, other than FIXED and handheld, for placement on a surface did not overbalance (tip over) or move unexpectedly, to the degree that it could present an unacceptable RISK to PATIENT, or OPERATOR as tested in 9.4.2 to 9.4.4	
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 not specified, as in 9.4.2.2, and placed on a 10° inclined plane from horizontal consisting of a hard and flat surface (e.g., concrete floor covered with 2 to 4 mm thick vinyl material):	
9.4.2.2	Instability excluding transport	N/A
	ME EQUIPMENT or its parts prepared based on a) to g), inclusive, did not overbalance when placed in different positions of NORMAL USE, except transport positions, on a 5° inclined plane from horizontal (hard and flat surface)	N/A
	A warning provided, stating "Transport only under conditions described in instructions for use or marked on ME EQUIPMENT with an indication of RESIDUAL RISK if ME EQUIPMENT or its parts overbalances" 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 with a mass of 25 kg or more, other than FIXED ME EQUIPMENT for use on floor, did not overbalance due to pushing or resting installation.	
	Surfaces of ME EQUIPMENT where a RISK of overbalancing exists from pushing, leaning, resting etc., permanently marked with a CLEARLY LEGIBLE warning of the RISK (e.g., safety sign 5 of Table D.2, safety sign ISO 7010-P017)	N/A
	ME EQUIPMENT did not overbalance when placed on a horizontal plane, and a force of 25% of its weight, but not more than 220 N, applied in different directions, except a direction with an upward component	N/A
	b) ME EQUIPMENT, other than FIXED ME EQUIPMENT, for use on the floor or on a table, did	N/A

Issue Date: 2013-11-07 Page 58 of 112 Report Reference # E341350-A29-UL

	IEC 60601				
Clause	Requirement + Test	Result - Remark	Verdict		
	not overbalance due to sitting or stepping, except when a legible warning of this RISK provided on ME EQUIPMENT (e.g., safety signs 6 and 7 of Table D.2, safety signs ISO 7010-P018, or ISO 7010-P019 as appropriate)				
	ME EQUIPMENT did not overbalance when placed on a horizontal plane, and a constant force of 800 N applied at the point of maximum moment to working surfaces, offering an foothold or sitting surface of a min 20 x 20 cm area, and at a height 1 m from the floor		N/A		
9.4.2.4	Castors and wheels		N/A		
9.4.2.4.1	Means used for transportation of MOBILE ME EQUIPMENT (e.g., castors or wheels) did not result in an unacceptable RISK when MOBILE ME EQUIPMENT moved or parked in NORMAL USE	No such part	N/A		
9.4.2.4.2	Force required to move MOBILE ME EQUIPMENT along a hard and flat horizontal surface did not exceed 200 N applied at a height of 1 m above floor or highest point on ME EQUIPMENT when < 1 m high, except when instructions indicated more than one person needed (N)		N/A		
9.4.2.4.3	MOBILE ME EQUIPMENT exceeding 45 kg configured with a SAFE WORKING LOAD, moved 10 times in forward direction over a solid vertical plane obstruction with wheels impacting the obstruction at a speed of 0.4 m/s ± 0.1 m/s for manual or with max speed for motor driven MOBILE ME EQUIPMENT		N/A		
	ME EQUIPMENT went up the obstruction without overbalancing or any other unacceptable RISK as determined by examination of RISK MANAGEMENT FILE, ME EQUIPMENT and its parts		N/A		
	There was no reduction of CREEPAGE and CLEARANCES below 8.9, no access to parts exceeding limits in 8.4, and no access to moving parts capable of causing HARM, and		N/A		
	- Assessment criteria in Clause 9 and 11.6 used		N/A		
	- Dielectric strength test of 8.8.3 conducted to evaluate integrity of solid SUPPLEMENTARY or REINFORCED INSULATION		N/A		
	- CREEPAGE DISTANCES and AIR CLEARANCES measured compared favourably with min distances in clause 8.9		N/A		

Issue Date: 2013-11-07 Page 59 of 112 Report Reference # E341350-A29-UL

	IEC 60601				
Clause	Requirement + Test		Result - Remark	Verdict	

	Small chips not adversely affecting protection against electric shock or moisture, disregarded		N/A
9.4.3	Instability from unwanted lateral movement (includin	g 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	Recognized component. To be consider in end system installation.	N/A
	b) MOBILE ME EQUIPMENT provided with locking means to prevent unwanted movements of ME EQUIPMENT or its parts in transport position		N/A
	c) No unacceptable RISK due to unwanted lateral movement resulted when MOBILE ME EQUIPMENT placed in its transport position or worst case NORMAL USE position with SAFE WORKING LOAD, and locking device activated, on a 10° inclined hard flat surface with castors in the worst-case position		N/A
	Following initial elastic movement, creepage, and pivoting of castors, no further movement of MOBILE ME EQUIPMENT > 50 mm (in relation to inclined plane) occurred (mm)		N/A
	RISK due to any initial movement assessed taking into consideration NORMAL USE of ME EQUIPMENT		N/A
.4.3.2	Instability excluding transport		N/A
	a) Further movement of ME EQUIPMENT (after initial elastic movement) was less than 50 mm when MOBILE ME EQUIPMENT with a SAFE WORKING LOAD positioned on a 5 inclined hard flat surface with wheel locked or braking system activated (mm)		N/A
	RISK due to initial movements assessed taking into consideration NORMAL USE of ME EQUIPMENT		N/A
	b) TRANSPORTABLE or STATIONARY ME EQUIPMENT for use on the floor and with a SAFE WORKING LOAD prepared as in 9.4.2.2 and placed on a horizontal plane with locking device activated and castors, when supplied, in their worst -case position		N/A
	Further movement of ME EQUIPMENT (after initial elastic movement), was no more than 50 mm when a force of 25 % of weight of unit, but less than 220 N, applied in different directions, except a direction with an upwards component, at highest point of ME EQUIPMENT but 1.5 m from floor		N/A

Issue Date: 2013-11-07 Page 60 of 112 Report Reference # E341350-A29-UL

	IEC 60601				
Clause	Requirement + Test		Result - Remark	Verdict	

	RISK due to initial movements assessed taking into consideration NORMAL USE of ME EQUIPMENT	N/A
9.4.4	Grips and other handling devices	N/A
	a) ME EQUIPMENT other than PORTABLE EQUIPMENT or its part 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, except when handling is obvious and causing HAZARDS	N/A
	Handles, when supplied, 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	
9.5.1	Suitability of means of protecting against unacceptable RISK of expelled parts determined by assessment and examination of RISK installation.  MANAGEMENT FILE	N/A
9.5.2	Cathode ray tube(s) complied with IEC 60065:2001, Clause 18, or IEC 61965:	N/A
9.6	Acoustic energy (including infra- and ultrasound) and vibration	N/A
9.6.1	Human exposure to acoustic energy and vibration from ME EQUIPMENT doesn't result in unacceptable RISK as confirmed in RISK MANAGEMENT FILE including audibility of auditory alarm signals, PATIENT sensitivity, and tests of 9.6.2 and 9.6.3	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, except for auditory alarm signals	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):	-
-		

Issue Date: 2013-11-07 Page 61 of 112 Report Reference # E341350-A29-UL

	IEC 60601				
Clause	Requirement + Test		Result - Remark	Verdict	

	- 140 dB un-weighted sound pressure level for impulsive or impact acoustic energy (dB):		-
9.6.2.2	RISK MANAGEMENT FILE examined for RISKS associated with infrasound or ultrasound, when present, addressed in RISK MANAGEMENT PROCESS		N/A
9.6.3	Hand-transmitted vibration		N/A
	Means provided, except for INTENDED USE vibrations, to protect PATIENT and OPERATOR when hand-transmitted frequency-weighted r.m.s. acceleration generated in NORMAL USE exceeds specified values measured at points of hand contact with PATIENT or OPERATOR		N/A
	- 2.5 m/s2 for a cumulative time of 8 h during a 24 h period (m/s2):		N/A
	- Accelerations for different times, inversely proportional to square root of time (m/s2):		N/A
9.7	Pressure vessels and parts subject to pneumatic and	d hydraulic pressure	N/A
9.7.1	Requirements of this clause applied to vessels and parts of ME EQUIPMENT subject to pressure resulting in rupture and unacceptable RISK	No Pressure vessels and parts subject to pneumatic and hydraulic pressure.	N/A
	Parts of a pneumatic or hydraulic system used as a support system, comply with 9.8		N/A
9.7.2	Pneumatic and hydraulic parts of ME EQUIPMENT or ACCESSORIES met following requirements based on examination of RISK MANAGEMENT FILE		N/A
	- no unacceptable RISK resulted from loss of pressure or loss of vacuum		N/A
	- no unacceptable RISK resulted from a fluid jet caused by LEAKAGE or a component failure		N/A
	- Elements of ME EQUIPMENT or an ACCESSORY, especially pipes and hoses leading to an unacceptable RISK protected against harmful external effects		N/A
	- Reservoirs and similar vessels leading to an unacceptable RISK are automatically depressurized when ME EQUIPMENT is isolated from its POWER supply		N/A
	Means provided for isolation, or local depressurizing reservoirs and similar vessels, and pressure indication when above not possible		N/A

Issue Date: 2013-11-07 Page 62 of 112 Report Reference # E341350-A29-UL

	IEC 60601			
Clause	Requirement + Test	Result - Remark	Verdict	
	- all Elements remaining under pressure after isolation of ME EQUIPMENT or an ACCESSORY from its POWER supply resulting in an unacceptable RISK provided with clearly identified exhaust devices, and a warning to depressurize these Elements before setting or maintenance activity		N/A	
9.7.3	Maximum pressure a part of ME EQUIPMENT can be subjected to in NORMAL and SINGLE FAULT CONDITIONS considered to be highest of following:		N/A	
	a) RATED maximum supply pressure from an external source		N/A	
	b) Pressure setting of a pressure-relief device provided as part of assembly		N/A	
	c) Max pressure that can develop by a source of pressure that is part of assembly, unless pressure limited by a pressure-relief device		N/A	
9.7.4	Max pressure in NORMAL and SINGLE FAULT CONDITIONS did not exceed MAXIMUM PERMISSIBLE WORKING PRESSURE for EQUIPMENT part, except as allowed in 9.7.7, confirmed by examination of ME EQUIPMENT and RISK MANAGEMENT FILE, and by functional tests		N/A	
9.7.5	A pressure vessel withstood a HYDRAULIC TEST PRESSURE when pressure was > 50 kPa, and product of pressure and volume was more than 200 kPal		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 by MANUFACTURER'S data, ME EQUIPMENT, RISK MANAGEMENT FILE, and functional tests		N/A	
	a) Connected as close as possible to pressure vessel or parts of system it is to protect		N/A	
	b) Installed to be readily accessible for inspection, maintenance, and repair		N/A	

Issue Date: 2013-11-07 Page 63 of 112 Report Reference # E341350-A29-UL

	IEC 60601		•
Clause	Requirement + Test	Result - Remark	Verdict
	c) Could be adjusted or rendered inoperative without a TOOL		N/A
	d) With discharge opening located and directed as to not to release material towards any person		N/A
	e) With discharge opening located and directed as to not to deposit material on parts that could result in an unacceptable RISK		N/A
	f) Adequate discharge capacity provided to ensure that pressure will not exceed MAXIMUM PERMISSIBLE WORKING PRESSURE of system it is connected to by more than 10 % when failure occurs in control of supply pressure		N/A
	g) No shut-off valve provided between a pressure- relief device and parts it is to protect		N/A
	h) Min number of cycles of operation 100 000, except for one-time use devices (bursting disks)		N/A
.8	HAZARDS associated with support systems		N/A
.8.1	ME EQUIPMENT parts designed to support loads or provide actuating forces when a mechanical fault could constitute an unacceptable RISK:	No support system.	N/A
	- Construction of support, suspension, or actuation system complied with Table 21 and TOTAL LOAD		N/A
	<ul> <li>means of attachment of ACCESSORIES prevent possibility of incorrect attachment that could result in an unacceptable RISK</li> </ul>		N/A
	- RISK ANALYSIS of support systems included HAZARDS from static, dynamic, vibration, impact and pressure loading, foundation and other movements, temperature, environmental, manufacture and SERVICE conditions		N/A
	- RISK ANALYSIS included effects of failures such as excessive deflection, plastic deformation, ductile/brittle fracture, fatigue fracture, instability (buckling), stress-assisted corrosion cracking, wear, material creep and deterioration, and residual stresses from manufacturing PROCESSES		N/A
	<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		N/A

Issue Date: 2013-11-07 Page 64 of 112 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict

	adequacy of surface of structure parts will be attached to	
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
	When test results were part of information, 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
9.8.3	Strength of PATIENT or OPERATOR support or suspe	ension systems N/A
9.8.3.1	ME EQUIPMENT parts supporting or immobilizing PATIENTS minimize RISK of physical injuries and accidental loosening of secured joints	N/A
	SAFE WORKING LOAD of ME EQUIPMENT or its parts supporting or suspending PATIENTS or OPERATORS is sum of mass of PATIENTS or mass of OPERATORS plus mass of ACCESSORIES supported by ME EQUIPMENT or its parts	N/A
	Supporting and suspending parts for adult human PATIENTS or OPERATORS designed for a PATIENT or OPERATOR with a min mass of 135 kg and ACCESSORIES with a min mass of 15 kg, unless stated by MANUFACTURER	N/A
	Maximum mass of PATIENT included in SAFE WORKING LOAD of ME EQUIPMENT or its parts supporting or suspending PATIENTS adapted when MANUFACTURER specified applications	N/A
	Max allowable PATIENT mass < 135 kg marked on ME EQUIPMENT and stated in ACCOMPANYING DOCUMENTS	N/A
	Max allowable PATIENT mass > 135 kg stated in ACCOMPANYING DOCUMENTS	N/A
	Examination of markings, ACCOMPANYING DOCUMENTS, and RISK MANAGEMENT FILE	N/A

Issue Date: 2013-11-07 Page 65 of 112 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict

	confirmed compliance:	
9.8.3.2	Part of SAFE WORKING LOAD representing mass of PATIENTS or OPERATORS is distributed on support/suspension surface representing human body as in Fig A.19	N/A
	Part of SAFE WORKING LOAD representing mass of ACCESSORIES deployed as in NORMAL USE and, when not defined, at worst case position permitted by configuration or ACCESSORIES attachment on support/suspension parts	N/A
	a) Entire mass of PATIENT or OPERATOR distributed over an area of 0.1 m2 on a foot rest temporarily supporting a standing PATIENT or OPERATOR:	N/A
	Compliance confirmed by examination of ME EQUIPMENT, RISK MANAGEMENT FILE, specifications of materials and their processing, and tests	N/A
	PATIENT support/suspension system positioned horizontally in most disadvantageous position in NORMAL USE, and a mass 2 x 135 kg or twice intended person's load (the greater used), applied to foot rest over an area of 0.1 m2 for 1 min (Kg):	N/A
	Damage or deflection resulting in an unacceptable RISK did not occur on foot rest and its secured joints	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, RISK MANAGEMENT FILE, specifications of materials and their processing, and by a test:	N/A
	PATIENT support/suspension system set in most unfavourable NORMAL USE position, and a mass of 60 % of part of SAFE WORKING LOAD simulating PATIENT or OPERATOR, or a min 80 kg, placed on support or suspension system with centre of load 60 mm from outer edge of support or suspension system for at least one minute (Kg):	N/A
	Deflection of support/suspension system resulting in an unacceptable RISK not occur	N/A
9.8.3.3	Dynamic forces that can be exerted on equipment	N/A

Issue Date: 2013-11-07 Page 66 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict
	parts supporting or suspending a PATIENT or OPERATOR in NORMAL USE did not result in an unacceptable RISK as confirmed by following test:		
	PATIENT support/suspension system set in most unfavourable NORMAL USE position, and a mass equal to SAFE WORKING LOAD simulating PATIENT or OPERATOR dropped from 150 mm above seat area on an area of support/ suspension a PATIENT or OPERATOR can sit		N/A
9.8.4	Systems with MECHANICAL PROTECTIVE DEVIC	ES	N/A
9.8.4.1	a) A MECHANICAL PROTECTIVE DEVICE provided when a support system or its parts impaired by wear have a TENSILE SAFETY FACTOR to values in Table 21, rows 5 and 6, but less than 3 and 4		N/A
	b) MECHANICAL PROTECTIVE complies with the requirements as follows:		N/A
	- Designed based on TOTAL LOAD, and includes effects of Safe WORKING LOAD when applicable		N/A
	- Has TENSILE SAFETY FACTORS for all parts not less than Table 21, row 7		N/A
	- Activated before travel (movement) produced an unacceptable RISK		N/A
	- Takes into account Clauses 9.2.5 and 9.8.4.3		N/A
	Compliance confirmed by examination of ME EQUIPMENT, RISK MANAGEMENT FILE, specifications of materials and their processing:		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 (e.g., a secondary cable)		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
	- Further use of ME EQUIPMENT not possible until replacement of MECHANICAL PROTECTIVE device		N/A
	- ACCOMPANYING DOCUMENTS instruct once MECHANICAL PROTECTIVE device is Activated, SERVICE PERSONNEL shall be called, and MECHANICAL PROTECTIVE device must be		N/A

Issue Date: 2013-11-07 Page 67 of 112 Report Reference # E341350-A29-UL

	IEC	60601	
Clause	Requirement + Test	Result - Remark	Verdict

	replaced before ME EQUIPMENT can be used		-
	- ME EQUIPMENT permanently marked with safety sign 2 of Table D.2 (i.e., safety sign 7010-W001)		N/A
	- Marking is adjacent to MECHANICAL PROTECTIVE device or its location relative to MECHANICAL PROTECTIVE device is obvious to SERVICE PERSONNEL		N/A
	- compliance confirmed by examination of ME EQUIPMENT, ACCOMPANYING DOCUMENTS, RISK MANAGEMENT FILE, specifications and processing of materials, and following test		N/A
	A chain, cable, band, spring, belt, jack screw nut, pneumatic or hydraulic hose, structural part or the like, employed to support a load, defeated by a convenient means causing maximum normal load to fall from most adverse position permitted by construction of ME EQUIPMENT		N/A
	Load included SAFE WORKING LOAD in 9.8.3.1 when system was capable of supporting a PATIENT or OPERATOR		N/A
	No evidence of damage to MECHANICAL PROTECTIVE DEVICE affecting its ability to perform its intended function		N/A
9.8.5	Systems without MECHANICAL PROTECTIVE DEV	ICES	N/A
	Support system parts have TENSILE SAFETY FACTORS to values in Table 21, rows 1 and 2, and are not impaired by wear:		N/A
	Support system parts impaired by wear, however, they have TENSILE SAFETY FACTORS to values in Table 21, rows 3 and 4		N/A
	Examination of ME EQUIPMENT and RISK MANAGEMENT FILE confirmed compliance		N/A

Issue Date: 2013-11-07 Page 68 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict

10	PROTECTION AGAINST UNWANTED AND EXCESSIVE RADIATION HAZARDS	N/A
10.1	X-Radiation	N/A
10.1.1	X-radiation dose-rate was ≤ 36 pA/kg (5 µSv/h) (0.5 mR/h) 5 cm from surface of ME EQUIPMENT including background radiation for ME EQUIPMENT not producing therapeutic/diagnostic X-radiation but producing ionizing radiation:	N/A
	Amount of radiation measured by means of an ionizing chamber radiation monitor with an effective area of 10 cm2 or by other instruments producing equal results	N/A
	ME EQUIPMENT operated as in NORMAL USE at most unfavourable RATED MAINS VOLTAGE and controls adjusted to emit maximum radiation	N/A
	Internal pre-set controls not intended for adjustment during EXPECTED SERVICE LIFE of ME EQUIPMENT not taken into consideration	N/A
10.1.2	RISK from unintended X-radiation from ME EQUIPMENT producing X-radiation for diagnostic and therapeutic purposes addressed in RISK MANAGEMENT PROCESS as indicated in RISK MANAGEMENT FILE (see IEC 60601-1-3 & 1.3) :	N/A
0.2	RISK associated with alpha, beta, gamma, neutron, and other particle radiation, when applicable, addressed in RISK MANAGEMENT PROCESS as shown in RISK MANAGEMENT FILE:	N/A
10.3	RISK associated with microwave radiation, when applicable, addressed in RISK MANAGEMENT PROCESS as indicated in RISK MANAGEMENT FILE	N/A
10.4	Relevant requirements of IEC 60825-1:1993 applied to lasers, light emitting diodes (LEDs), and laser light barriers or similar products	N/A
10.5	RISK associated with visible electromagnetic radiation other than emitted by lasers and LEDS, when applicable, addressed in RISK MANAGEMENT PROCESS as indicated in RISK MANAGEMENT FILE	N/A
0.6	RISK associated with infrared radiation other than emitted by lasers and LEDS, as applicable, addressed in RISK MANAGEMENT PROCESS as indicated in RISK MANAGEMENT FILE:	N/A
0.7	RISK associated with ultraviolet radiation other than emitted by lasers and LEDS, as applicable,	N/A

Issue Date: 2013-11-07 Page 69 of 112 Report Reference # E341350-A29-UL

IEC 60601				
Clause Requirement + Test Result - Remark Verd				
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	LI DIGITALIA GENERAL DE GOGO			
	addressed in RISK MANAGEMENT PROCESS as indicated in RISK MANAGEMENT FILE			

Issue Date: 2013-11-07 Page 70 of 112 Report Reference # E341350-A29-UL

	IEC	60601	
Clause	Requirement + Test	Result - Remark	Verdict

11	PROTECTION AGAINST EXCESSIVE TEMPERATURES AND OTHER HAZARDS		Pass
11.1	Excessive temperatures in ME EQUIPMENT		Pass
11.1.1	Temperatures on ME EQUIPMENT parts did not exceed values in Tables 22 and 23 operating in worst-case NORMAL USE at maximum rated ambient operating temperature T	See appended Table 11.1.1 and appended RM Results Table 11.1.1	Pass
	Surfaces of test corner did not exceed 90 °C	Recognized component. To be consider in end system installation.	N/A
	THERMAL CUT-OUTS did not operate in NORMAL CONDITION	No thermal cut-outs.	N/A
11.1.2	Temperature of APPLIED PARTS		N/A
11.1.2.1	Temperatures, hot or cold surfaces, and when appropriate, clinical effects of APPLIED PARTS supplying heat to a PATIENT determined and documented in RISK MANAGEMENT FILE and instructions for use	No applied parts.	N/A
11.1.2.2	APPLIED PARTS not supplying heat to a PATIENT met Table 24 with max surface temperatures > 41 °C disclosed in instructions for use, and clinical effects regarding maturity of PATIENTS, body surface, surface pressure, medications taken, as shown in RISK MANAGEMENT FILE:		N/A
	Surfaces of APPLIED PARTS cooled below ambient temperatures that can also result in HAZARD evaluated as part of RISK MANAGEMENT PROCESS		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:	No thermal cut-outs.	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
11.1.4	GUARDS preventing contact with hot or cold accessible surfaces removable only with a TOOL	No such guards.	N/A
11.2	Fire prevention		Pass
11.2.1	ENCLOSURE has strength and rigidity necessary	See appended Table 15.3	Pass

