

US/12756A/UL

IEC SYSTEM FOR CONFORMITY TESTING AND CERTIFICATION OF ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

SYSTEME CEI D'ESSAIS DE CONFORMITE ET DE CERTIFICATION DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE CERTIFICAT D'ESSAI OC

Product Produit

Name and address of the applicant Nom et adresse du demandeur

Name and address of the manufacturer Nom et adresse du fabricant

Name and address of the factory Nom et adresse de l'usine

Rating and principal characteristics Valeurs nominales et caractéristiques principales

Trademark (if any)
Marque de fabrique (si elle existe)

Model / Type Ref. Ref. de type

Additional information (if necessary)
Information complémentaire (si nécessaire)

A sample of the product was tested and found to be in conformity with Un échantillon de ce produit a été essayé et a été considéré conforme à la

as shown in the Test Report Ref. No. which forms part of this Certificate comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat Component - Power Supply

SL POWER ELECTRONICS CORP 6050 KING DRIVE, BLDG. A VENTURA, CA 93003, USA

SL POWER ELECTRONICS CORP 6050 KING DRIVE, BLDG. A VENTURA, CA 93003, USA

SL POWER ELECTRONICS XIANGHE ANPING ECONOMIC & TECH DEVELOPING ZONE XIANGHE, HEBEI 065402, CHINA

Input: 100-240 V~, 50-60 Hz, 1.3A

Output: 12 Vdc, 5.25 A to 48 Vdc, 1.35 A, maximum 65 Watts.



MINT1065XY75CZ, where X is A or B, where Y is any number 12 through 48, where Z is any number 01 through 99, designates additional configurations indicating non-safety related options.

This CB Test Report comprises 7 enclosures. The CB Test Report and Certificate were amended on April 8, 2010 to add models, modify output ratings information, clauses, tables and enclosures.

PUBLICATION

IEC 60601-1 (1988) Second Edition, with Amendment No. 1 (1991) and No. 2 (1995) with the exception of: Clause 36, Electromagnetic Compatibility, Clause 48, Biocompatibility and Clause 52.1, Programmable Electronic Systems. Inclusive of CENELEC Common Modifications. See Test Report for National Differences.

E116994-A44-CB-1

This CB Test Certificate is issued by the National Certification Body Ce Certificat d'essai OC est établi par l'Organisme National de Certification



Date:

Issued: 2008 June 25 Amended: 2010 April 8 (Am. 1) Underwriters Laboratories Inc. / GMA Certification Department, US 333 Pfingsten Road, Northbrook, IL 60062-2096 United States of America TEL INT* +1 847 664 3008, FAX INT* +1 847 313 3008

email: jolanta.m.wroblewska@us.ul.com

Signature:

Jolanta M. Wroblewska

Issue Date: 2008-06-23 Page 1 of 2 Report Reference # E116994-A44-CB-1

Amendment 1 2010-04-08

COVER PAGE FOR TEST REPORT

Test Item Description: Component - Power Supply

Model/Type Reference: MINT1065XY75CZ, where X is A or B, where Y is any number 12 through 48,

where Z is any number 01 through 99, designates additional configurations

indicating non-safety related options.

Rating(s): Input: 100-240 V~, 50-60 Hz, 1.3A

Output: 12 Vdc, 5.25 A to 48 Vdc, 1.35 A, maximum 65 Watts.

Standards: IEC 60601-1:1988 + A1:1991 + A2:1995
Applicant Name and SL POWER ELECTRONICS CORP

Address: 6050 KING DRIVE, BLDG. A VENTURA, CA 93003, USA

Factory Location(s): SL POWER ELECTRONICS XIANGHE

ANPING ECONOMIC & TECH DEVELOPING ZONE

XIANGHE, HEBEI 065402, CHINA

Report Reference # E116994-A44-CB-1

Amendment 1 2010-04-08

2008-06-23

Issue Date:

This Report includes the following parts, in addition to this cover page:

1. Specific Technical Criteria

Page 2 of 2

- 2. Clause Verdicts
- 3. Critical Components
- 4. Test Results
- 5. Enclosures
 - a. National Differences
 - b. Marking Plate
 - c. Photographs
 - d. Schematics + PWB
 - e. Manuals
 - f. Miscellaneous

The original report was modified on 2010-04-08 to include the following changes/additions: Amendment 1:

Addition of Models MINT1065BY75CZ, where Y is any number 12 through 48, where Z is any number 01 through 99, designates additional configurations indicating non-safety related options.

Modified the following, based on the addition of the above models:

- -Electrical Ratings corrected to indicate that the output ratings can be any voltage within the 12 Vdc to 48 Vdc range.
- -Tables 7, 19, 20, and Critical Components
- -Created Marking Plate Enclosure. Added label for Model 1065B Series, and moved MINT1065A Series label from Enclosures Miscellaneous
- -General Product Information Conditions of Acceptability, Product Description and Model Differences.
- -Clauses: 14 (USA Difference); 5.1 (Class I & II); 6.1f; 6.1l; 6.1p; and 18I
- -Enclosures Photographs, PWB+Schematics, and Manual.
- -Insulation Diagram and Table to Insulation Diagram.
- -Markings and Instructions

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

Test results are valid only for the tested equipment.

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Issue Date: 2008-06-23 Page 1 of 16 Report Reference # E116994-A44-CB-1

Amendment 1 2010-04-08



Test Report issued under the responsibility of:



Underwriters Laboratories Inc.

TEST REPORT IEC 60601-1

Medical Electrical Equipment Part 1:General requirements for safety

Report Reference No E116994-A44-CB-1

Date of issue 2008-06-23

Total number of pages: 16

CB Testing Laboratory Underwriters Laboratories Inc.

Address 455 E. Trimble Rd., San Jose, CA, 95131-1230, USA

Applicant's name SL POWER ELECTRONICS CORP

6050 KING DRIVE, BLDG. A VENTURA, CA 93003, USA

Test specification:

Standard: IEC 60601-1:1988 + A1:1991 + A2:1995

Test procedure: CB Scheme

Non-standard test method: N/A

Address:

Test Report Form No. IEC60601_1c/97-04

Test Report Form originator: Underwriters Laboratories Inc

Master TRF dated 97-04

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If this test Report is used by non-IECEE members, the IECEE/IEC logo shall be removed.

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

Issue Date: 2008-06-23 Page 2 of 16 Report Reference # E116994-A44-CB-1

Amendment 1 2010-04-08

Test item description Component - Power Supply

Trade Mark:

SIL

through 48, where Z is any number 01 through 99, designates additional configurations indicating non-safety related options.

Manufacturer SL POWER ELECTRONICS CORP

6050 KING DRIVE, BLDG. A VENTURA, CA 93003, USA

Rating: Input: 100-240 V~, 50-60 Hz, 1