Issue Date: 2013-11-07 Page 71 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict

	to prevent a fire caused by reasonably foreseeable misuse and met mechanical strength tests for ENCLOSURES in 15.3		
11.2.2	Me equipment and me systems used in conjunction ENVIRONMENTS	with OXYGEN RICH	N/A
11.2.2.1	RISK of fire in an OXYGEN RICH ENVIRONMENT reduced by means limiting spread of fire under NORMAL or SINGLE FAULT CONDITIONS when source of ignition in contact with ignitable material:	Recognized component. To be consider in end system installation.	N/A
	Requirements of 13.1.1 applied to oxygen concentrations up to 25 % at one atmosphere or partial pressures up to 27.5 kPa for higher atmospheric pressures		N/A
	a) No sources of ignition discovered in an OXYGEN RICH ENVIRONMENT in NORMAL and SINGLE FAULT CONDITIONS under any of the following conditions:		N/A
	when temperature of material raised to its ignition temperature		N/A
	2) when temperatures affected solder or solder joints causing loosening, short circuiting, or other failures causing sparking or increasing material temperature to its ignition temperature		N/A
	3) when parts affecting safety cracked or changed outer shape exposing temperatures higher than 300°C or sparks due to overheating		N/A
	4) when temperatures of parts or components exceeded 300°C, atmosphere was 100 % oxygen, contact material solder, and fuel cotton		N/A
	5) when sparks provided adequate energy for ignition by exceeding limits of Figs 35 to 37 (inclusive), atmosphere was 100 % oxygen, contact material solder, and fuel cotton		N/A
	Deviations from worst case limits in 4) and 5) above based on lower oxygen concentrations or less flammable fuels justified and documented in RISK MANAGEMENT FILE		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

Issue Date: 2013-11-07 Page 72 of 112 Report Reference # E341350-A29-UL

IEC 60601			
Clause	Requirement + Test	Result - Remark	Verdict
	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:		N/A
	1) Electrical components in an OXYGEN RICH ENVIRONMENT provided with power supplies having limited energy levels lower than those considered sufficient for ignition in 11.2.2.1 a) as determined by examination, measurement or calculation of power, energy, and temperatures in NORMAL and SINGLE FAULT CONDITIONS identified in 11.2.3		N/A
	2) Max oxygen concentration measured until it did not exceed 25 % in ventilated compartments with parts that can be a source of ignition only in SINGLE FAULT CONDITION and can be penetrated by oxygen due to an undetected leak (%)		N/A
	3) A compartment with parts or components that can be a source of ignition only under SINGLE FAULT CONDITION separated from another compartment containing an OXYGEN RICH ENVIRONMENT by sealing all joints and holes for cables, shafts, or other purposes		N/A
	Effect of possible leaks and failures under SINGLE FAULT CONDITION that could cause ignition evaluated using a RISK ASSESSMENT to determine maintenance intervals by examination of documentation and RISK MANAGEMENT FILE:		N/A
	4) Fire initiated in ENCLOSURE of electrical components in a compartment with OXYGEN RICH ENVIRONMENT that can become a source of ignition only under SINGLE FAULT CONDITIONS self-extinguished rapidly and no hazardous amount of toxic gases reached PATIENT as determined by analysis of gases		N/A
1.2.2.2	RISK of ignition under least favourable conditions did not occur and oxygen concentration did not exceed 25% in immediate surroundings due to location of external exhaust outlets of an OXYGEN RICH ENVIRONMENT when electrical components mounted outside of ME EQUIPMENT or ME SYSTEM		N/A
11.2.2.3	Electrical connections within a compartment containing an OXYGEN RICH ENVIRONMENT under NORMAL USE did not produce sparks due		N/A

Issue Date: 2013-11-07 Page 73 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict
	to loosening or breaking, except when limited in power and energy to values in 11.2.2.1 a) 5)		
	- Screw-attachments protected against loosening during use by varnishing, use of spring washers, or adequate torques		N/A
	- Soldered, crimped, and pin-and-socket CONNECTIONS of cables exiting ENCLOSURE include additional MECHANICAL securing means		N/A
11.2.3	SINGLE FAULT CONDITIONS related to OXYGEN EQUIPMENT and ME SYSTEMS considered	RICH ENVIRONMENTS ME	N/A
	- Failure of a ventilation system constructed in accordance with 11.2.2.1 b) 2):	Recognized component. To be consider in end system installation.	N/A
	- Failure of a barrier constructed in accordance with 11.2.2.1 b) 3):		N/A
	- Failure of a component creating a source of ignition (as defined in 11.2.2.1 a):		N/A
	- Failure of solid insulation or creepage and clearances providing equivalent of at least one MEANS OF PATIENT PROTECTION but less than two MEANS OF PATIENT PROTECTION that could create a source of ignition defined in 11.2.2.1 a)		N/A
	- failure of a pneumatic component resulting in LEAKAGE of oxygen-enriched gas:		N/A
1.3	Constructional requirements for fire ENCLOSURES	of ME EQUIPMENT	Pass
	ME EQUIPMENT met this clause for alternate means of compliance with selected HAZARDOUS SITUATIONS and fault conditions in 13.1.2:	See Appended RM Results Table 11.3	Pass
	Constructional requirements were met, or		Pass
	- constructional requirements specifically analysed in RISK MANAGEMENT FILE	See Appended RM Results Table 11.3	Pass
	Justification, when requirement not met:		N/A
	a) Flammability classification of insulated wire within fire ENCLOSURE is FV-1, or better, based on IEC 60695 series as determined by examination of data on materials	See appended Table 8.10	Pass
	Flammability classification of connectors, printed circuit boards, and insulating material on which components are mounted is FV-2, or better, based on IEC 60695-11-10 as decided by examination of materials data:	See appended Table 8.10	Pass

Issue Date: 2013-11-07 Page 74 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict
	If no FV Certification, FV tests based on IEC 60695-11-10 conducted on 3 samples of complete parts (or sections of it), including area with min. thickness, ventilation openings		Pass
	b) Fire ENCLOSURE met following:		Pass
	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 2 x 2 mm centre to centre and wire diameter of at least 0.45 mm	No bottom openings	Pass
	2) No openings on the sides within the area included within the inclined line C in Fig 39		Pass
	3) ENCLOSURE, baffles, and flame barriers have adequate rigidity and made of appropriate metal or of non-metallic materials, except constructions based on Table 25 and a mesh; FV-2 or better for TRANSPORTABLE ME EQUIPMENT, FV-1 or better for fixed EQUIPMENT, or STATIONARY EQUIPMENT per IEC 60695-11-10, determined by ENCLOSURE examination or flammability classification based on 11.3a)	See appended Table 8.10	Pass
11.4	ME EQUIPMENT and ME SYSTEMS intended for use with flammable anaesthetics		
	ME EQUIPMENT, ME SYSTEMS and parts described in ACCOMPANYING DOCUMENTS for use with flammable anaesthetics (CATEGORY AP) or anaesthetics with oxidants (CATEGORY APG) comply with Annex G	To be evaluated in end product.	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:		N/A
11.6	Overflow, spillage, leakage, ingress of water or particulate matter, cleaning, disinfection, sterilization and compatibility with substances used with the ME EQUIPMENT		N/A
11.6.1	Sufficient degree of protection provided against overflow, spillage, leakage, ingress of water or particulate matter, cleaning, disinfection and sterilization, and compatibility with substances used with ME EQUIPMENT		N/A
11.6.2	Overflow in ME EQUIPMENT	To be evaluated in end product.	N/A
	Liquid reservoir liable to overflow in NORMAL USE		N/A

Issue Date: 2013-11-07 Page 75 of 112 Report Reference # E341350-A29-UL

IEC 60601			
Clause	Requirement + Test	Result - Remark	Verdict
	completely filled and 15 % of its capacity poured in for over 1 min, and except when restricted, TRANSPORTABLE ME EQUIPMENT tilted through an angle of 15° in least favourable direction(s), and when necessary refilled starting from position of NORMAL USE:		
	ME EQUIPMENT met dielectric strength and LEAKAGE CURRENT tests and uninsulated electrical parts or electrical insulation of parts that could result in a HAZARDOUS SITUATION were not wet		N/A
11.6. 3	Spillage on ME EQUIPMENT and ME SYSTEM	To be evaluated in end product.	N/A
	ME EQUIPMENT and ME SYSTEMS handling liquids in NORMAL USE positioned as in 5.4 a) and liquid with composition, volume, duration of spill, point of contact, and test conditions based on RISK MANAGEMENT PROCESS poured steadily on a point on top of ME EQUIPMENT:		N/A
	ME EQUIPMENT met dielectric strength and LEAKAGE CURRENT tests and uninsulated electrical parts or electrical insulation of parts that could result in a HAZARDOUS SITUATION were not wet		N/A
11.6.4	Leakage	To be evaluated in end product.	N/A
11.6.5	Ingress of water or particulate matter into ME EQUII	PMENT 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 a HAZARDOUS SITUATION in NORMAL CONDITION or in a SINGLE FAULT CONDITION		N/A
11.6.6	Cleaning and disinfection of ME EQUIPMENT and M	ME SYSTEMS	N/A
	ME EQUIPMENT/ME SYSTEM and their parts and ACCESSORIES cleaned or disinfected once using methods specified in instructions for use including any cooling or drying period:	To be evaluated in end product.	N/A
	ME EQUIPMENT met dielectric strength and LEAKAGE CURRENT tests, with no deterioration resulting in an unacceptable RISK present:		N/A

Issue Date: 2013-11-07 Page 76 of 112 Report Reference # E341350-A29-UL

	IEC 60601			
Clause	Requirement + Test	Result - Remark	Verdict	
	Effects of multiple cleanings/disinfections during EXPECTED SERVICE LIFE of EQUIPMENT evaluated by MANUFACTURER and assurance that no unacceptable RISK will occur verified by RISK MANAGEMENT FILE review		N/A	
11.6.7	Sterilization of ME EQUIPMENT and ME SYSTEMS	S	N/A	
	ME EQUIPMENT, ME SYSTEMS and their parts or ACCESSORIES intended to be sterilized assessed and documented according to ISO 11134, ISO 11135, or ISO 11137 as appropriate:		N/A	
	After the test, ME EQUIPMENT complied with the appropriate dielectric strength and LEAKAGE CURRENT tests and there was no deterioration resulting in an unacceptable RISK:		N/A	
11.6.8	RISKS associated with compatibility of substances used with ME EQUIPMENT addressed in RISK MANAGEMENT PROCESS as confirmed by examination of RISK MANAGEMENT FILE:		N/A	
11.7	ME EQUIPMENT, ME SYSTEM, and ACCESSORIES coming into direct or indirect contact with biological tissues, cells, or body fluids assessed and documented per ISO 10993		N/A	
11.8	Interruption and restoration of power supply did not result in a HAZARDOUS SITUATION, except interruption of its intended function		N/A	

Issue Date: 2013-11-07 Page 77 of 112 Report Reference # E341350-A29-UL

	IEC 60	601	
Clause	Requirement + Test	Result - Remark	Verdict

12	ACCURACY OF CONTROLS AND INSTRUMENTS AND PROTECTION AGAINST HAZARDOUS OUTPUTS		N/A
12.1	RISKS associated with accuracy of controls and instruments stated in RISK MANAGEMENT PROCESS confirmed by RISK MANAGEMENT FILE review	To be evaluated in end product.	N/A
12.2	RISK of poor USABILITY, including identification, marking, and documents addressed in a USABILITY ENGINEERING PROCESS as confirmed by review of provided records:		N/A
12.3	The need for alarm systems as a means of RISK CONTROL and RISKS associated with operation or failure of alarm system addressed in RISK MANAGEMENT PROCESS		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 as confirmed in RISK MANAGEMENT FILE		N/A
12.4.2	When applicable, need for indication of parameters associated with hazardous output addressed in RISK MANAGEMENT PROCESS as confirmed in RISK MANAGEMENT FILE		N/A
12.4.3	RISKS associated with accidental selection of excessive output values for ME EQUIPMENT with a multi-purpose unit designed to provide low and high-intensity outputs for different treatments addressed in RISK MANAGEMENT PROCESS, confirmed in RISK MANAGEMENT FILE		N/A
12.4.4	When applicable, RISKS associated with incorrect output addressed in RISK MANAGEMENT PROCESS as confirmed by review of RISK MANAGEMENT FILE:		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 emitted by ME EQUIPMENT designed to produce radiation for diagnostic/therapeutic purposes		N/A
	Radiation safety ensured by compliance with requirements of appropriate standards		N/A
12.4.5.2	RISKS associated with diagnostic X-rays addressed in RISK MANAGEMENT PROCESS as confirmed in RISK MANAGEMENT FILE		N/A

Issue Date: 2013-11-07 Page 78 of 112 Report Reference # E341350-A29-UL

IEC 60601				
Clause	Requirement + Test	Result - Remark	Verdict	
12.4.5.3	RISKS associated with radiotherapy addressed in RISK MANAGEMENT PROCESS as confirmed by review of RISK MANAGEMENT FILE		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 confirmed by examination of RISK MANAGEMENT FILE		N/A	
12.4.6	When applicable, RISKS associated with diagnostic or therapeutic acoustic pressure addressed in RISK MANAGEMENT PROCESS as confirmed in RISK MANAGEMENT FILE		N/A	

Issue Date: 2013-11-07 Page 79 of 112 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict

13	HAZARDOUS SITUATIONS AND FAULT CONDITIONS		Pass
13.1	Specific HAZARDOUS SITUATIONS		Pass
13.1.1	None of HAZARDOUS SITUATIONS in 13.1.2-13.1.4, inclusive, occurred when SINGLE FAULT CONDITIONS applied, one at a time, as in 4.7 and 13.2		Pass
13.1.2	Emissions, deformation of ENCLOSURE or exceeding maximum temperature		Pass
	- Emission of flames, molten metal, poisonous or ignitable substance in hazardous quantities did not occur		Pass
	- Deformation of ENCLOSURE impairing compliance with 15.3.1 did not occur		Pass
	- Temperatures of APPLIED PARTS did not exceed allowable values in Table 24 when measured as in 11.1.3:		N/A
	- Temperatures of ME EQUIPMENT parts that are not APPLIED PARTS likely to be touched did not exceed values in Table 23 when measured and adjusted as in 11.1.3:	See appended Tables 11.1.1	Pass
	-Allowable values for "other components and materials" in Table 22 times 1.5 minus 12.5 °C were not exceeded		Pass
	Limits for windings in Tables 26, 27, and 31 not exceeded		Pass
	Table 22 not exceeded in all other cases		Pass
	Temperatures measured according to 11.1.3		Pass
	SINGLE FAULT CONDITIONS in 4.7, 8.1 b), 8.7.2, and 13.2.2 relative to emission of flames, molten metal, or ignitable substances, not applied to parts and components where:	Test performed	N/A
	- Supply circuit was unable to supply 15 W one minute after 15 W drawn from supply circuit, or	See appended Table 13.1.2	N/A
	- Parts and components completely contained within a fire ENCLOSURE complying with 11.3 as verified by review of design documentation		N/A
	After tests of this Clause, settings of THERMAL CUT-OUTS and OVER-CURRENT RELEASES did not change sufficiently to affect their safety function		N/A
3.1.3	- limits for LEAKAGE CURRENT in SINGLE FAULT CONDITION based on 8.7.3 did not exceed:	See appended Table 8.7	Pass
	- voltage limits for ACCESSIBLE PARTS including		N/A

Issue Date: 2013-11-07 Page 80 of 112 Report Reference # E341350-A29-UL

	IEC 6060	1	
Clause	Requirement + Test	Result - Remark	Verdict

	APPLIED PARTS in 8.4.2 did not exceed:		
13.1.4	ME EQUIPMENT complied with the requirements of 9.1 to 9.8 for specific MECHANICAL HAZARDS		Pass
13. 2	SINGLE FAULT CONDITIONS		Pass
13.2.1	During application of SINGLE FAULT CONDITIONS in 13.2.2 -13.2.13, inclusive, NORMAL CONDITIONS in 8.1 a) applied in least favourable combination	See appended Table 13.2	Pass
3.2.2 - 3.2.12	ME EQUIPMENT complied with 13.2.2 -13.2.12:	See appended Table 13.2	Pass
13.2.13	ME EQUIPMENT remained safe after tests of 13.2.13.2 to 13.2.13.4 (inclusive), and cooling down to room temperature		Pass
	ME EQUIPMENT examined for compliance or appropriate tests such as dielectric strength of motor insulation according to 8.8.3 conducted		Pass
	For insulation of thermoplastic materials relied upon as a MEANS OF PROTECTION (see 8.8), the ball-pressure test specified in 8.8.4.1 a) performed at a temperature 25 °C higher than temperature of insulation measured during tests of 13.2.13.2 to 13.2.13.4 (inclusive).		Pass
3.2.13.2	ME EQUIPMENT with heating elements		N/A
	a 1) thermostatically controlled ME EQUIPMENT with heating elements for building-in, or for unattended operation, or with a capacitor not protected by a fuse connected in parallel with THERMOSTAT contacts met tests of 13.2.13.2 b) & 13.2.13.2 c)	No heating elements.	N/A
	a 2) ME EQUIPMENT with heating elements RATED for non-CONTINUOUS OPERATION met tests of 13.2.13.2 b) and 13.2.13.2 c)		N/A
	a 3) other ME EQUIPMENT with heating elements met test of 13.2.13.2 b)		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		N/A

Issue Date: 2013-11-07 Page 81 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict
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	element or an intentionally weak part		
	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 tested per 11.1without adequate heat discharge, and supply voltage set at 90 or 110 % of RATED supply voltage, least favourable of the two (V):		N/A
	Operating period stopped when a non-SELF- RESETTING THERMAL CUT-OUT operated, or current interrupted without possibility of automatic restoration before THERMAL STABILITY		N/A
	ME EQUIPMENT switched off as soon as THERMAL STABILITY established and allowed to cool to room temperature when current not interrupted		N/A
	Test duration was equal to RATED operating time for non-CONTINUOUS OPERATION		N/A
	c) Heating parts of ME EQUIPMENT tested with ME EQUIPMENT operated in NORMAL CONDITION at 110 % of RATED supply voltage and as in 11.1, and		N/A
	Controls limiting temperature in NORMAL CONDITION disabled, except THERMAL CUTOUTS		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
3.2.13.3	ME EQUIPMENT with motors		N/A
	a 1) For the motor part of the ME EQUIPMENT, compliance checked by tests of 13.2.8- 13.2.10, 13.2.13.3 b), 13.2.13.3 c), and 13.2.13.4, as applicable	No Motors.	N/A
	To determine compliance with 13.2.9 and 13.2.10 motors in circuits running at 42.4 V peak a.c./ 60 V d.c. or less are covered with a single layer of cheesecloth which did not ignite during the test		N/A
	a 2) Tests on ME EQUIPMENT containing heating parts conducted at prescribed voltage with motor & heating parts operated simultaneously to produce the least favourable condition		N/A

Issue Date: 2013-11-07 Page 82 of 112 Report Reference # E341350-A29-UL

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

Issue Date: 2013-11-07 Page 83 of 112 Report Reference # E341350-A29-UL

	IEC 60	601	
Clause	Requirement + Test	Result - Remark	Verdict

14	PROGRAMMABLE ELECTRICAL MEDICAL SYSTEMS (PEMS)		N/A
14.1	Requirements of this clause not applied to PESS when it provided no BASIC SAFETY or ESSENTIAL PERFORMANCE, or	No such parts / PESS not relied upon for basic safety or essential performance.	N/A
	- when application of ISO 14971 showed that failure of PESS does not lead to unacceptable RISK:		N/A
	Every PROCESS has been followed throughout the PEMS DEVELOPMENT LIFE-CYCLE and a RECORD of PROCESS has been made available as confirmed by RISK MANAGEMENT FILE REVIEW and assessment of PROCESSES cited in this Clause		N/A
	MANUFACTURER considered the need for additional RISK CONTROL measures when unable to follow all PROCESSES identified in Clause 14 for each constituent component of PEMS as confirmed by RISK MANAGEMENT FILE review and assessment of PROCESSES cited in this Clause		N/A
	Assessment of PROCESSES cited in this Clause made by internal audits		N/A
14.2	Documents produced from application of Clause 14 are maintained and form a part of RISK MANAGEMENT FILE in addition to RECORDS and documents required by ISO 14971		N/A
14.3	RISK MANAGEMENT plan required by 3.5 of ISO 14971 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
	PEMS DEVELOPMENT LIFE-CYCLE tailored for a specific development by making plans detailing activities, milestones, and schedules		N/A
· · · · · · · · · · · · · · · · · · ·	PEMS DEVELOPMENT LIFE-CYCLE includes documentation requirements		N/A

Issue Date: 2013-11-07 Page 84 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict
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 where appropriate		N/A
	Problem resolution system meets the prescribed criteria depending on type of product:		N/A
	- it is documented as a PART of PEMS DEVELOPMENT LIFE-CYCLE		N/A
	- it allows reporting of POTENTIAL or existing problems affecting BASIC SAFETY or ESSENTIAL performance		N/A
	- it includes an Assessment of each problem for associated RISKS		N/A
	- it identifies criteria that must be met for the issue to be closed		N/A
	- it identifies the action to be taken to resolve each problem		N/A
14.6	RISK MANAGEMENT PROCESS	1	N/A
14.6.1	MANUFACTURER considered HAZARDS associated with software and hardware aspects of PEMS including NETWORK/DATA COUPLING, components of third-party origin, legacy subsystems when compiling list of known or foreseeable HAZARDS		N/A
	In addition to the material in ISO 14971, Annex D, list of possible sources for HAZARDS associated with PEMS includes specified causes		N/A
	- failure of NETWORK/DATA COUPLING to provide characteristics necessary for PEMS to achieve its BASIC SAFETY or ESSENTIAL performance		N/A
	<ul> <li>undesired feedback [physical and data] (such as unsolicited/ out of range/ inconsistent input or input from electromagnetic interference)</li> </ul>		N/A
	- unavailable DATA		N/A
	- lack of integrity of DATA		N/A
	- incorrect DATA		N/A
	- incorrect timing of DATA		N/A
	- unintended interactions within & among PESS		N/A
	- unknown aspects or quality of third-party software		N/A
	- unknown aspects or quality of third-party PESS		N/A

Issue Date: 2013-11-07 Page 85 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict

	<ul> <li>lack of DATA security, particularly vulnerability to tampering, unintended interaction with other programs and viruses</li> </ul>	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 6.1 of ISO 14971:	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:	N/A
	The architecture specification makes use of considers the specified items to reduce RISK to an acceptable level, where appropriate:	N/A
	a) COMPONENTS WITH HIGH-INTEGRITY CHARACTERISTICS	N/A
	b) fail-safe functions	N/A
	c) redundancy	N/A
	d) diversity;	N/A
	e) partitioning of functionality	N/A
	f) defensive design potentially limiting hazardous effects by restricting available output power or by introducing means to limit travel of actuators	N/A
	g) allocation of RISK CONTROL measures to subsystems and components of PEMS	N/A
	h) failure modes of components and their effects;	N/A
	i) common cause failures	N/A
	j) systematic failures	N/A
	k) test interval duration and diagnostic coverage	N/A
	I) maintainability	N/A
	m) protection from reasonably foreseeable misuse	N/A
	n) NETWORK/DATA COUPLING specification, when applicable	N/A
14.9	Design is broken up into subsystems, each with a design and test specification where appropriate, and descriptive data on design environment included in RISK MANAGEMENT FILE:	N/A

Issue Date: 2013-11-07 Page 86 of 112 Report Reference # E341350-A29-UL

	IEC 60601			
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	
14.11	A PEMS VALIDATION plan containing validation of BASIC SAFETY & ESSENTIAL PERFORMANCE and requiring checks for unintended functioning of PEMS to perform and document PEMS VALIDATION		N/A	
	The person with overall responsibility for PEMS VALIDATION is independent of design team, and no member of a design team is responsible for PEMS VALIDATION of their own design		N/A	
	All professional relationships of members of PEMS VALIDATION team with members of design team documented in RISK MANAGEMENT FILE providing methods & results of PEMS VALIDATION		N/A	
14.12	Continued validity of previous design documentation assessed under a documented modification/change PROCEDURE		N/A	
14.13	Technical description includes the following information when PEMS is to be connected to other equipment outside control of PEMS MANUFACTURER by NETWORK/DATA COUPLING		N/A	
	a) characteristics of NETWORK/DATA COUPLING necessary for PEMS to achieve its INTENDED USE		N/A	
	b) list of HAZARDOUS SITUATIONS resulting from a failure of NETWORK/DATA COUPLING to provide the specified characteristics	_	N/A	
	c) instructions to RESPONSIBLE ORGANIZATION containing required information and warnings		N/A	
	- connection of PEMS to a NETWORK/DATA COUPLING that includes other EQUIPMENT could		N/A	

Issue Date: 2013-11-07 Page 87 of 112 Report Reference # E341350-A29-UL

IEC 60601			
Clause	Requirement + Test	Result - Remark	Verdict
	result in previously unidentified RISKS and RESPONSIBLE ORGANIZATION shall identify, analyze, and control such RISKS		
	<ul> <li>subsequent changes to NETWORK/DATA COUPLING introducing new RISKS and requiring new analysis; and changes to NETWORK/DATA COUPLING include:</li> </ul>		N/A
	- NETWORK/DATA COUPLING configuration change		N/A
	- connection of additional items to NETWORK/DATA COUPLING		N/A
	- disconnecting items from NETWORK/DATA COUPLING		N/A
	- update of EQUIPMENT connected to NETWORK/DATA COUPLING		N/A
	- upgrade of EQUIPMENT connected to NETWORK/DATA COUPLING		N/A

Issue Date: 2013-11-07 Page 88 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict

15	CONSTRUCTION OF ME EQUIPMENT		Pass
15.1	RISKS associated with arrangement of controls and indicators of ME EQUIPMENT addressed in RISK MANAGEMENT PROCESS, as confirmed by examination of RISK MANAGEMENT FILE:		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	Recognized component, to be evaluated in end product	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		Pass
15.3.1	Mold stress relief, push, impact, drop, and rough handling tests did not result in unacceptable RISK and ME EQUIPMENT displayed adequate mechanical strength		Pass
15.3.2	Push test conducted by subjecting external parts of ENCLOSURE to a steady force of 250 N ± 10 N for 5 s applied to a circular (30mm) plane surface, except bottom of ENCLOSURE of an ME EQUIPMENT >18 kg, using a suitable test tool:	See Appended Table 15.3	Pass
	No damage resulting in an unacceptable RISK sustained as determined by examination of RISK MANAGEMENT FILE		Pass
15.3.3	Impact test conducted by subjecting a complete ENCLOSURE or its largest non-reinforced area, except for HAND-HELD ME EQUIPMENT and parts, to a free falling 500 g ± 25 g solid smooth steel ball, approx. 50 mm in diameter from a height of 1.3 m	See Appended Table 15.3 and RM Results Table 15.3.3	Pass
	Test not applied to flat panel displays, platen glass of ME EQUIPMENT, or cathode ray tubes		N/A
	No damage resulting in an unacceptable RISK sustained as shown in RISK MANAGEMENT FILE		N/A
15.3.4	Drop test		N/A
15.3.4.1	Sample of HAND-HELD ME EQUIPMENT and HAND-HELD part with SAFE WORKING LOAD allowed to fall freely once from each of 3 different positions as in NORMAL USE from height specified in ACCOMPANYING DOCUMENTS, or from 1 m onto a 50 mm ± 5 mm thick hardwood board lying		N/A

Issue Date: 2013-11-07 Page 89 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict

	flat on a concrete or rigid base:		
	No unacceptable RISK resulted		N/A
15.3.4.2	Sample of PORTABLE ME EQUIPMENT and PORTABLE part with SAFE WORKING LOAD lifted to a height as in Table 29 above a 50 ± 5 mm thick hardwood board lying flat on a concrete floor or rigid base, dropped 3 times from each orientation in NORMAL USE (cm)		N/A
	No damage resulting in an unacceptable RISK sustained as determined by examination of sample and RISK MANAGEMENT FILE		N/A
15.3.5	Each sample of MOBILE ME EQUIPMENT and MOBILE part with SAFE WORKING LOAD and in most adverse condition in NORMAL USE passed Rough Handling tests		N/A
	a) Ascending step shock test conducted on the sample by pushing it 3 times in its normal direction of travel at 0.4 m/s $\pm$ 0.1 m/s against an ascending hardwood step obstruction without the sample going over the obstruction	No mobile part	N/A
	b) Descending step shock test conducted on the sample by pushing it 3 times in its normal direction of travel at 0.4 m/s ± 0.1 m/s in order to fall over a vertical step affixed flat on a rigid base with direction of movement perpendicular to face of the step until full descent achieved		N/A
	c) Door frame shock test conducted on the sample by moving it 3 times in its normal direction of travel at 0.4 m/s ± 0.1 m/s, or for motor driven EQUIPMENT, at maximum possible speed against a hardwood vertical obstacle higher than EQUIPMENT contact point(s)		N/A
	No damage resulting in an unacceptable RISK sustained as determined by examination of sample and RISK MANAGEMENT FILE		N/A
15.3.6	Examination of ENCLOSURE made from molded or formed thermoplastic material indicated that material distortion due to release of internal stresses by molding or forming operations will not result in an unacceptable RISK	Test conducted on enclosure. Risk Acceptability of Test Results to be considered as part of End Product.	N/A
	Mold-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	Refer to E341350-A3.	Pass

Issue Date: 2013-11-07 Page 90 of 112 Report Reference # E341350-A29-UL

	IEC 60601				
Clause	Requirement + Test		Result - Remark	Verdict	

	in 11.1.3, but no less than 70 °C:		
	No damage resulting in an unacceptable RISK		N/A
15.3.7	INTENDED USE, EXPECTED SERVICE LIFE, and conditions for transport and storage were taken into consideration for selection and treatment of materials used in construction of ME EQUIPMENT		N/A
	Based on review of EQUIPMENT, ACCOMPANYING DOCUMENTS, specifications and processing of materials, and MANUFACTURER'S relevant tests or calculations, corrosion, ageing, mechanical wear, degradation of biological materials due to bacteria, plants, animals and the like, will not result in an unacceptable RISK		N/A
15.4	ME EQUIPMENT components and general assemb	ly	Pass
15.4.1	Incorrect connection of accessible connectors, removable without a TOOL, prevented where an unacceptable RISK exists, in particular:	To be evaluated in end product.	N/A
	a) Plugs for connection of PATIENT leads cannot be connected to other outlets on same ME EQUIPMENT intended for other functions, except when RISK MANAGEMENT FILE provides proof that no unacceptable RISK could result		N/A
	b) Medical gas connections on ME EQUIPMENT for different gases to be operated in NORMAL USE are not interchangeable as verified by review of RISK MANAGEMENT FILE:		N/A
15.4.2	Temperature and overload control devices		N/A
15.4.2.1	a) THERMAL CUT-OUTS and OVER-CURRENT RELEASES with automatic resetting not used in ME EQUIPMENT when their use could result in a HAZARDOUS SITUATION by resetting action as verified by review of RISK MANAGEMENT FILE .:	No thermal cut-out.	N/A
	b) THERMAL CUT-OUTS with a safety function to be reset by a soldering operation affecting operating value not fitted in ME EQUIPMENT as verified by examination of design and RISK MANAGEMENT FILE		N/A
	c) An independent non-SELF-RESETTING THERMAL CUT-OUT is, additionally, provided where a failure of a THERMOSTAT could constitute a HAZARD as verified by examination of design and RISK MANAGEMENT FILE		N/A
	d) Based on design and RISK MANAGEMENT FILE review, loss of function of ME EQUIPMENT		N/A

Issue Date: 2013-11-07 Page 91 of 112 Report Reference # E341350-A29-UL

IEC 60601				
Clause	Requirement + Test	Result - Remark	Verdict	
	due to operation of THERMAL CUT-OUT or OVER CURRENT RELEASE doesn't result in a HAZARDOUS SITUATION			
	e) Capacitors or other spark-suppression devices not connected between contacts of THERMAL CUT-OUTS		N/A	
	f) Use of THERMAL CUT-OUTS or OVER- CURRENT RELEASES do not affect safety of ME EQUIPMENT as verified by following tests:		N/A	
	Positive temperature coefficient devices (PTC's) complied with IEC 60730-1: 1999, clauses 15, 17, J.15, and J.17 as applicable		N/A	
	ME EQUIPMENT containing THERMAL CUT- OUTS and OVER-CURRENT RELEASES operated under the conditions of Clause 13:		N/A	
	SELF-RESETTING THERMAL CUT-OUTS and OVER-CURRENT RELEASES including circuits performing equivalent functions (other than PTC's) Certified according to appropriate standards		N/A	
	In the absence of Certification in accordance with IEC standards, SELF-RESETTING THERMAL CUT-OUTS and OVER-CURRENT RELEASES including circuits performing equivalent functions (other than PTC's) operated 200 times		N/A	
	Manual reset THERMAL CUT-OUTS and OVER- CURRENT RELEASES Certified in accordance with appropriate IEC standards		N/A	
	When certification based on IEC standards, or data from MANUFACTURER demonstrating reliability of component to perform its safety-related function is not available, manual reset THERMAL CUT-OUTS and OVER-CURRENT RELEASES operated 10 times		N/A	
	Thermal protective devices tested separately from ME EQUIPMENT when engineering judgment indicated test results would not be impacted		N/A	
	g) Protective device, provided on ME EQUIPMENT incorporating a fluid filled container with heating means, operated when heater switched on with container empty and prevented an unacceptable RISK due to overheating		N/A	
	h) ME EQUIPMENT with tubular heating elements provided with protection against overheating in both leads where a conductive connection to earth		N/A	

Issue Date: 2013-11-07 Page 92 of 112 Report Reference # E341350-A29-UL

	IEC 60601					
Clause	Requirement + Test	Result - Remark	Verdict			

	aculd recult in averbaction as varified by review of		
	could result in overheating as verified by review of design and RISK MANAGEMENT FILE		
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 from which gases can escape during charging or discharging likely to result in a HAZARD ventilated to minimize RISK of accumulation and ignition as verified by review of design and RISK MANAGEMENT FILE	No battery.	N/A
	Battery compartments prevent accidental short circuiting of battery when this could result in a HAZARDOUS SITUATION as verified by examination of design and RISK MANAGEMENT FILE		N/A
15.4.3.2	Means provided to prevent incorrect connection of polarity when a HAZARDOUS SITUATION may develop by incorrect connection or replacement of a battery		N/A
15.4.3.3	Overcharging of battery prevented by virtue of design when it could result in an unacceptable RISK as verified by review of design:		N/A
15.4.3.4	Lithium batteries that could become a HAZARD complied with appropriate tests of IEC 60086-4		N/A
	Tests of IEC 60086-4 waived on the lithium battery based on examination of design		N/A
15.4.3.5	A properly RATED protective device provided within INTERNAL ELECTRICAL POWER SOURCE to protect against fire caused by excessive currents when (in case of a short circuit) layout of internal wiring, cross-sectional area, rating of connected components can result in a fire:		N/A
	Protective device has adequate breaking capacity to interrupt the maximum fault current		N/A
	Justification for OVER-CURRENT RELEASES or FUSE exclusion is included in RISK MANAGEMENT FILE		N/A
15.4.4	Indicator lights provided to indicate ME EQUIPMENT is ready for NORMAL USE, except when apparent to OPERATOR from normal operating position, and marking of 7.4.1 are insufficient for this purpose	To be evaluated in end product.	N/A
	An additional indicator light provided on ME		N/A

Issue Date: 2013-11-07 Page 93 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict
	EQUIPMENT with a stand-by state or a warm-up state exceeding 15 s, except when apparent to OPERATOR from normal operating position		
	Indicator lights provided on ME EQUIPMENT incorporating non-luminous heaters to indicate heaters are operational when a HAZARDOUS SITUATION could exist, except when apparent to OPERATOR from normal operating position		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 where an accidental or prolonged operation of output circuit could constitute a HAZARDOUS SITUATION		N/A
	Colours of indicator lights complied with 7.8.1		N/A
	Charging mode visibly indicated in ME EQUIPMENT incorporating a means for charging an INTERNAL ELECTRICAL POWER SOURCE		N/A
15.4.5	RISKS associated with pre-set controls addressed in RISK MANAGEMENT PROCESS when applicable as verified by review of RISK MANAGEMENT FILE		N/A
15.4.6	Actuating parts of controls of ME EQUIPMENT		N/A
5.4.6.1	a) Actuating parts cannot be pulled off or loosened up during NORMAL USE	No such part.	N/A
	b) Indication of scales (e.g., "on" "off" positions, etc.) always corresponds to position of controls with adjustment that can result in a HAZARDOUS SITUATION for PATIENT or OPERATOR while ME EQUIPMENT is in use		N/A
	c) Incorrect connection of indicating device to relevant component prevented by adequate construction when it could be separated without use of a TOOL		N/A
	When torque values per Table 30 applied between control knob and shaft of rotating controls for not less than 2 s, 10 times in each direction, knobs did not rotate		N/A
	Tests conducted by applying an axial force of 60 N for electrical components and 100 N for other components for 1 min when an axial pull was required in NORMAL USE with no unacceptable RISK		N/A

Issue Date: 2013-11-07 Page 94 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict
15.4.6.2	Stops of adequate mechanical strength provided on rotating/ movable parts of controls of ME EQUIPMENT where necessary to prevent an unexpected change from max to min, or vice-versa, of the controlled parameter when this could cause a HAZARDOUS SITUATION:		N/A
	Torque values in Table 30 applied 10 times in each direction to rotating controls for 2 sec:		N/A
	Application of an axial force of 60 N for electrical components and 100 N for other components to rotating or movable parts of controls for 1 min when an axial pull was required in NORMAL USE:		N/A
15.4.7	Cord-connected HAND-HELD and foot-operated con	ntrol devices	N/A
15.4.7.1	a) HAND-HELD control devices of ME EQUIPMENT complied with 15.3.4.1	No foot-operated device.	N/A
	b) Foot-operated control device supported an actuating force of 1350 N for 1 min applied over an area of 30 mm diameter in its position of NORMAL USE with no damage to device causing an unacceptable RISK		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 IPX1 & complies with tests of IEC 60529 (IP Code):		N/A
	b) ENCLOSURE of foot operated control devices containing electrical circuits is at least IPX6 and complies with IEC 60529 if in NORMAL USE liquids are likely to be found (IP Code):		N/A
	Probability of occurrence estimated as part of RISK MANAGEMENT PROCESS		N/A
15.4.8	Aluminum wires less than 16 mm2 in cross- sectional area are not used	No AL wire	Pass
15.4.9	a) Oil container in PORTABLE ME EQUIPMENT allows for expansion of oil and is adequately sealed to prevent loss of oil in any position	No oil container.	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, optionally, provided		N/A

Issue Date: 2013-11-07 Page 95 of 112 Report Reference # E341350-A29-UL

	IEC 60601		•
Clause	Requirement + Test	Result - Remark	Verdict
	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 EQUIP providing separation in accordance with 8.5	MENT and transformers	Pass
15.5.1	Overheating		Pass
15.5.1.1	Transformers of ME EQUIPMENT are protected against overheating in the event of short circuit or overload of output windings and comply with this Clause and tests of 15.5.1.2 - 3:	See appended Tables 15.5.1.2 and 15.5.1.3	Pass
	During tests, windings did not open, no HAZARDOUS SITUATION occurred, and maximum temperatures of windings did not exceed values in Table 31		Pass
	Dielectric strength test of 8.8.3 conducted on transformer after short circuit and overload tests .:		N/A
15.5.1.2	Transformer output winding short circuited, and test continued until protective device operated or THERMAL STABILITY achieved:	See appended Table 15.5.1.2	Pass
	Short circuit applied directly across output windings for transformers not tested according to 5X frequency and 5X voltage test of 15.5.2		N/A
15.5.1.3	Multiple overload tests conducted on windings with more than one protective device to evaluate worst-case NORMAL USE loading and protection:	See appended Table 15.5.1.3	Pass
15.5.2	Transformer windings provided with adequate insulation to prevent internal short-circuits that could cause overheating which could result in a HAZARDOUS SITUATION	Product is switching power supply, and the transformer was stressed at high frequency during normal and single operation. Evaluation of clause 15.5.2 was considered unnecessary.	N/A
	Dielectric strength tests were conducted in accordance with requirements of this clause with no breakdown of insulation system and no detectable deterioration of transformer:		N/A
15.5.3	Transformers forming MEANS OF PROTECTION as required by 8.5 comply with IEC 61558-1:1997, Clause 5.12	T1 insulation system comply with UL1446	N/A

Issue Date: 2013-11-07 Page 96 of 112 Report Reference # E341350-A29-UL

IEC 60601				
Clause	Requirement + Test	Result - Remark	Verdict	

16	ME SYSTEMS		
16.1	After installation or subsequent modification, ME SYSTEM didn't result in an unacceptable RISK	To be evaluated in end product.	N/A
	Only HAZARDS arising from combining various equipment to form a ME SYSTEM considered		N/A
	- ME SYSTEM provides the level of SAFETY within the PATIENT ENVIRONMENT equivalent to ME EQUIPMENT complying with this standard		N/A
	- ME SYSTEM provides the level of SAFETY outside PATIENT ENVIRONMENT equivalent to EQUIPMENT complying with their respective IEC or ISO SAFETY standards		N/A
	- tests performed in NORMAL CONDITION, except as specified		N/A
	- tests performed under operating conditions specified by MANUFACTURER of ME SYSTEM		N/A
	Safety tests previously conducted on individual equipment of ME SYSTEM according to relevant standards not repeated		N/A
	RISK MANAGEMENT methods, optionally, used by MANUFACTURER of an ME SYSTEM reconfigurable by RESPONSIBLE ORGANIZATION or OPERATOR to determine configurations with highest RISKS and measures to ensure any configuration of ME SYSTEM will not present unacceptable RISKS		N/A
	Non-ME EQUIPMENT used in ME SYSTEM complied with applicable IEC or ISO safety standards		N/A
	Equipment relying only on BASIC INSULATION for protection against electric shock not used in ME SYSTEM		N/A
6.2	ACCOMPANYING DOCUMENTS of an ME SYSTER	M	N/A
	Documents containing all data necessary for ME SYSTEM to be used as intended by MANUFACTURER including a contact address accompany ME SYSTEM or modified ME SYSTEM		N/A
	ACCOMPANYING DOCUMENTS regarded as a part of ME SYSTEM		N/A
	ACCOMPANYING DOCUMENTS are, optionally, provided in electronic format (e.g. electronic file format or CD ROM) and ME SYSTEM is capable of displaying or printing these documents		N/A

Issue Date: 2013-11-07 Page 97 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict
	a) ACCOMPANYING DOCUMENTS provided for each item of ME EQUIPMENT supplied by MANUFACTURER		N/A
	b) ACCOMPANYING DOCUMENTS provided for each item of non-ME EQUIPMENT supplied by MANUFACTURER		N/A
	c) the required information is provided:		N/A
	- specifications, instructions for use as intended by MANUFACTURER, and a list of all items forming the ME SYSTEM		N/A
	- instructions for installation, assembly, and modification of ME SYSTEM to ensure continued compliance with this standard		N/A
	- instructions for cleaning and, when applicable, disinfecting and sterilizing each item of EQUIPMENT or EQUIPMENT PART forming PART of the ME SYSTEM		N/A
	- additional SAFETY measures to be APPLIED during installation of ME SYSTEM		N/A
	- identification of parts of ME SYSTEM suitable for use within the PATIENT ENVIRONMENT		N/A
	- additional measures to be APPLIED during preventive maintenance		N/A
	<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
	- a warning to connect only items that have been specified as PART of ME SYSTEM or specified as being compatible with ME SYSTEM		N/A
	- MAXIMUM permissible LOAD for any MULTIPLE socket-OUTLET(s) used with ME SYSTEM		N/A
	- instructions indicating MULTIPLE socket-outlets provided with the ME SYSTEM to be used only for supplying POWER to EQUIPMENT intended to form PART of ME SYSTEM		N/A
	- an explanation indicating RISKS of connecting non-ME EQUIPMENT supplied as a PART of ME SYSTEM directly to wall OUTLET when non-ME EQUIPMENT is intended to be supplied via a MULTIPLE socket-OUTLET with a separating		N/A

Issue Date: 2013-11-07 Page 98 of 112 Report Reference # E341350-A29-UL

	IEC 60601				
Clause	Requirement + Test		Result - Remark	Verdict	

	transformer	
	- an explanation indicating RISKS of connecting any EQUIPMENT supplied as a PART of ME SYSTEM to MULTIPLE socket-OUTLET	N/A
	<ul> <li>permissible environmental conditions of use for ME SYSTEM including conditions for transport and storage</li> </ul>	N/A
	- instructions to OPERATOR not to, simultaneously, touch parts referred to in 16.4 and PATIENT	N/A
	d) the following instructions provided for use by RESPONSIBLE ORGANIZATION:	N/A
	- adjustment, cleaning, sterilization, and disinfection PROCEDURES	N/A
	- assembly of ME systems and modifications during actual SERVICE LIFE shall be evaluated based on the requirements of this standard	N/A
16.3	Instructions for use of ME EQUIPMENT intended to receive its power from other equipment in an ME SYSTEM, describe the other equipment to ensure compliance with these requirements	N/A
16.4	Parts of non-ME EQUIPMENT in PATIENT ENVIRONMENT subject to contact by OPERATOR during maintenance, calibration, after removal of covers, connectors, etc., without use of a TOOL operated at a voltage ≤ voltage in 8.4.2 c) supplied from a source separated from SUPPLY MAINS by two MEANS OF OPERATOR PROTECTION	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 appropriate for highest voltage occurring across SEPARATION DEVICE during a fault condition	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

Issue Date: 2013-11-07 Page 99 of 112 Report Reference # E341350-A29-UL

IEC 60601			
Clause	Requirement + Test	Result - Remark	Verdict
16.6.1	TOUCH CURRENT in NORMAL CONDITION, from or between parts of ME SYSTEM within the PATIENT ENVIRONMENT, did not exceed 100 uA		N/A
	TOUCH CURRENT did not exceed 500 uA in event of interruption of any non-PERMANENTLY INSTALLED PROTECTIVE EARTH CONDUCTOR, from or between parts of ME SYSTEM within PATIENT ENVIRONMENT:		N/A
6.6.2	Current in PROTECTIVE EARTH CONDUCTOR of MULTIPLE SOCKET-OUTLET did not exceed 5 mA:		N/A
6.6.3	PATIENT LEAKAGE CURRENT and total PATIENT LEAKAGE CURRENT of ME SYSTEM in NORMAL CONDITION did not exceed values specified for ME EQUIPMENT in Tables 3 and 4:		N/A
	Measurements made using a device as in clause 8.7.4.4		N/A
6.7	ME SYSTEM complied with applicable requirements of Clause 9 when a MECHANICAL HAZARD existed:		N/A
6.8	Interruption and restoration of relevant power connections of ME SYSTEM one at a time and all connections simultaneously did not result in a HAZARDOUS SITUATION other than interruption of its intended function		N/A
6.9	ME SYSTEM connections and wiring		N/A
16.9.1	Incorrect connection of accessible connectors, removable without a TOOL, prevented where a HAZARDOUS SITUATION could otherwise exist.:		N/A
	- Connectors complied with Clause 15.4.1		N/A
	- plugs for connection of PATIENT leads 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 hazardous SITUATION could result		N/A
16.9.2	MAINS PARTS, components and layout		N/A
6.9.2.1	a) - MULTIPLE SOCKET-OUTLET only allows connection using a TOOL, or		N/A
	- MULTIPLE SOCKET-OUTLET is of a type that cannot accept MAINS PLUGS of any of the kinds specified in IEC/TR 60083, or		N/A

Issue Date: 2013-11-07 Page 100 of 112 Report Reference # E341350-A29-UL

IEC 60601			
Clause	Requirement + Test	Result - Remark	Verdict
	- MULTIPLE socket-OUTLET is supplied via a separating transformer		N/A
	b) - MULTIPLE SOCKET-OUTLET marked with safety sign 2 of Table D.2 (i.e., safety sign ISO 7010-W001) visible in NORMAL USE, and		N/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
	- marked to indicate the EQUIPMENT or EQUIPMENT parts it may safely be attached to		N/A
	- MULTIPLE socket-OUTLET is a separate item or an integral PART of ME EQUIPMENT or non-ME EQUIPMENT		N/A
	c) MULTIPLE SOCKET-OUTLET complied with IEC 60884-1 and the following requirements:		N/A
	- CREEPAGE and CLEARANCES complied with 8.9		N/A
	<ul> <li>it is CLASS I, and PROTECTIVE EARTH conductor is connected to earthing contacts in socket-outlets</li> </ul>		N/A
	- PROTECTIVE EARTH TERMINALS and PROTECTIVE EARTH CONNECTIONS comply with 8.6, except total impedance for ME SYSTEM was up to 400 m, or higher when conditions of 8.6.4 b) met (m)		N/A
	- ENCLOSURE complied with 8.4.2 d)		N/A
	- MAINS TERMINAL DEVICES and wiring complied with 8.11.4, when applicable		N/A
	- RATINGS of components are not in conflict with conditions of use		N/A
	- electrical TERMINALS and connectors of MULTIPLE socket-outlets prevent incorrect connection of accessible connectors removable without a TOOL		N/A
	- POWER SUPPLY CORD complied with 8.11.3		N/A
	d) Additional requirements applied when MULTIPLE SOCKET-OUTLET combined with a separating transformer:		N/A
	- Separating transformer complied with IEC 61558-2-1, except requirements of maximum RATED output power of 1 kVA and degree of protection IPX4 were not applied:		N/A

Issue Date: 2013-11-07 Page 101 of 112 Report Reference # E341350-A29-UL

IEC 60601			
Clause	Requirement + Test	Result - Remark	Verdict
	- separating transformer is CLASS I		N/A
	- Degree of protection against ingress of water specified as in IEC 60529		N/A
	- Separating transformer assembly marked according to 7.2 and 7.3		N/A
	- MULTIPLE SOCKET-OUTLET permanently connected to separating transformer, or socket-outlet of separating transformer assembly cannot accept MAINS PLUGS as identified in IEC/TR 60083		N/A
16.9.2.2	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 EQUIPMENT AND ME SYSTEMS		N/A
	RISKS associated with items addressed in RISK MANAGEMENT PROCESS as confirmed by review	Not evaluated by UL.	N/A
	- electromagnetic phenomena at locations where ME EQUIPMENT or ME SYSTEM is to be used as stated in ACCOMPANYING DOCUMENTS:		N/A
	- introduction of electromagnetic phenomena into ENVIRONMENT by ME EQUIPMENT or ME SYSTEM that might degrade performance of other devices, electrical EQUIPMENT, and systems		N/A

Issue Date: 2013-11-07 Page 102 of 112 Report Reference # E341350-A29-UL

	IEC	60601	
Clause	Requirement + Test	Result - Remark	Verdict

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 ANESTHETIC MIXTURE WITH AIR occurs are CATEGORY AP or APG ME EQUIPMENT and complied with G.3, G.4, and G.5	To be evaluated in end product.	N/A
G.2.2	FLAMMABLE AESTHETIC MIXTURE WITH AIR occurring due to a leakage or discharge of a FLAMMABLE AESTHETIC MIXTURE WITH OXYGEN or NITROUS OXIDE from an ENCLOSURE considered 5 to 25 cm from point of occurrence		N/A
G.2.3	A FLAMMABLE AESTHETIC MIXTURE WITH OXYGEN or NITROUS OXIDE contained in a completely / partly enclosed ME EQUIPMENT part and in PATIENT'S respiratory tract 5 cm from an ENCLOSURE part where leakage or discharge occurs		N/A
G.2.4	ME EQUIPMENT or parts thereof specified for use with FLAMMABLE AESTHETIC MIXTURE WITH AIR (in a location as in G.2.2) are CATEGORY AP or APG ME EQUIPMENT and 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 (location per G.2.2) are CATEGORY APG ME EQUIPMENT and comply with G.4 and G.6		N/A
	ME EQUIPMENT in G.2.3 to G.2.5 met appropriate tests of G.3-G.5 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. with a green-coloured band 2 cm wide with letters "APG" according to 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

Issue Date: 2013-11-07 Page 103 of 112 Report Reference # E341350-A29-UL

	IEC 60601			
Clause	Requirement + Test	Result - Remark	Verdict	
G.3.2	CATEGORY AP ME EQUIPMENT prominently marked, with a green-coloured circle 2 cm in diameter, with characters "AP" according to 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 according to G.3.2 and G.3.3 placed on major part of ME EQUIPMENT for CATEGORY AP or APG parts, and not repeated on detachable parts that can only be used with the marked EQUIPMENT		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 CA EQUIPMENT	TEGORY APG ME	N/A	
G.4.1	a) CREEPAGE and CLEARANCES between points of POWER SUPPLY CORD connection are according to Table 12 for one MEANS OF PATIENT PROTECTION		N/A	
	b) Connections, except those in circuits described in G.5.3 and G.6.3, protected against accidental disconnection in NORMAL USE or connection and disconnection can be performed only with a TOOL		N/A	
	c) CATEGORY AP and APG not provided with a DETACHABLE POWER SUPPLY CORD, except when circuit complied with G.5.3 and G.6.3		N/A	
G.4.2	Construction details	_	N/A	
	a) Opening of an ENCLOSURE providing protection against penetration of gases or vapours into ME EQUIPMENT or its parts possible only with a TOOL		N/A	
	b) ENCLOSURE complies with requirements to minimize arcing and sparking due to penetration of foreign objects		N/A	

Issue Date: 2013-11-07 Page 104 of 112 Report Reference # E341350-A29-UL

IEC 60601				
Clause	Requirement + Test	Result - Remark	Verdict	
	- no openings on top covers of ENCLOSURE, except for openings for controls covered by control knobs		N/A	
	- openings in side-covers prevented penetration of a solid cylindrical test rod of 4 mm in diameter applied in all possible directions without appreciable force		N/A	
	<ul> <li>openings in base plates prevented penetration of a solid cylindrical test rod of 12 mm in diameter applied in all directions without appreciable force</li> </ul>		N/A	
	c) Short circuiting conductor(s) to a conductive part without presence of explosive gasses where insulation may contact a part containing a FLAMMABLE AESTHETIC MIXTURE WITH OXYGEN or NITROUS OXIDE, ignitable gases alone, or oxygen, did not result in loss of integrity of the part, an unacceptable temperature, or other HAZARD		N/A	
G.4.3	<ul> <li>a) Electrostatic charges prevented on CATEGORY AP and APG ME EQUIPMENT by a combination of appropriate measures</li> </ul>		N/A	
	- Use of antistatic materials with a limited electrical resistance as specified in G.4.3 b)		N/A	
	- provision of electrically conductive paths from ME EQUIPMENT or its parts to a conductive floor, PROTECTIVE EARTH or POTENTIAL EQUALIZATION SYSTEM, or via wheels to an antistatic floor of medical room		N/A	
	b) Electrical resistance limits of aesthetic tubing, mattresses and pads, castor tires, and other antistatic material complied with ISO 2882 based on measurements according to ISO 1853, ISO 2878 and ISO 23529		N/A	
G.4.4	Corona cannot be produced by components or parts of ME EQUIPMENT operating at more than 2000 V a.c. or 2400 V d.c. and not included in ENCLOSURES complying with G.5.4 or G.5.5		N/A	
G.5	Requirements and tests for CATEGORY AP ME EQUIPMENT, parts and components		N/A	
G.5.1	ME EQUIPMENT, its parts or components do not ignite FLAMMABLE AESTHETIC MIXTURES WITH AIR under NORMAL USE and CONDITIONS based on compliance with G.5.2 to G.5.5 (inclusive)		N/A	

Issue Date: 2013-11-07 Page 105 of 112 Report Reference # E341350-A29-UL

IEC 60601			T
Clause	Requirement + Test	Result - Remark	Verdict
	Alternatively, ME EQUIPMENT, its parts, and components complied with requirements of IEC 60079-0 for pressurized ENCLOSURES (IEC 60079-2); for sand-filled ENCLOSURES, IEC 60079-5; or for oil immersed equipment, IEC 60079-6; and with this standard excluding G.5.2 to G.5.5		N/A
G.5.2	ME EQUIPMENT, its parts, and components in contact with gas mixtures in NORMAL USE and CONDITIONS not producing sparks and not resulting in surface temperatures above 150 °C in case of restricted or 200 °C in case of unrestricted vertical air circulation measured at 25 °C comply with G.5.1		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 Umax and Imax occurring in their circuits, and complied as follows:		N/A
	Measured Umax ≤ UzR with IzR as in Fig. G.1:		N/A
	Measured Umax ≤ Uc with Cmax as in Fig. G.2:		N/A
	Measured Imax ≤ IzR with UzR as in Fig G.1:		N/A
	Measured Imax ≤ IzL with Lmax and a Umax ≤ 24 V as in Fig G.3:		N/A
	- Combinations of currents and corresponding voltages within the limitations IzR.UzR ≤ 50 W extrapolated from Fig G.1		N/A
	No extrapolation made for voltages above 42 V		N/A
	<ul> <li>Combinations of capacitances and corresponding voltages within limitations of C/2U2 1.2 mJ extrapolated from Fig G.2</li> </ul>		N/A
	No extrapolation made for voltages above 242V		N/A
	Umax, additionally, determined using actual resistance R when the equivalent resistance R was less than 8000		N/A
	- Combinations of currents and corresponding inductances within limitations L/2I2 0.3 mJ extrapolated from Fig G.3		N/A
	No extrapolation made for inductances larger than 900 mH		N/A
	<ul> <li>Umax was the highest supply voltage occurring in circuit under investigation with sparking contact open, taking into consideration MAINS VOLTAGE</li> </ul>		N/A

Issue Date: 2013-11-07 Page 106 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict
	variations in 4.10		
	- Imax was the highest current flowing in circuit under investigation with sparking contact closed, taking into consideration MAINS VOLTAGE variations required in 4.10		N/A
	- Cmax and Lmax taken as values occurring at the component under investigation producing sparks		N/A
	- peak value considered when a.c. supplied		N/A
	- an equivalent circuit calculated to determine equivalent max capacitance, inductance, and equivalent Umax and Imax, either as d.c. or a.c. peak values in case of a complicated circuit		N/A
	Temperature measurements made according to 11.1, and Umax, Imax, R, Lmax, and Cmax 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 that might have penetrated into ENCLOSURE of ME EQUIPMENT or part removed by ventilation before EQUIPMENT energized, and penetration of such mixtures during operation was prevented by maintenance of overpressure by means of air without flammable gases, or by physiologically acceptable inert gas (e.g., nitrogen)		N/A
	b) Overpressure inside ENCLOSURE was 75 Pa, min., in NORMAL CONDITION (Pa):		N/A
	Overpressure maintained at the site of potential ignition even when air or inert gas could escape through openings in ENCLOSURE necessary for normal operation of ME EQUIPMENT or its parts		N/A
	ME EQUIPMENT could be energized only after the required minimum overpressure was present long enough to ventilate the ENCLOSURE so that the displaced volume of air or inert gas was at least five times the volume of ENCLOSURE		N/A
	ME EQUIPMENT energized at will or repeatedly when overpressure was continuously present		N/A

Issue Date: 2013-11-07 Page 107 of 112 Report Reference # E341350-A29-UL

IEC 60601			
Clause	Requirement + Test	Result - Remark	Verdict
	c) Ignition sources de-energized automatically by means used where G.4 does not apply, or complied with G.5 when during operation overpressure dropped below 50 Pa (Pa)		N/A
	d) External surface of ENCLOSURE in which internal overpressure was maintained did not exceed 150 °C in 25 °C ambient under NORMAL USE and CONDITION (°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 when it was surrounded by a FLAMMABLE AESTHETIC MIXTURE WITH AIR of a high concentration for at least 30 min without any pressure difference inside ENCLOSURE		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 when the cords were stressed by bending or pulling		N/A
	Cords are fitted with adequate anchorages to limit stresses		N/A
	After the test in G.5.4 b), an internal overpressure of 400 Pa was created and 30 pulls of the value in Table G.1 applied to each flexible cord in axial direction of cord inlet and in the least favourable direction for 1 s		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
3.6	CATEGORY APG ME EQUIPMENT, parts and com	ponents thereof	N/A
G.6.1	ME EQUIPMENT, its parts, and components did not ignite FLAMMABLE AESTHETIC MIXTURE WITH OXYGEN OR NITROUS OXIDE under		N/A

Issue Date: 2013-11-07 Page 108 of 112 Report Reference # E341350-A29-UL

IEC 60601				
Clause	Requirement + Test		Result - Remark	Verdict

	NORMAL USE and SINGLE FAULT CONDITION	
	ME EQUIPMENT, its parts, and components not complying with G.6.3 subjected to a CONTINUOUS OPERATION test after attaining thermal steady state (max. 3 h) over a period of 10 min in a 12.2 % ± 0.4 ether by volume/oxygen mixture	N/A
G.6.2	Parts and components of CATEGORY APG ME EQUIPMENT operating in a FLAMMABLE AESTHETIC MIXTURE WITH OXYGEN OR NITROUS OXIDE supplied from a source isolated from earth by insulation equal to one MEANS OF PATIENT PROTECTION and from electrical parts by insulation twice the MEANS OF PATIENT PROTECTION	N/A
G.6.3	Test of G.6.1 waived when the following requirements were met in NORMAL USE and under NORMAL and SINGLE FAULT CONDITIONS:	N/A
	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 Umax and Imax occurring in their circuits complied with requirements, taking Cmax and Lmax into consideration:	N/A
	Measured Umax ≤ UzR with IzR as in Fig. G.4:	N/A
	Measured Umax ≤ UzC with Cmax as in Fig. G.5.:	N/A
	Measured Imax ≤ IzR with UzR as in Fig G.4:	N/A
	Measured Imax ≤ IzL with Lmax and a Umax ≤ 24 V as in Fig G.6:	N/A
	- Extrapolation from Figs G.4, G.5, and G.6 was limited to areas indicated	N/A
	- Umax was the highest no-load voltage occurring in the circuit under investigation, taking into consideration mains voltage variations as in 4.10	N/A
	- Imax was the highest current flowing in the circuit under investigation, taking into account MAINS VOLTAGE variations as in 4.10	N/A
	- Cmax and Lmax are values occurring in relevant circuit	N/A
	- Umax additionally determined with actual resistance R when equivalent resistance R in Fig	N/A

Issue Date: 2013-11-07 Page 109 of 112 Report Reference # E341350-A29-UL

IEC 60601			
Clause	Requirement + Test	Result - Remark	Verdict

	G.5 was less than 8000	
	- peak value taken into consideration when a.c. supplied	N/A
	- an equivalent circuit calculated to determine max capacitance, inductance, and Umax and Imax, either as d.c. or a.c. peak values in case of a complicated circuit	N/A
	- when energy produced in an inductance or capacitance in a circuit is limited by voltage or current-limiting devices, two independent components APPLIED, to obtain the required limitation even when a first FAULT (short or open circuit) in one of these components	N/A
	Above requirement not applied to transformers complying with this standard	N/A
	Above 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, or	N/A
	Umax, Imax, R, Lmax and Cmax 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 CUTOUT 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	N/A
	Test apparatus used was in accordance with this Clause and Fig G.7	N/A

Issue Date: 2013-11-07 Page 110 of 112 Report Reference # E341350-A29-UL

IEC 60601			
Clause	Requirement + Test	Result - Remark	Verdict

L	INSULATED WINDING WIRES FOR USE WITHOU INSULATION	JT INTERLEAVED	N/A
L.1	BASIC, SUPPLEMENTARY, DOUBLE, and REINFORCED INSULATION in wound components without interleaved insulation complied with this Annex covering round winding wires between 0.05 mm and 5.00 mm diameters	No such part	N/A
2	Wire construction		N/A
	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		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		N/A
	Temperature (°C):		-
	Humidity (%):		-
L.3.1	Dielectric strength		N/A
	Dielectric strength test of Clause 8.8.3 for the appropriate type and number of MOP(s) conducted by preparing the sample according to IEC 60851-5:1996, Clause 4.4.1 for a twisted pair with test voltages at least twice Tables 6 & 7, but not less than below with no breakdown:		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		N/A
	Sample subjected to flexibility and adherence test 8 of IEC 60851-3:1996, clause 5.1.1, using mandrel diameters of Table L.1		N/A
	Sample examined according to IEC 60851-3: 1997, clause 5.1.1.4, followed by dielectric test of clause 8.8.3, except test voltage applied between wire and mandrel with no breakdown		N/A
	Test voltage was at least the voltage in Tables 6 and 7but not less than the following:		N/A
	- 1500 V for BASIC and SUPPLEMENTARY INSULATION (V):		N/A

Issue Date: 2013-11-07 Page 111 of 112 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict
	·	<u>l</u>	

	- 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
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, except test voltage applied between the wire and mandrel	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
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	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
	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
4	Tests during manufacture	N/A
4.1	Production line dielectric strength tests conducted by the manufacture according to L.4.2 and L.4.3:	N/A
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:	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	N/A

Issue Date: 2013-11-07 Page 112 of 112 Report Reference # E341350-A29-UL

IEC 60601				
Clause	Requirement + Test	Result - Remark	Verdict	
	INSULATION (V):			
L.4.3	Sampling tests conducted using twisted pair samples (IEC 60851-5:1996, clause 4.4.1)		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	

Issue Date: 2013-11-07 Page 1 of 10 Report Reference # E341350-A29-UL

## <u>Enclosure</u>

## **National Differences**

Canada USA Issue Date: 2013-11-07 Page 2 of 10 Report Reference # E341350-A29-UL

IEC 60601		
SubClause Difference + Test	Result - Remark	Verdict

Cana	ada - Differences to IEC 60601-1: 2005 + CO (2007)	Canada - Differences to IEC 60601-1: 2005 + CORR. 1 (2006) + CORR. 2 (2007)		
1	Scope, object and related documents	Noted	Pass	
1.1	Scope	Noted	Pass	
1.1	This standard applies to the BASIC SAFETY and ESSENTIAL PERFORMANCE of MEDICAL ELECTRICAL EQUIPMENT and MEDICAL ELECTRICAL SYSTEMS designed to be installed in accordance with the Canadian Electrical Code (CEC), Part I, CSA C22.1; CAN/CSA-C22.2 No. 0; and CAN/CSA-Z32.	Noted	Pass	
1.1	NOTE 1A: In the IEC 60601 standards series adopted for use in Canada, the Canadian-particular standards may modify, replace, or delete requirements contained in this standard as appropriate for the particular ME EQUIPMENT and ME SYSTEMS under consideration, and may add other BASIC SAFETY and ESSENTIAL PERFORMANCE requirements.	Noted	Pass	
1.3	Collateral standards		N/A	
1.3	Applicable Canadian collateral standards become normative at the date of their publication and apply together with this standard.		N/A	
1.3	NOTE 1: When evaluating compliance with CAN/CSA-C22.2 No. 60601-1, it is permissible to assess independently compliance with the adopted Canadian collateral standards.		N/A	
1.4	Particular standards		N/A	
1.4	A requirement of a Canadian-particular safety standard takes precedence over this standard.		N/A	
3	Terminology and definitions	Noted	Pass	
3.41	HIGH VOLTAGE		N/A	
3.41	any voltage above 750 V, 1 050 V peak, as defined in the Canadian Electrical Code (CEC), Part I		N/A	
4.8	a) the applicable safety requirements of a relevant CSA, IEC, or ISO standard; or	See Critical Component List for details	Pass	
4.8	NOTE 1: For the components, it is not necessary to carry out identical or equivalent tests already performed to check compliance with the component standard.		Pass	

Issue Date: 2013-11-07 Page 3 of 10 Report Reference # E341350-A29-UL

	IEC 60601		
SubClause	Difference + Test	Result - Remark	Verdict

4.8	b) where there is no relevant CSA, IEC, or ISO standard, the requirements of this standard have to be applied	See Critical Component List for details	Pass
4.8	NOTE 2: If there are neither requirements in this standard nor in a CSA, 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.		N/A
4.10.2	and shall be in accordance with the Canadian Electrical Code (CEC), Part I, CSA C22.1:		Pass
7.7.1	and shall be in accordance with the Canadian Electrical Code (CEC), Part I, CSA C22.1		Pass
7.7.1	A PROTECTIVE EARTH CONDUCTOR or a PROTECTIVE EARTH CONNECTION or insulation shall be identified by either green or green and yellow colour. Colours of neutral and POWER SUPPLY CORD conductors shall be in accordance with the Canadian Electrical Code (CEC), Part I, CSA C22.2 No. 21, and CSA C22.2 No. 49		Pass
7.7.2	and shall be in accordance with the Canadian Electrical Code (CEC), Part I, CSA C22.1		Pass
7.7.2	A PROTECTIVE EARTH CONDUCTOR or a PROTECTIVE EARTH CONNECTION or insulation shall be identified by either green or green and yellow colour. Colours of neutral and POWER SUPPLY CORD conductors shall be in accordance with the Canadian Electrical Code (CEC), Part I, CSA C22.2 No. 21, and CSA C22.2 No. 49	Considered for PE wire connected in between the Appliance Inlet and the PE terminal only.	Pass
7.7.3	and shall be in accordance with the Canadian Electrical Code (CEC), Part I, CSA C22.1		Pass
7.7.3	A PROTECTIVE EARTH CONDUCTOR or a PROTECTIVE EARTH CONNECTION or insulation shall be identified by either green or green and yellow colour. Colours of neutral and POWER SUPPLY CORD conductors shall be in accordance with the Canadian Electrical Code (CEC), Part I, CSA C22.2 No. 21, and CSA C22.2 No. 49		Pass
7.7.4	and shall be in accordance with the Canadian Electrical Code (CEC), Part I, CSA C22.1		N/A
7.7.4	A PROTECTIVE EARTH CONDUCTOR or a PROTECTIVE EARTH CONNECTION or insulation shall be identified by either green or green and		N/A

Issue Date: 2013-11-07 Page 4 of 10 Report Reference # E341350-A29-UL

	IEC 60601		
SubClause	Difference + Test	Result - Remark	Verdict

	yellow colour. Colours of neutral and POWER SUPPLY CORD conductors shall be in accordance with the Canadian Electrical Code (CEC), Part I, CSA C22.2 No. 21, and CSA C22.2 No. 49	
7.7.5	and shall be in accordance with the Canadian Electrical Code (CEC), Part I, CSA C22.1	N/A
7.7.5	A PROTECTIVE EARTH CONDUCTOR or a PROTECTIVE EARTH CONNECTION or insulation shall be identified by either green or green and yellow colour. Colours of neutral and POWER SUPPLY CORD conductors shall be in accordance with the Canadian Electrical Code (CEC), Part I, CSA C22.2 No. 21, and CSA C22.2 No. 49	N/A
8.7.3	Allowable values shall be in accordance with the Canadian Electrical Code (CEC), Part I, CSA C22.1.	Pass
8.11.3.2	a) The MAINS PLUG of non-PERMANENTLY INSTALLED EQUIPMENT shall be	N/A
8.11.3.2	i) if molded-on type, hospital grade mains plug complying with CSA C22.2 No. 21;:	N/A
8.11.3.2	ii) hospital grade disassembly attachment plug type complying with CSA C22.2 No. 42; or	N/A
8.11.3.2	iii) Class II equipment having fuses on the line side/sides and neutral and may use a non-polarized attachment plug or a polarized attachment plug - CSA configuration type 1-15P shall be required and shall meet all applicable requirements in CSA C22.2 No. 21 and CSA C22.2 No. 42. Where a polarized attachment plug is used, the POWER SUPPLY CORD shall be connected to the wiring of the EQUIPMENT on the ungrounded side of the line when any of the following devices are used in the primary circuit:	N/A
8.11.3.2	1- the centre contact of an Edison base lampholder;	N/A
8.11.3.2	2- a single pole switch;	N/A
8.11.3.2	3- an automatic control with a marked off position;	N/A
8.11.3.2	4- a solitary fuse/fuse holder; or	N/A
8.11.3.2	5- any other single pole overcurrent protective	N/A

Issue Date: 2013-11-07 Page 5 of 10 Report Reference # E341350-A29-UL

	IEC 60601		
SubClause	Difference + Test	Result - Remark	Verdict

	device		
8.11.3.2	b) Detachable POWER SUPPLY CORD for non-PERMANENTLY INSTALLED EQUIPMENT (cord-connected equipment) shall be of a type that		N/A
8.11.3.2	i) can be shown to be unlikely to become detached accidentally, unless it can be shown that detachment will not constitute a safety HAZARD to a PATIENT or OPERATOR;		N/A
8.11.3.2	ii) can be shown that the impedance of the earth (ground) circuit contacts will not constitute a safety HAZARD to a PATIENT or OPERATOR; and		N/A
8.11.3.2	iii) has a terminal configuration or other constructional feature that will minimize the possibility of its replacement by a detachable POWER SUPPLY CORD which could create a HAZARDOUS SITUATION		N/A
8.11.3.2	c) A detachable POWER SUPPLY CORD shall		N/A
8.11.3.2	i) comply with the applicable requirements of CSA C22.2 No. 21; and		N/A
8.11.3.2	ii) not be smaller than No. 18 AWG, and the mechanical serviceability shall be not less than		N/A
8.11.3.2	1) Type SJ or equivalent for mobile or exposed to abuse ME EQUIPMENT; and		N/A
8.11.3.2	2) Type SV or equivalent for ME EQUIPMENT not exposed to abuse (or Type HPN if required because of temperature)		N/A
8.11.3.2	NOTE 1A: See CSA C22.2 No. 49 for requirements on the cord types mentioned in Sub-item 2).		N/A
8.11.3.2	d) Power supply cords shall meet the requirements of the Canadian Electrical Code, Part I, as applicable		N/A
8.11.3.2	Connecting cords between equipment parts shall meet the requirements of the Canadian Electrical Code, Part I, as applicable		N/A
8.11.5	Mains fuses and OVER-CURRENT RELEASES shall be in accordance with the Canadian Electrical Code (CEC), Part I, CSA C22.1	See List of Critical Components	Pass
9.7.5	Pressure vessels shall comply with the requirements of CSA B51, as applicable		N/A

Issue Date: 2013-11-07 Page 6 of 10 Report Reference # E341350-A29-UL

IEC 60601			
SubClause	Difference + Test	Result - Remark	Verdict

9.7.7	A pressure-relief device shall also comply as applicable to the requirements of ASME PTC 25 or equivalent Canadian requirements		N/A
15.4.1	bA) The point of connection of gas cylinders to EQUIPMENT shall be gas specific and clearly identified so that errors are avoided when a replacement is made. Medical gas inlet connectors on EQUIPMENT shall be		N/A
15.4.1	i) gas specific, yoke type, or nut and nipple type valve connections complying with CGA V-1 for pressures over 1 380 kPa (200 psi); or		N/A
15.4.1	ii) DISS type complying with CGA V-5 for pressures 1 380 kPa (200 psi) or less and configured to permit the supply of medical gases from low-pressure connecting assemblies complying with CAN/CSA-Z5359		N/A
15.4.1	NOTE 1A: Users of this standard should consult the CSA Z305 series of standards, CAN/CSA-Z9170-1, CAN/CSA-Z9170-2, 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.		N/A
15.4.8	Internal wiring of ME EQUIPMENT shall be in accordance with the Canadian Electrical Code (CEC), Part I, CSA C22.1	See Critical Components Table	Pass
16.1	General requirements for the ME SYSTEMS		N/A
16.1	An ME SYSTEM shall provide		N/A
16.1	- within the PATIENT ENVIRONMENT, the level of safety equivalent to ME EQUIPMENT complying with this standard; and		N/A
16.1	- outside the PATIENT ENVIRONMENT, the level of safety equivalent to equipment complying with their respective CSA, IEC, or ISO safety standards		N/A
16.1	Non-ME EQUIPMENT, when used in an ME SYSTEM, shall comply with CSA, IEC, or ISO safety standards that are relevant to that equipment.		N/A
16.9.2.1	c) The MULTIPLE SOCKET-OUTLET shall		N/A

Issue Date: 2013-11-07 Page 7 of 10 Report Reference # E341350-A29-UL

IEC 60601			
SubClause	Difference + Test	Result - Remark	Verdict

	comply with the requirements of CSA C22.2 No. 42, CSA C22.2 No. 49, and the following requirements	
16.9.2.1	- The separating transformer shall comply with the requirements of CAN/CSA-E61558-2-1 with a rated output not exceeding	N/A
16.9.2.1	- 1 kVA for single-phase transformers; and	N/A
16.9.2.1	- 5 kVA for polyphase transformers	N/A
16.9.2.1	The separating transformer shall also have a degree of protection not exceeding IPX4.	N/A

Issue Date: 2013-11-07 Page 8 of 10 Report Reference # E341350-A29-UL

IEC 60601			
SubClause Difference + Test	Result - Remark	Verdict	

USA - D	ifferences to IEC 60601-1: 2005 + CORR. 1	(2006) + CORR. 2 (2007)	
4.8	Replacement: where there was no relevant IEC/ISO standard, the relevant US ANSI standard applied	See Critical Component List for details	Pass
4.8	- when no relevant US ANSI standard existed, the requirements of this standard applied		Pass
4.10.2	Replacement: Rated voltage not exceeding 250V dc or single phase ac. or 600V poly-phase ac for me equipment and me systems up to 4kVA		Pass
4.10.2	Rated voltage not exceeding 600 V for all other me equipment and me systems		N/A
6.6	Addition: To comply with NFPA 70, X-Ray systems are classified as long time operation (> 5 min) or momentary operation (< 5 sec)		N/A
7.2.11	Addition: To comply with NFPA 70, X-Ray systems are marked as long time operation or momentary operation		N/A
7.2.21	New Sub-clause: Colors of medical gas cylinders		N/A
7.2.21	To comply with NFPA 99: Cylinders containing medical gases and their connection points are colored in accordance with the requirements of NFPA 99		N/A
8.2	Addition: All fixed me equipment & permanently installed me equipment are class I me equipment	To be evaluated in end product	N/A
8.6.1	Addition: To comply with NFPA 99, the enclosure of X-ray ME EQUIPMENT operating over 600 Vac, 850Vdc MAINS VOLTAGE, or containing voltages up to 50 V peak and enclosed in protectively earthed enclosure as well as connections to X-ray tubes and other high voltage components that include high voltage shielded cables are PROTECTIVELY EARTHED		N/A
8.6.1	To comply with NFPA 99, non-current carrying conductive parts of X-Ray ME EQUIPMENT likely to become energized are PROTECTIVELY EARTHED		N/A
8.7.3	Earth leakage current values are not higher than the stated values		Pass
8.7.3	5 mA in normal condition		Pass
8.7.3	10 mA in single fault condition		Pass
8.11	Addition: permanently connected me equipment provided with field wiring provision in accordance	Not Permanently installed ME equipment.	N/A

Issue Date: 2013-11-07 Page 9 of 10 Report Reference # E341350-A29-UL

IEC 60601			
SubClause	Difference + Test	Result - Remark	Verdict

with NEC	
Addition prior to the first paragraph:a) To comply with the NEC, add the following requirements to this clause:	N/A
Addition at the end of the clause: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	
Installation of connecting cords between equipment parts comply with NEC	N/A
Cable used as external interconnection between units	N/A
1) Exposed to abuse: Type SJT, SJTO, SJO, ST, SO, STO, or equivalent, or similar multiple-conductor appliance-wiring material,	
2) Not exposed to abuse: The cable was as in item 1) above, or	
i) Type SPT-2, SP-2, or SPE-2, or equivalent	N/A
ii) Type SVr, SVRO, SVE, or equivalent or similar multiple-conductor appliance wiring material,	N/A
iii) An assembly of insulated wires each with a nominal insulation thickness of 0.8 mm (1/32 inch) or more,	N/A
- enclosed in acceptable insulating tubing having a nominal wall thickness of 0.8 mm (1/32 inch) or more	
Receptacles provided as part of me equipment and me systems for use in the patient care areas of pediatric wards, rooms, or areas are Listed tamper resistant	
- or employ a Listed tamper resistant cover in accordance with NEC	N/A
Addition: The flexible cord is a type acceptable for the particular application,	N/A
- and it is acceptable for use at a voltage not less than the rated voltage of the appliance	N/A
- and has an ampacity as in NEC, not less than the current rating of the appliance	N/A
	Addition prior to the first paragraph:a) To comply with the NEC, add the following requirements to this clause:  Addition at the end of the clause: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  Installation of connecting cords between equipment parts comply with NEC  Cable used as external interconnection between units  1) Exposed to abuse: Type SJT, SJTO, SJO, ST, SO, STO, or equivalent, or similar multiple-conductor appliance-wiring material,  2) Not exposed to abuse: The cable was as in item 1) above, or  i) Type SPT-2, SP-2, or SPE-2, or equivalent ii) Type SVr, SVRO, SVE, or equivalent or similar multiple-conductor appliance wiring material,  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  Receptacles provided as part of me equipment and me systems for use in the patient care areas of pediatric wards, rooms, or areas are Listed tamper resistant  - or employ a Listed tamper resistant cover in accordance with NEC  Addition: The flexible cord is a type acceptable for the particular application,  - and it is acceptable for use at a voltage not less than the rated voltage of the appliance  - and has an ampacity as in NEC, not less than the

Issue Date: 2013-11-07 Page 10 of 10 Report Reference # E341350-A29-UL

IEC 60601				
SubClause	Difference + Test	Result - Remark	Verdict	
8.11.3.3	Addition: To comply with NFPA 99, for X-Ray ME EQUIPMENT with an attachment plug, the current rating on a hospital grade plug is 2X the maximum input current of the equipment		N/A	

Issue Date: 2013-11-07 Page 1 of 53 Report Reference # E341350-A29-UL

IEC 60601			
Clause	Requirement + Test	Result - Remark	Verdict

4.2		Process for ME Equipment or ME Systems	Pass
Clause of	Document Ref. in RMF	Result - Remarks	Verdict
ISO 14971	(Document No. and paragraph)		
3.3a	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Attachment C: Risk Management Procedure (Report No: GTQPR05000 Version A.1), Par. 5	The Risk Management Procedure define the policy for determining acceptable risk, taking into account relevant national Standards (harmonized to International standards), and national or regional regulations.	Pass
3.5e	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Attachment B: Risk Management Plan Par.1 Sec. 1.3	The Risk Management Plan defined the criteria for risk acceptability.	Pass
4.1	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 to Par. 7	Risk Management procedure provided and followed the process specified in 4.2 to 4.4 of ISO 14971:2000 to document related information.	Pass
4.2	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 6.1	Intended use and identification of characteristics are well defined.	Pass
4.3	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 6.2 and Sec. 6.3	The manufacturer had compiled a list of known or foreseeable hazards associated with the power supply in both normal and fault conditions.	Pass
4.4	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision:	The estimates of the risk(s) were recorded in the risk management file.	Pass

Issue Date: 2013-11-07 Page 2 of 53 Report Reference # E341350-A29-UL

IEC 60601				
Clause	Requirement + Test		Result - Remark	Verdict

	A.0 for Model GTM91128 series) Par. 6 Sec. 6.4		
5	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 7	The results of this risk evaluation were recorded in the risk management file.	Pass
6.1	Risk Management Report, Par. 8	The manufacturer follow the process specified in 6.2 to 6.7 of ISO 14971:2000 to control the risk(s) so that the residual risk(s) associated with each hazard is judged acceptable.	Pass
6.2	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 8 Sec. 8.1 item "Risk Reduction plan"	The risk control measures selected were recorded in the risk management file.	Pass
6.3	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 8 Sec. 8.1 item "Evaluation"	The effectiveness of the risk control measures had been verified and the results of the verification were recorded in the risk management file.	Pass
6.4	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 8 Sec. 8.2	All residual risk that remains after the risk control measure(s) are applied and evaluated using the criteria that defined in the risk management plan.	Pass
6.5	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 8 Sec. 8.3	No need to risk/benefit analysis because all residual risk is judged acceptable after risk control.	N/A
6.6	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128	The risk control measures have been reviewed and no new hazard was introduced after control.	Pass

Issue Date: 2013-11-07 Page 3 of 53 Report Reference # E341350-A29-UL

IEC 60601					
Clause	Requirement + Test Result - Remark		Verdict		
	series) Par. 8 Sec. 8.1 item "Risks arising from risk control measures"				
6.7	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 10 Sec. 10.1	The manufacturer assures that the risk(s) from all identified hazards have been evaluated.	Pass		
7	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report	After all risk control measures have been implemented and verified, the manufacturer decide the overall residual risk posed by the power adapter is acceptable using the criteria	Pass		

4.3	TABLE: Essential Performance			N/A
List of Esse	ntial Performance	Manufacturer's document number reference	Remarks	
functions		or reference from this standard or collateral		
		or particular standard(s)		
Supplementary Information: Essential Performance is performance, the absence or degradation of which,				
would result	in an unacceptable	risk.	_	

defined in the risk management plan.

GTM91120 series and Report No: GT-RM2013-007, Revision:

A.0 for Model GTM91128 series) Par. 10 Sec. 10.2

4.3	RM TABLE: Essential Performance			
Clause of	Document Ref. in RMF	Result - Remarks	Verdict	
ISO 14971	(Document No. and paragraph)			

4.5	RM TABLE: Equivalent Safety for ME Equipment of ME System				
Clause of	Document Ref. in RMF	Result - Remarks	Verdict		
ISO 14971	(Document No. and paragraph)				

4.6	RM TABLE: ME Equipment or system parts contacting the patient				
Clause of	Document Ref. in RMF	Result - Remarks	Verdict		
ISO 14971	(Document No. and paragraph)				

Issue Date: 2013-11-07 Page 4 of 53 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict

4.7	RM TABLE: Single Fault Condi	tion for ME Equipment	Pass
Clause of	Document Ref. in RMF	Result - Remarks	Verdict
ISO 14971	(Document No. and paragraph)		
4.2	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 6.1 item 6.1.1	Intended use and identification of characteristics are well defined.	Pass
4.3	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 2 and Sec. 3	The manufacturer had compiled a list of known or foreseeable hazards associated with the power supply in single fault conditions.	Pass
4.4	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 4	The estimates of the risk(s) were recorded in the risk management file.	Pass

4.8	RM TABLE: Components of ME Equipment		N/A
Clause of	Document Ref. in RMF Result - Remarks		Verdict
ISO 14971	(Document No. and paragraph)		

4.9	RM TABLE: Use of components with high-integrity characteristics				
Clause of	Document Ref. in RMF	Result - Remarks	Verdict		
ISO 14971	(Document No. and paragraph)				

4.11	TABLE: Power Input					Pass
Operating Conditions / Ratings		Voltage (V)	Frequency	Current (A)	Power (W or	Power factor
	_		(Hz)		VA)	(cos φ)
Suppleme	Supplementary information:					
Refer to E	Refer to E341350-A3 Table 7.					

5.1	RM TABLE: Type Tests		N/A
Clause of	Document Ref. in RMF	Result - Remarks	Verdict
ISO 14971	(Document No. and paragraph)		

Issue Date: 2013-11-07 Page 5 of 53 Report Reference # E341350-A29-UL

	IEC 60601				
Clause	Requirement + Test		Result - Remark	Verdict	

5.4 a)	RM TABLE: Other Conditions		Pass
Clause of	Document Ref. in RMF	Result - Remarks	Verdict
ISO 14971	(Document No. and paragraph)		
4.2	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 6.1 item 6.1.1	Intended use and identification of characteristics are well defined.	Pass
4.3	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 2 and Sec. 3	The manufacturer had compiled a list of known or foreseeable hazards associated with the power supply in both normal and single fault conditions.	Pass
4.4	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 4	The estimates of the risk(s) were recorded in the risk management file.	Pass

5.7	RM TABLE: Humidity preconditioning treatment		N/A
Clause of	Document Ref. in RMF	Result - Remarks	Verdict
ISO 14971	(Document No. and paragraph)		

5.9.2	TABLE: Determination of ACCESSIBLE parts			N/A
Location		Determination method (NOTE1)	Comments	
Supplement	Supplementary information:			
NOTE 1 - TI	he determination	on methods are: visual; rigid test finger;	jointed test finger; test hook.	

5.9.2.3	RM TABLE: Actuating mechanisms		N/A
Clause of	Document Ref. in RMF	Result - Remarks	Verdict
ISO 14971	(Document No. and paragraph)		

Issue Date: 2013-11-07 Page 6 of 53 Report Reference # E341350-A29-UL

IEC 60601				
Clause	Requirement + Test	Result - Remark	Verdict	

7.1.2	TABLE: Legibility of Marking	1		N/A
Markings te	sted	Ambient illuminance (lx)	Remarks	

Supplementary information:

Observer, with a visual acuity of 0 on the log Minimum Angle of Resolution (log MAR) scale or 6/6 (20/20), 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 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.

Issue Date: 2013-11-07 Page 7 of 53 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict

7.1.3 TABLE: Durability of marking te	st	Pass
Characteristics of the Marking Label tested:		Remarks
Material of Marking Label :	See below	
	See below	
Material (composition) of Warning Label:	See below	
Ink/other printing material or process :	See below	
Other:	See below	
YUEN CHANG SPECIAL PRINTING (SHENZHEN) CO LTD (PGDQ2.MH29752) Type JL-08		T-w = 15s ,T-m =15s, T-i =15s
YUEN CHANG SPECIAL PRINTING (SHENZHEN) CO LTD (PGDQ2.MH29752) Type JL-02		T-w = 15s ,T-m =15s, T-i =15s
FAN JA PAPER PRINTING CO LTD (PGDQ2.MH19546) Type FJ-03-3		T-w = 15s ,T-m =15s, T-i =15s
FAN JA PAPER PRINTING CO LTD (PGDQ2.MH19546) Type FJ07		T-w = 15s ,T-m =15s, T-i =15s
FAN JA PAPER PRINTING CO LTD (PGDQ2.MH19546) Type FJ-03-1		T-w = 15s ,T-m =15s, T-i =15s
DONGGUAN XIANGQUAN PRINTING CO LTD (PGDQ2.MH27594) Type XQ03		T-w = 15s ,T-m =15s, T-i =15s
DONGGUAN XIANGQUAN PRINTING CO LTD (PGJI2.MH47303) Type XQ004-B		T-w = 15s ,T-m =15s, T-i =15s
E-LIN ADHESIVE LABEL CO LTD (PGDQ2.MH45549) Type EL-15		T-w = 15s ,T-m =15s, T-i =15s
SHENZHEN CORWIN PRINTING CO LTD (PGDQ2.MH47077) Type CW-01		T-w = 15s ,T-m =15s, T-i =15s
SUZHOU HAIRONG PACKING PRODUCTION CO LTD (PGDQ2.MH48692) Type HR-01		T-w = 15s ,T-m =15s, T-i =15s
SUZHOU HAIRONG PACKING PRODUCTION CO LTD (PGDQ2.MH48692) Type HR-04		T-w = 15s ,T-m =15s, T-i =15s
DONGGUAN SHANGMAO PRINTING CO LTD (PGDQ2.MH17427) Type C-019		T-w = 15s ,T-m =15s, T-i =15s
DONGGUAN SHANGMAO PRINTING CO LTD (PGDQ2.MH17427) Type C-004		T-w = 15s ,T-m =15s, T-i =15s

## 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 methylated spirit, and then for 15 s with a cloth rag soaked with isopropyl alcohol.

Marking rubbed by hand, without undue pressure, first for 15 s with a cloth rag soaked with distilled water, then for 15 s with a cloth rag soaked with methylated spirit, and then for 15 s with a cloth rag soaked with isopropyl alcohol T-w = Time with distilled water T-m = Time with methylated spirit T-i = Time with isopropyl alcohol

Issue Date: 2013-11-07 Page 8 of 53 Report Reference # E341350-A29-UL

	IEC 60601				
Clause	Requirement + Test		Result - Remark	Verdict	

7.2.2	RM TABLE: Identification		Pass
Clause of	Document Ref. in RMF	Result - Remarks	Verdict
ISO 14971	(Document No. and paragraph)		
4.2	RISK_MANAGEMENT_REPOR	Intended use and identification of characteristics	Pass
	T (Report No: GT-RM2013-006,	are well defined	
	Revision: A.0 for Model		
	GTM91120 series and Report		
	No: GT-RM2013-007, Revision:		
	A.0 for Model GTM91128		
	series) Par. 6 Sec. 6.1		
4.3	RISK_MANAGEMENT_REPOR	The manufacturer had compiled foreseeable	Pass
	T (Report No: GT-RM2013-006,	Electrical hazard caused by misidentification	
	Revision: A.0 for Model	associated with the power supply	
	GTM91120 series and Report		
	No: GT-RM2013-007, Revision:		
	A.0 for Model GTM91128		
	series) Par. 6 Sec. 6.2 item		
	6.2.1 and Sec. 6.3 hazard No. 2		
4.4	RISK_MANAGEMENT_REPOR	The estimates of the risks were recorded in the	Pass
	T (Report No: GT-RM2013-006,	risk management file. Severity: 1 Probability: 2	
	Revision: A.0 for Model		
	GTM91120 series and Report		
	No: GT-RM2013-007, Revision:		
	A.0 for Model GTM91128		
	series) Par. 6 Sec. 6.4 hazard		
	No. 2		
5	RISK_MANAGEMENT_REPOR	The results of the risk evaluation were recorded	Pass
	T (Report No: GT-RM2013-006,	in the risk management file. Acceptable.	
	Revision: A.0 for Model		
	GTM91120 series and Report		
	No: GT-RM2013-007, Revision:		
	A.0 for Model GTM91128		
	series) Par. 7		
6.4	N/A	Risk control measures were considered	N/A
		unnecessary.	

7.2.5	RM TABLE: ME EQUIPMENT po	owered from other equipment	N/A
Clause of	Document Ref. in RMF	Result - Remarks	Verdict
ISO 14971	(Document No. and paragraph)		

7.2.13	RM TABLE: Physiological effects (safety signs and warning)					
Clause of	Document Ref. in RMF	Result - Remarks	Verdict			
ISO 14971	(Document No. and paragraph)					

Issue Date: 2013-11-07 Page 9 of 53 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict
7.2.17	RM TABLE: Protective packag	ing		N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971	(Document No. and paragraph)			
7.3.3	RM TABLE: Batteries			N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971		Troodic Tromanio		7 01 0101
	<u> </u>			
7.3.7	RM TABLE: Supply Terminals			N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971	(Document No. and paragraph)			
7.4.2	RM TABLE: Control devices			N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971		TCSuit - TCHarks		Verdict
	(2000)			
7.5	RM TABLE: Safety signs			N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971	(Document No. and paragraph)			
7.0.4	DM TABLE. Commel comme		(Con Table C 4)	NI/A
7.9.1 Clause of	RM TABLE: General accompared Document Ref. in RMF	Result - Remarks	See Table C.4)	N/A Verdict
ISO 14971		Result - Remarks		verdict
130 1497 1	(Document No. and paragraph)			
7.9.2.4	RM TABLE: Electrical power s	ource		N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971	(Document No. and paragraph)			
7.9.3.2	RM TABLE: Replacement of fu		cords, other parts	N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971	(Document No. and paragraph)			
	RM TABLE: Fundamental rule	of protection again	nst alactric shock -	N/A
8 1 h(1)		oi piolecliuli agali	iiot ciccii ic Si iuck -	111/74
8.1 b(1)			or	
8.1 b(1) Clause of	interruption of any one power-		or	Verdict

Issue Date: 2013-11-07 Page 10 of 53 Report Reference # E341350-A29-UL

	IEC	60601	
Clause	Requirement + Test	Result - Remark	Verdict

8.1 b(2)	RM TABLE: Fundamental rule of unintended movement of a con	of protection against electric shock - nponent	Pass
Clause of	Document Ref. in RMF	Result - Remarks	Verdict
ISO 14971	(Document No. and paragraph)		
4.2	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 6.1	Intended use and identification of characteristics are well defined	Pass
4.3	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 6.2 item 6.2.1 and Sec. 6.3 hazard No. 3	The manufacturer had compiled foreseeable hazards caused by unintended movement of a component associated with the power supply	Pass
4.4	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 6.4 hazard No. 3	The estimates of the risks were recorded in the risk management file. Severity: 2 Probability: 2	Pass
5	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 7	The results of the risk evaluation were recorded in the risk management file. Acceptable	Pass
6.2	N/A	Risk control measures were considered unnecessary.	N/A
6.3	N/A	Risk control measures were considered unnecessary.	N/A
6.4	N/A	Risk control measures were considered unnecessary.	N/A
6.5	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 8 Sec. 8.3	No reduction of risk through "Risk/benefit analysis"	N/A

Issue Date: 2013-11-07 Page 11 of 53 Report Reference # E341350-A29-UL

		IEC 60601				
Clause	Requirement + Test	Result - Remark	Verdict			
	1		<u> </u>			
8.1 b(3) RM TABLE: Fundamental rule of protection against electric shock - accidental detachment of conductors and connectors						
Clause of	Document Ref. in RMF	Result - Remarks	Verdict			
ISO 14971	(Document No. and paragraph)					
8.2.2	RM TABLE: Connection to an	external d.c. power sources	N/A			
Clause of	Document Ref. in RMF	Result - Remarks	Verdict			
ISO 14971	(Document No. and paragraph)					
8.3 d	RM TABLE: Requirements of T	ype BF or CF Applied Parts	N/A			
Clause of	Document Ref. in RMF	Result - Remarks	Verdict			
ISO 14971	(Document No. and paragraph)					

Issue Date: 2013-11-07 Page 12 of 53 Report Reference # E341350-A29-UL

IEC 60601					
Clause	Requirement + Test	Result - Remark	Verdict		

8.4.2	TABLE: W	orking Volta	ge / Power Me	asurement			Pass
Test supply vo	oltage/freque	ncy (V/Hz) (*	1):			240V/60Hz	
-	Measured v	/alues				-	
Location From/To	Vrms	Vpk or Vdc	Peak-to-peak ripple (2)	Power W/VA	Energy (J)	Remarks	
LOW VOLTAGE RELIABILITY : (IEC 60601- 1, 3rd Edition, Clause 8.4.2 and 8.11.1)						Model GTM9112	0-3048-FW
Transformer Pin A to B	93.2	328Vpk					
Transformer Pin A after D7 to B		48.8Vdc	4.8	38.8VA			
Transformer Pin A after D7 to B	0.025	0.382Vpk	0.724	0		Short D7 / Outpurafter several secondary	onds. No
WORKING VOLTAGE MEASUREM ENT: (IEC 60601-1, 3rd Edition, Clause 8.5.4)	Vrms	Vpk	Vpk-pk			Model GTM9112	0-3048-FW
T1 Pin 1 to Pin A	213	376	524				
T1 Pin 1 to Pin B	217	428	464				
T1 Pin 2 to Pin A	224	396	624				
T1 Pin 2 to Pin B	213	356	376				
T1 Pin 3 to Pin A	215	424	676				
T1 Pin 3 to Pin B	255	424	772			Highest Vrms / V	pk-pk
T1 Pin 5 to Pin A	223	548	616			Highest Vpk	
T1 Pin 5 to Pin B	204	344	372				
CY1 Pri Pin to Sec Pin	213	356	376				
U2 Pri Pin1 to Pin3	246	396	376				

Issue Date: 2013-11-07 Page 13 of 53 Report Reference # E341350-A29-UL

	IEC 60601						
nt + Test			Result - F	Remark	Verdict		
400	376						
400	376						
396	376						
	400	400     376       400     376       396     376	400 376 400 376 396 376	400   376	400   376		

<sup>1.</sup> The input supply voltage to the ME EQUIPMENT shall be the RATED voltage or the voltage within the RATED voltage range which results in the highest measured value. See clause 8.5.4.

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

8.4.2 c	RM TABLE: Accessible parts including applied parts				
Clause of	Document Ref. in RMF Result - Remarks				
ISO 14971	(Document No. and paragraph)				

measurement of voltage	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							Pass		
Maximum allowable voltage (V):										
Voltage measured (V)								•		
Voltage Measured Between: 1 2 3 4 5 6 7				7	8	9	10			
Maximum allowable stored charge when	n meas	sured vo	oltage e	exceede	ed 60 v	(µc):	*	45	•	
Calculated stored charge (µc)			_					•		
Voltage Measured Between:	1	2	3	4	5	6	7	8	9	10
-										
Supplementary information:	Supplementary information:									
Refer to E341350-A3 Table 15b.										

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							
Maximum allowable residual voltage (V): 60 V								
Maximum a	llowable stored charge when	residual voltage exce	eded 60 V:	45 µC				
Description	Description of the capacitive circuit (i.e., Measured residual Calculated stored Remarks							
accessible of	accessible capacitor or circuit parts) voltage (V) charge (µC)							
Supplement	Supplementary information:							

8.5.2.2	RM TABLE: Type B applied parts		
Clause of	Document Ref. in RMF	Result - Remarks	Verdict
ISO 14971	(Document No. and paragraph)		

8.5.2.3	RM TABLE: PATIENT Leads			
Clause of	Document Ref. in RMF	Result - Remarks	Verdict	
ISO 14971	(Document No. and paragraph)			

Issue Date: 2013-11-07 Page 14 of 53 Report Reference # E341350-A29-UL

				IEC 6060	1					
Clause	Requirement + 7	est				Result -	Rema	rk	V	erdict
						•				
8.5.5.1a	TABLE: Defibri electrical energ		proof a	pplied parts - i	nea	suremen	t of ha	zardous	N	/A
Test Condition: Figs. 9 and 10	Measurement on accessible		Applie voltag	d part with test e	volt	st tage arity		ured voltage en Y1 and Y2	Rem	narks
Supplement	ary information:									
8.5.5.1b	TABLE: Defibri	llation-	proof a	pplied parts - v	/erif	ication o	f recov	ery time	N	/A
Applied part voltage	t with test	Test voltage polarity	e d	Recovery time fro ocuments (s)		Measured recovery (s)		Remarks		
Supplement	tary information:									
8.5.5.2	TABLE: Defibri Defibrillation-P Energy delivere	roof Ap	plied F	Parts - Energy ı					N	/A
Test Voltage		Me	easured nergy E	Measured	Ene	rgy E1 as	% of E	E2 (%)		
E1= Measur	tary information: Fred energy delive red energy delive	red to 1	00% w	th ME Equipme	nt co	onnected;				
8.6.3	RM TABLE: Pro	tective	earthi	na of movina r	arts	<u> </u>			N	/A
Clause of	Document No.	n RMF		Result - Ren						erdict

8.6.3	RM TABLE: Protective earthing of moving parts			
Clause of	Document Ref. in RMF	Result - Remarks	Verdict	
ISO 14971	(Document No. and paragraph)			

	TABLE: Impedance and current-carrying capability of PROTECTIVE EARTH CONNECTIONS					
impedance measured between parts (A) /Duration (s)			Voltage drop measured between parts (V)	Maximum calculated impedance (m ohm)	allo	ximum wable edance (m n)
Supplementa	ary information:					
No accessib	le earthing part.					

Issue Date: 2013-11-07 Page 15 of 53 Report Reference # E341350-A29-UL

IEC 60601				
Clause	Requirement + Test	Result - Remark	Verdict	

8.7 TABLE: Leakage current				Pass
Type of leakage current and test condition (including single faults)	Suppl y voltag e (V)	Supply frequency (Hz)	Measu red max. value (µA)	Remarks
Figure 13, Earth Leakage	(V)	(Hz)	Before /After Humid ity (µA)	Model GTM91120-3048-T3, Non-frequency-weighted MD used. / 5mA
ER, NC, S1 = 1, S5 = N	264	60	99 / 179	Model GTM91120-3048-T3, Non- frequency-weighted MD used. / 5mA
ER, NC, S1 = 1, S5 = R	264	60	100 / 178	Model GTM91120-3048-T3, Non- frequency-weighted MD used. / 5mA
ER, SFC (Neutral Open), S1 = 0, S5 = N	264	60	180 / 340	Model GTM91120-3048-T3, Non- frequency-weighted MD used. / 10mA
ER, SFC (Neutral Open), S1 = 0, S5 = R	264	60	178 / 332	Model GTM91120-3048-T3, Non-frequency-weighted MD used. / 10mA
Fig. 14 - Touch Current (TC)	-	-	-	Maximum allowed values: 100 μA NC; 500 μA SFC
Figure 14, Touch (Leakage) Current	(V)	(Hz)	Before /After Humid ity (µA)	Remarks / Limitation
TC, NC, S1 = 1, S5 = N, S7 = 1	264	60	5/8	Model GTM91120-307.5-2.5-T2, Non-frequency-weighted MD used. / 100 μA
TC, NC, S1 = 1, S5 = R, S7 = 1	264	60	5/8	Model GTM91120-307.5-2.5-T2, Non-frequency-weighted MD used. / 100 μA
TC, SFC (Neutral Open), S1 = 0, S5 = N, S7 = 1	264	60	8/9	Model GTM91120-307.5-2.5-T2, Non-frequency-weighted MD used. / 500 μA
TC, SFC (Neutral Open), S1 = 0, S5 = R, S7 = 1	264	60	8/9	Model GTM91120-307.5-2.5-T2, Non-frequency-weighted MD used. / 500 μA
TC, NC, S1 = 1, S5 = N, S7 = 1	264	60	7/8	Model GTM91120-3048-T3, Non- frequency-weighted MD used. / 100 μA
TC, NC, S1 = 1, S5 = R, S7 = 1	264	60	8/8	Model GTM91120-3048-T3, Non- frequency-weighted MD used. / 100 μA

IEC 60601					
Clause	Requirement + Test		Result - Remark	Verdict	

TC, SFC (Neutral Open), S1 = 0, S5 = N, S7 = 1	264	60	12 / 12	Model GTM91120-3048-T3, Non- frequency-weighted MD used. / 500 μA
TC, SFC (Neutral Open), S1 = 0, S5 = R, S7 = 1	264	60	12 / 12	Model GTM91120-3048-T3, Non-frequency-weighted MD used. / 500 μA
TC, SFC (Ground Open), S1 = 1, S5 = N, S7 = 0	264	60	7/7	Model GTM91120-3048-T3, Non-frequency-weighted MD used. / 500 μA
TC, SFC (Ground Open), S1 = 1, S5 = R, S7 = 0	264	60	7/7	Model GTM91120-3048-T3, Non- frequency-weighted MD used. / 500 μA
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)
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
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)
Fig. 18 - Patient leakage current with external voltage on metal Accessible Part that is not Protectively Earthed	-	-	-	Maximum allowed values: Type B or BF AP: 500 μA Type CF: N/A
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)
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)
Fig. 17 and 20 - Total Patient Leakage	-	-	-	Maximum allowed values: Type B

Issue Date: 2013-11-07 Page 17 of 53 Report Reference # E341350-A29-UL

IEC 60601				
Clause	Requirement + Test	Result - Remark	Verdict	

Current with all AP of same type connected together with external voltage on SIP/SOP				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)
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: 5000μA Type CF: 100 μA
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

## Supplementary information:

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

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

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

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

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

Non-frequency-weighted MD used. Other test data shall refer to E341350-A3 Table 19.

real inequality weighted MB dood. Other tool data chair refer to t	E011000710 10510 10.
ER - Earth leakage current	A - After humidity conditioning
TC - Touch current	B - Before humidity conditioning
P - Patient leakage current	1 - Switch closed or set to normal polarity
PA - Patient auxiliary current	0 - Switch open or set to reversed polarity
TP - Total Patient current	NC - Normal condition
PM - Patient leakage current with mains on the applied parts	SFC - Single fault condition
MD - Measuring device	

Issue Date: 2013-11-07 Page 18 of 53 Report Reference # E341350-A29-UL

IEC 60601				
Clause	Requirement + Test	Result - Remark	Verdict	

8.8.3	TABLE: Dielectric strength test of solid insulating materials with safety function - MEANS OF OPERATOR PROTECTION (MOOP) / MEANS OF PATIENT PROTECTION (MOPP)							
Insulation under test (area from insulation diagram)		Insulation Type (1 or 2 MOOP/MOPP)	WORKING	PEAK WORKING VOLTAGE (U) V d.c.	A.C. test voltages in V r.m.s1	Dielectric breakdown after 1 minute Yes/No2		
B: Primary to Secondary	0	2 MOPP	548V		4550Vrms	No		
C: Primary to	o Enclosure	2 MOPP	354V		4000Vrms	No		
D: Primary to	o Earth	1 MOPP	354V		1500Vrms	No		
Insulating Ta models exce (One layer for	ept WF)	1 MOPP	548V		3000Vrms	No		
Insulating Ta WF, Sample 15) (One lay	# 1677421-	1 MOPP	548V		5000Vrms*	No		
TIW (All Mo	dels)	2 MOPP*1.5	548V		7500Vrms*	No		
`		Over large enterer informations						

- Supplementary information:

  1 Alternatively, per the Table (i.e., \_\_dc), a d.c. test voltage equal to the peak value of the a.c. test voltage
- 2 A) Immediately after humidity treatment of 5.7, ME EQUIPMENT de-energized, B) after required sterilization PROCEDURE, ME EQUIPMENT de-energized, C) after reaching steady state operating temperature as during heating test of 11.1.1, and D) after relevant tests of 11.6 (i.e., overflow, spillage, leakage, ingress of water, cleaning, disinfection, and sterilization).

Insulation tape and TIW tested can refer to table: Critical Components. \* Higher test voltage was used. Test both before humidity and After humidity.

8.8.4.1	TABLE: Resistance to heat - Ball pressure test of thermoplastic parts				Pass
	Allowed impression diameter (mm): =<2 mm		-		
	Force (N):	20			-
Part/material			Test temperature (°C) Impression d (mm)		on diameter
Supplementary information:					
Refer to E341350-A3 Table additional tests.					

Issue Date: 2013-11-07 Page 19 of 53 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict

8.8.4.1	RM TABLE: Mechanical strength and resistance to heat		
Clause of	Document Ref. in RMF	Result - Remarks	Verdict
ISO 14971	(Document No. and paragraph)		
4.2	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 6.1	Intended use and identification of characteristics are well defined	Pass
4.3	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 6.2 item 6.2.1 and Sec. 6.3 hazard No. 4 Risk No. EL4	The manufacturer had compiled foreseeable hazards caused by unintended movement of a component associated with the power supply	Pass
4.4	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 6.4 hazard No. 4 Risk No. EL4	The estimates of the risks were recorded in the risk management file. Severity: 4 Probability: 4	Pass
5	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 7	The results of the risk evaluation were recorded in the risk management file. NACC	Pass
6.2	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 8 Sec. 8.1 No. 2 Risk No. EL4	Material control is identified. Using material comply with UL746	Pass
6.3	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 8 Sec. 8.1 No. 2	The effectiveness of the risk control measures had been verified and the results of the verification were recorded in the risk management file. Severity: 4 Probability: 1	Pass

Issue Date: 2013-11-07 Page 20 of 53 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict

	Risk No. EL4		
6.4	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128	All residual risk that remains after the risk control measure(s) are applied and evaluated using the criteria that defined in the risk management plan. Acceptable	Pass
	series) Par. 8 Sec. 8.2		
6.5	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 8 Sec. 8.3	No reduction of risk through "Risk/benefit analysis"	N/A

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				
Specific areas of circuits short-circuited and test conditions		Test in lieu of CREEPAGE DISTANCE or AIR CLEARANCE1	HAZARDOUS SITUATION observed (i.e., fire hazard, shock hazard, explosion, discharge of parts, etc.)? Yes/No	Remarks	
Supplementary information: Note 1: AC - AIR CLEARANCE CD - CREEPAGE DISTANCE					

8.9.3.2	TABLE: Thermal cycling tests on one sample forming solid insulation between conductive	N/A		
Test Sequence No.	Each test duration and temperature	8.8.3 times 1.6)	after hu precond 5.7 exc	ditioning per Cl. ept for 48 h reakdown:

Supplementary information:

1 T1 = 10 °C above the maximum temperature of relevant part determined per 11.1.1, or 85 °C, the higher of the two. 10 °C not added to T1 when temperature measured by an embedded thermocouple. Used gradual transition from one temperature to another.

Issue Date: 2013-11-07 Page 21 of 53 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict

8.9.3.4	TABLE: Thermal cycling tests on one s 8.9.3.3)	e N/A	
Test Sequence No.	Each test duration and temperature	Dielectric test voltage (V = Test voltage in 8.8.3 times 1.6)	Dielectric strength test after humidity preconditioning per Cl. 5.7 except for 48 h only, Breakdown: Yes/No

Supplementary information:
1 T1 = 10 °C above the maximum temperature of relevant part determined per 11.1.1, or 85 °C, the higher of the two. 10 °C not added to T1 when temperature measured by an embedded thermocouple. Used gradual transition from one temperature to another.

Issue Date: 2013-11-07 Page 22 of 53 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict

8.10.1	<b>RM TABLE: Fixing of compone</b>	nts	Pass
Clause of	Document Ref. in RMF	Result - Remarks	Verdict
ISO 14971	(Document No. and paragraph)		
4.2	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report	Intended use and identification of characteristics are well defined	Pass
	No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 6.1		
4.3	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 6.2 item 6.2.1 and Sec. 6.3 hazard No. 3 Risk No. EL3	The manufacturer had compiled foreseeable hazards caused by unintended movement of a component associated with the power supply	Pass
4.4	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 6.4 hazard No. 3 Risk No. EL3	The estimates of the risks were recorded in the risk management file. Severity: 2 Probability: 2	Pass
5	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 7	The results of the risk evaluation were recorded in the risk management file. Acceptable	Pass
6.2	N/A	Risk control measures were considered unnecessary.	N/A
6.3	N/A	Risk control measures were considered unnecessary.	N/A
6.4	N/A	Risk control measures were considered unnecessary.	N/A
6.5	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 8 Sec. 8.3	No reduction of risk through "Risk/benefit analysis"	N/A

Issue Date: 2013-11-07 Page 23 of 53 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict

8.10.2	RM TABLE: Fixing of wiring		Pass
Clause of	Document Ref. in RMF	Result - Remarks	Verdict
ISO 14971	(Document No. and paragraph)		
4.2	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128	Intended use and identification of characteristics are well defined	Pass
	series) Par. 6 Sec. 6.1		
4.3	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 6.2 item 6.2.1 and Sec. 6.3 hazard No. 6 Risk No. EL6	The manufacturer had compiled foreseeable hazards caused by unintended movement of a component associated with the power supply	Pass
4.4	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 6.4 hazard No. 6 Risk No. EL6	The estimates of the risks were recorded in the risk management file. Severity: 4 Probability: 2	Pass
5	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 7	The results of the risk evaluation were recorded in the risk management file. NACC	Pass
6.2	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 8 Sec. 8.1 No. 4 Risk No. EL6	Use Teflon tube and glue for TIW wire and use glue for other wires	Pass
6.3	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 8 Sec. 8.1 No. 4	The effectiveness of the risk control measures had been verified and the results of the verification were recorded in the risk management file. Severity: 4 Probability: 1	Pass

Issue Date: 2013-11-07 Page 24 of 53 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict

	Risk No. EL6		
6.4	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 8 Sec. 8.2	All residual risk that remains after the risk control measure(s) are applied and evaluated using the criteria that defined in the risk management plan. Acceptable	Pass
6.5	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 8 Sec. 8.3	No reduction of risk through "Risk/benefit analysis"	N/A

Issue Date: 2013-11-07 Page 25 of 53 Report Reference # E341350-A29-UL

	IEC 60601		
Clause	Requirement + Test	Result - Remark	Verdict

8.10.5	RM TABLE: Mechanical protec	tion of wiring	Pass
Clause of	Document Ref. in RMF	Result - Remarks	Verdict
ISO 14971	(Document No. and paragraph)		
4.2	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 6.1	Intended use and identification of characteristics are well defined	Pass
4.3	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 6.2 item 6.2.1 and Sec. 6.3 hazard No. 6 Risk No. EL6	The manufacturer had compiled foreseeable hazards caused by unintended movement of a component associated with the power supply	Pass
4.4	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 6.4 hazard No. 6 Risk No. EL6	The estimates of the risks were recorded in the risk management file. Severity: 4 Probability: 2	Pass
5	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 7	The results of the risk evaluation were recorded in the risk management file. NACC	Pass
6.2	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 8 Sec. 8.1 No. 4 Risk No. EL6	Use Teflon tube and glue for TIW wire and use glue for other wires	Pass
6.3	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 8 Sec. 8.1 No. 4	The effectiveness of the risk control measures had been verified and the results of the verification were recorded in the risk management file. Severity: 4 Probability: 1	Pass

Issue Date: 2013-11-07 Page 26 of 53 Report Reference # E341350-A29-UL

			IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict	
	Risk No. EL6				
6.4	RISK_MANAGEMENT_ T (Report No: GT-RM20 Revision: A.0 for Model GTM91120 series and F No: GT-RM2013-007, R A.0 for Model GTM9112 series) Par. 8 Sec. 8.2	13-006, Report evision:			
6.5	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 8 Sec. 8.3				
	A.0 for Model GTM9112				
8.11.3.5	A.0 for Model GTM9112 series) Par. 8 Sec. 8.3			N/A	
8.11.3.5 Cord under	A.0 for Model GTM9112 series) Par. 8 Sec. 8.3  TABLE: Cord anchora	ges Ma		N/A marks	
Cord under	A.0 for Model GTM9112 series) Par. 8 Sec. 8.3  TABLE: Cord anchora	ges Ma	ass of Pull (N) Torque (Nm) Reuipment (kg)		
Cord under	A.0 for Model GTM9112 series) Par. 8 Sec. 8.3  TABLE: Cord anchorage rest	ges Ma		marks	
Cord under Supplemer 8.11.3.6	A.0 for Model GTM9112 series) Par. 8 Sec. 8.3  TABLE: Cord anchorage restriction:  TABLE: Cord guard	ges Ma equ	uipment (kg)		
Cord under Supplemer 8.11.3.6 Cord under	A.0 for Model GTM9112 series) Par. 8 Sec. 8.3  TABLE: Cord anchora r test  TABLE: Cord guard r test	ges Ma	uipment (kg)	marks	
Cord under Supplemer 8.11.3.6 Cord under	A.0 for Model GTM9112 series) Par. 8 Sec. 8.3  TABLE: Cord anchorage restriction:  TABLE: Cord guard	ges Ma equ	uipment (kg)	marks	
Cord under Supplemer  8.11.3.6 Cord under Supplemer	A.0 for Model GTM9112 series) Par. 8 Sec. 8.3  TABLE: Cord anchorage rest entary information:  TABLE: Cord guard rest entary information:	ges Ma equ	ss Measured curvature Remarks	Marks N/A	
Supplemer 8.11.3.6 Cord under Supplemer 8.11.5	A.0 for Model GTM9112 series) Par. 8 Sec. 8.3  TABLE: Cord anchora r test  TABLE: Cord guard r test	ges Ma equ	ss Measured curvature Remarks	marks	
Cord under Supplemer 8.11.3.6 Cord under	A.0 for Model GTM9112 series) Par. 8 Sec. 8.3  TABLE: Cord anchorage rest est entary information:  TABLE: Cord guard rest entary information:  RM TABLE: Mains fuse Document Ref. in RMF	ges Ma equ	ss Measured curvature Remarks  over-current releases	N/A	
Supplemer 8.11.3.6 Cord under Supplemer 8.11.5 Clause of	A.0 for Model GTM9112 series) Par. 8 Sec. 8.3  TABLE: Cord anchorage rest est entary information:  TABLE: Cord guard rest entary information:  RM TABLE: Mains fuse Document Ref. in RMF (Document No. and para	ges  Marequ  Test mases and or	ss Measured curvature Remarks  ever-current releases  Result - Remarks	N/A	
Supplemer 8.11.3.6 Cord under Supplemer 8.11.5 Clause of ISO 14971 9.2.1	A.0 for Model GTM9112 series) Par. 8 Sec. 8.3  TABLE: Cord anchorage rest series  TABLE: Cord guard rest series se	ges  Marequ  Test mases and or	ss Measured curvature Remarks  ever-current releases Result - Remarks  ated with moving parts - General	N/A  N/A  N/A	
Supplemer  8.11.3.6 Cord under Supplemer  8.11.5 Clause of	A.0 for Model GTM9112 series) Par. 8 Sec. 8.3  TABLE: Cord anchorage rest series  TABLE: Cord guard rest series  TABLE: Cord guard rest series  TABLE: Mains fuse Document Ref. in RMF (Document No. and para RM TABLE: HAZARDS Document Ref. in RMF	ges  Ma equ  Test mas  es and or  agraph)	ss Measured curvature Remarks  ever-current releases  Result - Remarks	N/A N/A Verdict	

9.2.2.2	9.2.2.2   TABLE: Measurement of gap "a" according to Table 20 (ISO 13852: 1996)   N/A								
Part of body		Allowable adult	Measured adult gap, Allowable children		Measured children				
		gap1, mm	p1, mm   mm   gap1, n		gap, mm				
Supplementary information: 1 In general, gaps for adults used, except when the device is specifically									
designed for use with children, values for children applied.									

9.2.2.4.3	RM TABLE: Movable guards				
Clause of	Document Ref. in RMF	Result - Remarks	Verdict		
ISO 14971	(Document No. and paragraph)				

Issue Date: 2013-11-07 Page 27 of 53 Report Reference # E341350-A29-UL

			IEC 60601		
Clause	Requirement +	Test	F	Result - Remark	Verdict
	•				·
9.2.2.4.4	RM TABLE: P	rotective measur	res		N/A
Clause of	Document Ref.	in RMF	Result - Remarks		Verdict
SO 14971	(Document No.	and paragraph)			
) 2 2 5 a)	DM TABLE, C				N/A
9.2.2.5 c) Clause of	Document Ref.	ontinuous activa	Result - Remarks		Verdict
SO 14971			Result - Remarks		verdict
<u>30 1497 1</u>	(Document No.	and paragraph)			
9.2.2.6	RM TABLE: S	peed of moveme	ent(s)		N/A
Clause of	Document Ref.	in RMF	Result - Remarks		Verdict
ISO 14971	(Document No.	and paragraph)			
					·
9.2.3.2	RM TABLE: O	ver travel			N/A
Clause of	Document Ref.	in RMF	Result - Remarks		Verdict
ISO 14971	(Document No.	and paragraph)			
	•				•
9.2.4		mergency stopp			N/A
Clause of	Document Ref.	in RMF	Result - Remarks		Verdict
ISO 14971	(Document No.	and paragraph)			
9.2.5		elease of patient			N/A
Clause of	Document Ref.		Result - Remarks		Verdict
ISO 14971	(Document No.	and paragraph)			
9.3	DM TABLE, U		ed with surfaces, co	rnoro and adaga	N/A
Clause of	Document Ref.		Result - Remarks	mers and edges	Verdict
ISO 14971		and paragraph)	Result - Remarks		Verdict
<u> </u>	(Document No.	and paragraph)			
9.4.2.1	TABLE: Instal	oility-overbalanc	e in transport positi	on	N/A
ME EQUIP			transport position)	Remarks	L
preparation		(			
	ntary information:				
	,				
9.4.2.2	TABLE: Instal	oility-overbalanc	e excluding transpo	ort position	N/A
ME EQUIP			excluding transport	Remarks	
preparation			ther 5 ° incline and ve		
,			g or 10 ° incline)		
Supplemen	ntary information:		-	-	

Issue Date: 2013-11-07 Page 28 of 53 Report Reference # E341350-A29-UL

			IEC 60601			
Clause	Requirement +	+ Test Result		Result - F	Remark	Verdict
			<del></del>			l
0.4.0.0	TABLE In a fall		. (		-1.6	N1/A
9.4.2.3			e from horizontal an			N/A
ME EQUIP			orce used, direction of		emarks	
preparation		_	equipment, location o	OT		
Cupplomon	tary information:	force				
Supplemen	tary iriiorifiation.					
9.4.2.4.2	TABLE: Casto	ers and wheels - F	Force for propulsion	n		N/A
ME EQUIP			orce location and hei		emarks	1071
preparation		Tool Condition (		19117	omano	
	tary information:	<u> </u>				
<u></u>						
9.4.2.4.3	TABLE: Casto	rs and wheels - I	Movement over a th	reshold		N/A
ME EQUIP	MENT	Test Condition (s	speed of movement)	R	emarks	
preparation		,	,			
	tary information:					
	•					
9.4.2.4.3	RM TABLE: M	ovement over a t	hreshold			N/A
Clause of	Document Ref.		Result - Remarks			Verdict
ISO 14971	(Document No.	and paragraph)				
	•	•				•
9.4.3.1	TABLE: Instal	nility from unwan	ted lateral moveme	nt (inclu	dina slidina) in	N/A
0	transport posi			iii (iiioiu	amg onamg/ m	1.07
ME EQUIP			ransport position, wo	rkina R	emarks	·
preparation			rice(s), caster position			
	tary information:		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<u>, , , , , , , , , , , , , , , , , , , </u>		
• •	Š					
9.4.3.2	TABLE: Instab	oility from unwan	ted lateral moveme	nt (inclu	dina slidina)	N/A
		sport position		(	gg,	1
ME EQUIP	MENT	Test Condition (v	working load, locking	R	emarks	
preparation			position, force, force			
		location, force di	rection)			
Supplemen	tary information:					
9.4.4		and other handli	ing devices			N/A
Clause and	Name of Test	Test Condition		R	emarks	
Supplemen	tary information:	•		·		
9.5.1		rotective means				N/A
Clause of	Document Ref.	in RMF	Result - Remarks			Verdict
ISO 14971	(Document No.	and paragraph)				
9.6.1	RM TABLE: A	coustic energy -	General			N/A
Clause of	Document Ref.		Result - Remarks			Verdict
ISO 14971	L/Danisant Na	and paragraph)				

Issue Date: 2013-11-07 Page 29 of 53 Report Reference # E341350-A29-UL

				IEC 6	0601				
Clause	Requ	irement + Test				Result -	Remark		Verdict
0.0.0	D14.7	ADI E Julius suus	.1 114						I NI/A
9.6.2.2		ABLE: Infrasoun	a ana uit						N/A
Clause of		ment Ref. in RMF		Result -	Remarks				Verdict
ISO 14971	(Document No. and paragraph)								
0.7.0	D	- ADI			4 -				NI/A
9.7.2		ABLE: Pneumati	c and nyo						N/A
Clause of		ment Ref. in RMF		Result -	Remarks				Verdict
ISO 14971	(Doc	ument No. and par	agrapn)						
0.7.4	D. 4. 7	ADIE D		NAT		.4 -			N1/A
9.7.4		ABLE: Pressure	rating of			ts			N/A
Clause of		ment Ref. in RMF	, a a a a a b \	Result -	Remarks				Verdict
ISO 14971	(Doc	ument No. and par	agrapn)						
0.7.5	TAD	LE. Drocoure ves	solo						NI/A
9.7.5	IABI	LE: Pressure ves Vessel Burst	seis Permane	ont	Leaks		Vessel fluid	Do	N/A marks
Hydraulic, Pneumatic	or	vessei Burst	Deforma		Leaks		substance	Re	marks
Suitable Me			Delomia	ILIOII			Substance		
and Test	uia								
Pressure									
Supplemen	tary In	formation:							
Ouppicmen	tary iii	iorniation.							
9.7.6	RM T	ABLE: Pressure-	control d	evice					N/A
Clause of		ment Ref. in RMF			Remarks				Verdict
ISO 14971	(Doc	ument No. and par	agraph)						
			<u> </u>	•					
9.7.7	RM T	ABLE: Pressure-	relief dev	rice					N/A
Clause of		ment Ref. in RMF			Remarks				Verdict
ISO 14971		ument No. and par	agraph)	The state of the s					
		_							
9.8.1	RM T	ABLE: Hazards a	ssociate	d with su	pport sys	tems - C	Seneral		N/A
Clause of	Docu	ment Ref. in RMF			Remarks				Verdict
ISO 14971	(Doc	ument No. and par	agraph)						
9.8.2	RM T	ABLE: Tensile sa	afety facto	or					N/A
Clause of		ment Ref. in RMF			Remarks				Verdict
ISO 14971	(Doc	ument No. and par	agraph)						
9.8.3.1	RM T Gene	ABLE: Strength eral	of patient	or opera	ator suppo	ort or su	spension syster	ns -	N/A
Clause of		ment Ref. in RMF		Result -	Remarks				Verdict
ISO 14971									

Issue Date: 2013-11-07 Page 30 of 53 Report Reference # E341350-A29-UL

				IEC 60601				
Clause	Require	ement + Test	Result - Remark				Verdict	
9.8.3.2	TABLE	: Patient supp	ort/suspe	nsion system - S	Static for	ces		N/A
ME Equipment part   Position   Loa			ad	Area	F	Remarks	*	
or area								
Suppleme	ntary Infor	mation:						
9.8.3.2a, b	DMTA	BI E: Static for	reas dua t	o loading from p	oreone			N/A
Clause of		ent Ref. in RMF		Result - Remark				Verdict
ISO 14971		ent No. and pa		Tresuit - Iremain	.3			Verdict
100 1407	i   (Boodii	ient ivo. and pe	ilagiapii)					
9.8.3.3	TABLE: Support/Suspension System - Dynamic forces due to loading from						N/A	
NAC C	person		0	5- \A/- white at 1 al	Δ	1	Daws aul. a	
ME Equipa or area	ment part	Position	Sa	fe Working Load	Area	1	Remarks	
Suppleme	ntary Infor	mation:			<u>l</u>			
9.8.4.1				hanical protecti		s - General		N/A
Clause of		ent Ref. in RMF	Result - Remarks			Verdict		
ISO 14971	1   (Docum	nent No. and pa	ragraph)					
9.8.4.3	RM TA	RI F: Mechania	cal protec	tive device for s	inale acti	ivation		N/A
Clause of		ent Ref. in RMF		Result - Remarks				Verdict
ISO 14971		nent No. and pa		Treduit Tremains			V OI GIOC	
			- 3 -  - /	J				
9.8.5	RM TA	BLE: Systems	without n	nechanical prote	ctive dev	rices		N/A
Clause of				Result - Remarks			Verdict	
ISO 14971	1 (Docum	nent No. and pa	ragraph)					
10.1.1	TABLE	Measurement	of V world				N/A	
						36 (5 µSy/h)		1
Maximum allowable radiation pA/kg ( μSv/h) ( Surface area under test Surface no./ Descripti						36 (5 μSv/h) (0.5 mR/h Measured Rem		<i>'</i>
Surface at	nace area under lest Sunace no./ Descripti			OH		Radiation, pA/kg		iains
						(µSv/h) (mR		
				made at a distan				
				NEL) can gain ac				
with mean	s of acces	s, or is instruct	ed to ente	r regardless of wh	nether or r	not a TOOL is	needed to	gain acce
40.4.0	DM TA	DIE. ME amele			a alia			NI/A
10.1.2	radiatio		inent inte	ended to produc	e diagnos	suc or therap	Jeutic X-	N/A
	radiation	<b>711</b>						1

10.2	RM TABLE: Alpha, beta, gamma, neutron & other particle radiation				
Clause of	Document Ref. in RMF	Result - Remarks	Verdict		
ISO 14971	(Document No. and paragraph)				

Result - Remarks

Verdict

Clause of ISO 14971 Document Ref. in RMF (Document No. and paragraph)

Issue Date: 2013-11-07 Page 31 of 53 Report Reference # E341350-A29-UL

		IEC 60601					
Clause	Requirement + Test	Result - Remark		Verdict			
10.3	RM TABLE: Microwave radiation						
Clause of	Document Ref. in RMF	Result - Remarks	Result - Remarks				
ISO 14971	(Document No. and paragraph)						
10.5	RM TABLE: Other visible elect	N/A					
Clause of	Document Ref. in RMF	Result - Remarks		Verdict			
ISO 14971	(Document No. and paragraph)						
10.6	RM TABLE: RISK associated w	ith infrared radiat	ion other than emitted by	N/A			
	lasers and LEDs	_					
Clause of	Document Ref. in RMF	Result - Remarks		Verdict			
ISO 14971	(Document No. and paragraph)						
10.7	RM TABLE: RISK associated with ultraviolet radiation other than emitted by						
	lasers and LEDs						
Clause of	Document Ref. in RMF	Result - Remarks		Verdict			
ISO 14971	(Document No. and paragraph)						

Issue Date: 2013-11-07 Page 32 of 53 Report Reference # E341350-A29-UL

IEC 60601				
Clause	Requirement + Test	Result - Remark	Verdict	

11.1.1	TABLE: Excessive temperatures in ME EQUIPMENT						Pass		
Model No.:	odel No. :		GTM91120						
			-3048-T3						
Test ambier	nt (°C) :		40						
Test supply	voltage/frequ	uency (V/Hz)(4):	264V/90Hz						
Model No.	Thermo -	Thermocouple locati	on(3)	Max allowal	ole	Max m	easured	Re	marks
	couple No.			temperature		temper	ature(2),		
				from Table 2	22,	(°C)			
				23 or 24 or l					
				file for AP(5	)				
				(°C)					
	1	AMBIENT		24.8 / 40.0					
	2	AC inlet body		57.4 / 72.3		85		1	
	3	LF1 Winding		91.6 / 106.5		130		ł	
	4	Q1		92.8 / 107.7		130			
	5	T1 Core		81.6 / 96.5		130			
	6	T1 winding		83.7 / 98.6		120			
	7	PWB near Q1		93.5 / 108.4		130			
	8	ENCLOSURE, Inside	e, above T1	68.5 / 83.4		85			

## Supplementary information:

- 1 Maximum allowable temperature on surfaces of test corner is 90 °C
- 2 Max temperature determined in accordance with 11.1.3e)
- 3 When thermocouples used to determine temperature of windings, limits of Table 22 reduced by 10 °C.
- 4 Supply voltage:
- ME EQUIPMENT with heating elements 110 % of the maximum RATED voltage;
- Motor operated ME EQUIPMENT least favourable voltage between 90 % of the minimum RATED and 110 % of

the maximum RATED voltage. ME EQUIPMENT operated under normal load and normal DUTY CYCLE.

- Combined heating and motor operated and other ME EQUIPMENT - tested both at 110 % of the maximum

RATED voltage and at 90 % of the minimum RATED voltage.

5 APPLIED PARTS intended to supply heat to a PATIENT - See RISK MANAGEMENT FILE containing temperatures and clinical effects. Also, see instructions for use.

The thermal pad was removed during testing. Other test data shall refer to E341350-A3 table 42.

Issue Date: 2013-11-07 Page 33 of 53 Report Reference # E341350-A29-UL

IEC 60601				
Clause	Requirement + Test	Result - Remark	Verdict	

11.1.1	RM TABLE: Maximum tempera	ture during normal use (Table 23 or 24)	Pass
Clause of	Document Ref. in RMF	Result - Remarks	Verdict
4.2	(Document No. and paragraph) RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 6.1	Intended use and identification of characteristics are well defined	Pass
4.3	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 6.2 item 6.2.1 and Sec. 6.3 hazard No. 7	The manufacturer had compiled foreseeable hazards caused by unintended movement of a component associated with the power supply	Pass
4.4	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 6.4 hazard No. 7 Risk No. H1	The estimates of the risks were recorded in the risk management file. Severity: 2 Probability: 2	Pass
5	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 7	The results of the risk evaluation were recorded in the risk management file. Acceptable	Pass
6.2	N/A	Risk control measures were considered unnecessary.	N/A
6.3	N/A	Risk control measures were considered unnecessary.	N/A
6.4	N/A	Risk control measures were considered unnecessary.	N/A
6.5	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 8 Sec. 8.3	No reduction of risk through "Risk/benefit analysis"	N/A

Issue Date: 2013-11-07 Page 34 of 53 Report Reference # E341350-A29-UL

			IEC	60601			
Clause	Requirement + Test				Result - Remark		Verdict
							-1
11.1.2.1	RM TABLE: Applied	d parts inte	ended to	supply hea	at to patient		N/A
Clause of	Document Ref. in RI			- Remarks	•		Verdict
ISO 14971	(Document No. and	paragraph)					
11.1.2.2	RM TABLE: Applie	d parts not	intended	to supply	heat to patient		N/A
Clause of	Document Ref. in RI		Result	- Remarks			Verdict
ISO 14971	(Document No. and	paragraph)					
11.1.3	TABLE: Temperatu	re of windi	ings by c	hange-of-r	esistance method		N/A
Temperatur	e T of winding:	t1 (°C)	R1 (ohm)	t2 (°C)	R2 (ohm) T (°C)	Allowed Tmax(°C	
Supplement	tary information:		/	1	<u> </u>		
Test proced	lure of 11.2.2.1 a) 5) at 3 times the worst ca						
<u></u>							
11.1.3	RM TABLE: Measu						N/A
Clause of	Document Ref. in RI		Result	- Remarks			Verdict
ISO 14971	(Document No. and	paragraph)					
<u></u>							
11.2.2.1	RM TABLE: Risk of				nment		N/A
Clause of	Document Ref. in RI		Result	- Remarks			Verdict
ISO 14971	(Document No. and	paragraph)					
11.2.2.1	TABLE: Alternative	method to	11.2.2.1	a) 5) to de	etermine existence	of an	N/A
A	ignition source					D	
	e sparking might caus			<b>'</b> 0		Remarks	
Designation	the parts between wl , Manufacturer):					Remarks	
•	eters selected represe	enting wors	t case cor	nditions for	ME EQUIPMENT:	Remarks	
	centration (%)						
Fuel							
Current (A)							
Voltage (V)							
Capacitance							
	or resistance (h or Oh	nms)				ļ	
No. of trials							
•	Ilted in ignition (Yes/N	10)					
Supplement	tary information:						
	lure of 11.2.2.1 a) 5) 8 at 3 times the worst co						

Issue Date: 2013-11-07 Page 35 of 53 Report Reference # E341350-A29-UL

IEC 60601				
Clause	Requirement + Test	Result - Remark	Verdict	

11.3	RM TABLE: Constructional req	uirements for fire enclosures of ME equipment	Pass
Clause of	Document Ref. in RMF	Result - Remarks	Verdict
ISO 14971	(Document No. and paragraph)		
4.2	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128	Intended use and identification of characteristics are well defined	Pass
	series) Par. 6 Sec. 6.1		
4.3	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 6.2 item 6.2.1 and Sec. 6.3 hazard No. 8	The manufacturer had compiled foreseeable hazards caused by unintended movement of a component associated with the power supply	Pass
4.4	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 6 Sec. 6.4 hazard No. 8 Risk No. H2	The estimates of the risks were recorded in the risk management file. Severity: 3 Probability: 4	Pass
5	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 7	The results of the risk evaluation were recorded in the risk management file. NACC	Pass
6.2	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 8 Sec. 8.1 No. 5 Risk No. H2	Using material comply with UL94	Pass
6.3	RISK_MANAGEMENT_REPOR T (Report No: GT-RM2013-006, Revision: A.0 for Model GTM91120 series and Report No: GT-RM2013-007, Revision: A.0 for Model GTM91128 series) Par. 8 Sec. 8.1 No. 5 Risk No. H2	The effectiveness of the risk control measures had been verified and the results of the verification were recorded in the risk management file. Severity: 3 Probability: 1	Pass

Issue Date: 2013-11-07 Page 36 of 53 Report Reference # E341350-A29-UL

			IEC 6060	1		
Clause	Requiremen	t + Test		Result - Remark		Verdict
	1 -			,		
6.4	T (Report N Revision: A. GTM91120 No: GT-RM2	series and Report 2013-007, Revision: el GTM91128	measure(s)	All residual risk that remains after the risk control measure(s) are applied and evaluated using the criteria that defined in the risk management plan. Acceptable		
6.5	T (Report N Revision: A. GTM91120 No: GT-RM2	series and Report 2013-007, Revision: el GTM91128	No reduction analysis"	n of risk through "Risk/be	nefit	N/A
11.5		: ME equipment and able agents	ME system	s intended for use in co	onjunction	N/A
Clause of ISO 14971	Document F		Result - Rer	marks		Verdict
11.6.1				s of water, cleaning, dis	sinfection,	N/A
Clause / Te		n, compatibility with Test Condition	substances	Part under test	Remarks	
	tary informati			Tart and criticat	rtemants	
Cappicificit	itary initorinati	011.				
11.6.2	RM TABLE	: Overflow in ME eq	uipment			N/A
Clause of	Document F		Result - Rer	narks		Verdict
ISO 14971	(Document	No. and paragraph)				
11.6.3	RM TABLE	: Spillage on ME eq	uipment and	ME system		N/A
Clause of	Document F		Result - Rer	marks		Verdict
ISO 14971	(Document	No. and paragraph)				
11.6.5	RM TABLE		r particulate	matter into ME EQUIPN	IENT and	N/A
Clause of	Document F		Result - Rer	narks		Verdict
ISO 14971	(Document	No. and paragraph)				
1						LAIZA
11.6.6				E equipment and ME sy	ystems	N/A
Clause of	Document F	Ref. in RMF	Result - Rer		ystems	Verdict
	Document F				ystems	
Clause of ISO 14971	Document F (Document	Ref. in RMF No. and paragraph)	Result - Rer	marks	ystems	Verdict
Clause of ISO 14971	Document F (Document	Ref. in RMF No. and paragraph) : Sterilization of ME	Result - Rer	and ME systems	ystems	Verdict N/A
Clause of ISO 14971	Document F (Document   RM TABLE Document F	Ref. in RMF No. and paragraph) : Sterilization of ME	Result - Rer	and ME systems	ystems	Verdict

Issue Date: 2013-11-07 Page 37 of 53 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict
11.6.8	RM TABLE: Compatibility with			N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971	(Document No. and paragraph)			
12.1	DM TABLE: Accuracy of contr	olo and aguinman		N/A
Clause of	RM TABLE: Accuracy of contr	Result - Remarks		Verdict
Clause of ISO 14971		Result - Remarks		verdict
150 1497 1	(Document No. and paragraph)			
12.3	RM TABLE: Alarm systems			N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971		Total Homano		7 5. 6.50
12.4.1	RM TABLE: Intentional exceed		3	N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971	(Document No. and paragraph)			
12.4.2	RM TABLE: Indication of para	motors relevant to	cofoty	N/A
Clause of	Document Ref. in RMF	Result - Remarks	Salety	Verdict
ISO 14971		Result - Remarks		Verdict
130 1497 1	(Document No. and paragraph)			
12.4.3	RM TABLE: Accidental selecti	on of excessive or	itput values	N/A
Clause of	Document Ref. in RMF	Result - Remarks	•	Verdict
ISO 14971	(Document No. and paragraph)			
12.4.4	RM TABLE: Incorrect output			N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971	(Document No. and paragraph)			
12.4.5.2	PM TABLE: Diagnostic V-ray o	auinmont		N/A
Clause of	RM TABLE: Diagnostic X-ray of Document Ref. in RMF	Result - Remarks		Verdict
	(Document No. and paragraph)	Nesuit - Remarks		verdict
130 1497 1	(Document No. and paragraph)			
12.4.5.3	RM TABLE: Radiotherapy equ	ipment		N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971				3 5. 5. 5.
		-		T-
12.4.5.4	RM TABLE: Other ME equipmed radiation	ent producing diag	nostic or therapeutic	N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971		. toodit Ttomanto		Volunt
00 1707 1	Toodanient No. and paragraph)			

Issue Date: 2013-11-07 Page 38 of 53 Report Reference # E341350-A29-UL

IEC 60601						
Clause	Requirement + Test				Result - Remark	Verdict
12.4.6 RM TABLE: Diagnostic or therapeutic acoustic pressure					N/A	
Clause of	Document Ref.	in RMF	Result	- Remarks	3	Verdict
ISO 14971	(Document No.	and paragraph)				
13.1.2 TABLE: measurement of power or energy dissipation in parts & N/A						
13.1.2						
13.1.2	components to	waive SINGLE F	AULT	CONDITIO	ONS in 4.7, 8.1 b), 8.7.2, a	ind
	components to 13.2.2 relative to	waive SINGLE F to emission of fla	AULT	CONDITION TO THE CONDIT		ind
	components to	waive SINGLE F to emission of fla	AULT	CONDITIO	ONS in 4.7, 8.1 b), 8.7.2, a	ind
Power dissi	components to 13.2.2 relative to	waive SINGLE F to emission of fla W)	AULT	CONDITION TO THE CONDIT	ONS in 4.7, 8.1 b), 8.7.2, a	ind
Power dissi Energy diss	components to 13.2.2 relative t pated less than (	waive SINGLE F to emission of fla W)	AULT	CONDITION NO STATE TO	ONS in 4.7, 8.1 b), 8.7.2, a	ind
Power dissi Energy diss	components to 13.2.2 relative to pated less than (injusted less than injusted)	waive SINGLE F to emission of fla W) (J)	AULT mes, n	CONDITION NOTE 15 900 lated	DNS in 4.7, 8.1 b), 8.7.2, a stal, or ignitable substance	es
Power dissi Energy diss	components to 13.2.2 relative to pated less than (injusted less than injusted)	waive SINGLE F to emission of fla W) (J) Measured power	Calcu	CONDITION NOTE 15 900 lated	ONS in 4.7, 8.1 b), 8.7.2, a stal, or ignitable substant	es

Issue Date: 2013-11-07 Page 39 of 53 Report Reference # E341350-A29-UL

IEC 60601				
Clause	Requirement + Test	Result - Remark	Verdict	

13.2	TABLE: Single Fault Conditions in accordingly:	ordance with 13.2.2 to 13.2.13,	Pass
Clause No.	CONDITION	Results observed	Hazardous Situation (Yes/No)
13.2.3	Overheating of transformers per Clause 15.5:	-	-
13.2.4	Failure of THERMOSTATS according to 13.2.13 & 15.4.2, overloading - THERMOSTATS short circuited or interrupted, the less favourable of the two:	-	-
13.2.5	Failure of temperature limiting devices according to 13.2.13 & 15.4.2, overloading, THERMOSTATS short circuited or interrupted, the less favourable of the two:	-	-
13.2.6	Leakage of liquid - RISK MANAGEMENT FILE examined to determine the appropriate test conditions (sealed rechargeable batteries exempted)	-	-
-			
13.2.7	Impairment of cooling that could result in a HAZARD using test method of 11.1:	-	-
13.2.8	Locking of moving parts - Only one part locked at a time - Also see 13.2.10 below:	-	-
13.2.9	Interruption and short circuiting of motor capacitors - Motor capacitors short & open circuited 1 - Also see 13.10	-	-
13.2.10	Additional test criteria for motor operated ME EQUIPMENT in 13.2.8 &13.2.9:	-	-
13.2.11	Failures of components in ME EQUIPMENT used in conjunction with OXYGEN RICH ENVIRONMENTS:	-	-
13.2.12	Failure of parts that might result in a MECHANICAL HAZARD (See 9 & 15.3):	-	-
	l	==	

Issue Date: 2013-11-07 Page 40 of 53 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict
IEC 60252 control. Se	ith short-circuited capacitor not per -1 and the ME EQUIPMENT not in e Attachment # and appended Tab 341350-A3 Table 52.	tended for unattend		
				T
13.2.6	RM TABLE: Leakage of liquid	<u> </u>		N/A
Clause of ISO 14971	Document Ref. in RMF (Document No. and paragraph)	Result - Remarks		Verdict
100 11011	T(Doddinent ive: and paragraph)			
14.1	RM TABLE: Programmable ele	ctrical medical sy	stems - General	N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971	(Document No. and paragraph)			
14.6.1	RM TABLE: Identification of kr		able hazards	N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971	(Document No. and paragraph)			
14.6.2	RM TABLE: Risk control			N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971		recourt remaine		Volume
-				
14.7	RM TABLE: Requirement spec			N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971	(Document No. and paragraph)			
14.8	RM TABLE: Architecture			N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971		result - Remarks		Verdict
14.9	RM TABLE: Design and Impler			N/A
	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971	(Document No. and paragraph)			
14.40	DM TADI F. Verification			NI/A
14.10 Clause of	RM TABLE: Verification  Document Ref. in RMF	Dogult Damarica		N/A
ISO 14971		Result - Remarks		Verdict
14.11	RM TABLE: PEMS validation			N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971	(Document No. and paragraph)			

Issue Date: 2013-11-07 Page 41 of 53 Report Reference # E341350-A29-UL

			IEC 60601			
Clause	Requirement + Test			Result	- Remark	Verdict
14.13	RM TABLE: Connect	ion of PEN	/IS by NETWORK/D	ATA C	COUPLING to other	N/A
Clause of	Document Ref. in RM	F	Result - Remarks			Verdict
ISO 14971	(Document No. and page 1)	aragraph)				
15.1	RM TABLE: Constru		E equipment - Arra	ngeme	ents of controls and	N/A
Clause of	Document Ref. in RM		Result - Remarks			Verdict
ISO 14971	(Document No. and page 1)	aragraph)				
15.3	TABLE: Mechanical					Pass
Clause	Name of Test	Test cond			Observed results/Rem	arks
15.3.2	Force Test		top: 250N±10N, 5s		Intact, no damage.	
15.3.2	Force Test		bottom: 250N±10N		Intact, no damage.	
15.3.2	Force Test		side: 250N±10N, 5		Intact, no damage.	
	tary information: 1)As a te not applicable rows).		Push, Impact, Drop,	Mould	Stress Relief and Roug	h Handling
	3.3 Impact Test, 15.3.4		ct Test and 15 3 6 M	lold Str	ess Relief Test shall re	fer to
	3 table additional tests	Diop impat	50 1 C50 G11G 10.0.0 IV	ioia Oti	Coo rener rest snam re	
15.3.2	RM TABLE: Push tes	st				N/A
Clause of	Document Ref. in RM		Result - Remarks			Verdict
ISO 14971	(Document No. and pa					
		<u> </u>	•			<b>'</b>
15.3.3	RM TABLE: Impact t	est				N/A
Clause of	Document Ref. in RM		Result - Remarks			Verdict
ISO 14971	(Document No. and pa	aragraph)				
15.3.4.2	RM TABLE: Portable					N/A
Clause of	Document Ref. in RM		Result - Remarks			Verdict
ISO 14971	(Document No. and pa	aragraph)				
15.3.5	RM TABLE: Rough h	andling to	st			N/A
Clause of	Document Ref. in RM		Result - Remarks			Verdict
ISO 14971	(Document No. and pa		1 total Terriario			Vordiot
						•
15.4.1	RM TABLE: Constru	ction of co	nnectors			N/A
Clause of	Document Ref. in RM		Result - Remarks			Verdict
ISO 14971	(Document No. and pa		- Tomano			
15.4.2.1 a	RM TABLE: THERMA	AL CUT-OL	JTS and OVER-CUI	RRENT	RELEASES	N/A
Clause of	Document Ref. in RM		Result - Remarks			Verdict
ISO 14971	(Document No. and pa					
	-					

Issue Date: 2013-11-07 Page 42 of 53 Report Reference # E341350-A29-UL

		IEC 60601		
Clause	Requirement + Test		Result - Remark	Verdict
15.4.2.1 b	RM TABLE: THERMAL CUT-OU	JTS with a safety f	function	N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971	(Document No. and paragraph)			
45 4 0 4 6	DM TABLE: Independent non-	SELE DESETTING	THERMAL CUT OUT	N/A
15.4.2.1 c	RM TABLE: Independent non-S	Result - Remarks	THERMAL CUT-OUT	Verdict
ISO 14971		result - remarks		Verdict
	1(			
15.4.2.1 d	RM TABLE: Loss of function o	f ME EQUIPMENT		N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971	(Document No. and paragraph)			
15.4.2.1 h	RM TABLE: ME EQUIPMENT w	vith tubular boating	a alamants	N/A
Clause of	Document Ref. in RMF	Result - Remarks	y cicilicilis	Verdict
ISO 14971		Troodic Tromanio		Voluiot
		•		
15.4.3.1	RM TABLE: Housing			N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971	(Document No. and paragraph)			
15.4.3.2	RM TABLE: Connection			N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971	(Document No. and paragraph)			
15.4.3.3	RM TABLE: Protection against			N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971	(Document No. and paragraph)			
15.4.3.4	RM TABLE: Lithium batteries			N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971	(Document No. and paragraph)			
15.4.3.5	RM TABLE: Excessive current			N/A
Clause of ISO 14971	Document Ref. in RMF (Document No. and paragraph)	Result - Remarks		Verdict
130 148/1	TOCCHITCHE NO. and paragraph)			
15.4.4	RM TABLE: Indicators			N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971	(Document No. and paragraph)			
r	,			
15.4.5	RM TABLE: Pre-set controls	In # 5		N/A
Clause of	Document Ref. in RMF	Result - Remarks		Verdict
ISO 14971	(Document No. and paragraph)			

Issue Date: 2013-11-07 Page 43 of 53 Report Reference # E341350-A29-UL

IEC 60601						
Clause	Requirement + Test		Result - Remark	Verdict		

15.4.6	TABLE: actuating parts of controls of ME EQUIPMENT - torque & axial pull tests								
Rotating control Gripping diameter		Gripping diameter "d" of control knob (mm) 1	Torque from Table 30 (Nm)	Axial force applied (N)	Unacceptable RISK occurred Yes/No	Remarks			
	Supplementary information: 1 Gripping diameter (d) is the maximum width of a control knob regardless of its shape (e.g. control knob with pointer)								

15.4.7.3 b	RM TABLE: Entry of liquids		N/A
Clause of	Document Ref. in RMF	Result - Remarks	Verdict
ISO 14971	(Document No. and paragraph)		

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						
Primary voltage	ge (most advers	se value from 9	90 % to 110 %	of RATED vol	tage)(V)1		-
RATED input	frequency (Hz)						-
Winding tested	Class of insulation (A, B, E, F, or H)	p	Protective device operated Yes/No	STABILITY (when	Maximum allowed temp from Table 31 (°C)	Maximum winding temp measured (°C)	Ambient (°C)

Supplementary information:

<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 Refer to E341350-A3 Table 57.9.1a.

Issue Date: 2013-11-07 Page 44 of 53 Report Reference # E341350-A29-UL

IEC 60601					
Clause	Requirement + Test		Result - Remark	Verdict	

	.5.1.3 TABLE: transformer overload test - conducted only when protective devunder short-circuit test operated							
Primary voltage,	most adverse value	between 90 % to 1	10 % of RATED v	oltage (V)1				
RATED input fre	quency (Hz)							
Test current just THERMAL STAR	vice & achieve							
	ed on Table 32 when former, and it was sh		that operated unde	er method a) is				
				Ambient (°C)				

## 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.

Refer to E341350-A3 Table 57.9.1b.

15.5.2	TABLE: Transformer dielectric strength after humidity preconditioning of 5.7							
Transforme	r	Test voltage applied between	Test	Test	Breakdow	Deteriorati		
Model/Type/ Part			voltage,	frequency	n Yes/No	on Yes/No		
No			(V)	(Hz)				
Supplement	Supplementary information: Tests conducted under the conditions of 11.1, in ME EQUIPMENT or under							
simulated co	ondition	s on the bench. See Clause 15.5.2 for test	parameters	& other de	tails			

16.1	RM TABLE: General requirements for ME Systems					
Clause of	Document Ref. in RMF	Result - Remarks	Verdict			
ISO 14971	(Document No. and paragraph)					

16.6.1 <b>TABLE: Leakage C</b>	TABLE: Leakage Currents in ME System _ Touch Current Measurements					
Specific area where TOUCH	Allowable	Measured	Allowable TOUCH	Measured T	OUCH	
CURRENT measured (i.e., from	TOUCH	TOUCH	CURRENT in event of	CURRENT i	n event of	
or between parts of ME	CURRENT	CURRENT	interruption of	interruption	of	
SYSTEM within PATIENT	in	in	PROTECTIVE EARTH	PROTECTIVE EAR		
ENVIRONMENT)	NORMAL	NORMAL	CONDUCTOR, (µA)	CONDUCTO	DR, (μA)	
,	CONDITIO	CONDITIO	,		,	
	Ν (μΑ)	Ν (μΑ)				
Supplementary information:	•			•		

Issue Date: 2013-11-07 Page 45 of 53 Report Reference # E341350-A29-UL

IEC 60601				
Clause	Requirement + Test		Result - Remark	Verdict

16.9.1	RM TABLE: Connection terminals and connectors		N/A
Clause of	Document Ref. in RMF	Result - Remarks	Verdict
ISO 14971	(Document No. and paragraph)		

17	RM TABLE: Electromagnetic compatibility of ME equipment and ME systems		
Clause of	Document Ref. in RMF	Result - Remarks	Verdict
ISO 14971	(Document No. and paragraph)		

SP TABLE: A	TABLE: Additional or special tests conducted				
Clause and Name of Test	Test type and condition	Observed results			
5.7: Humidity Preconditioning	Pre-chamber: 25°C, 4hrs; In chamber: 95%, 25°C, 48Hrs. Complete unit and all types of insulating tape and TIW.	No dielectric breakdown.			
Supplementary information:					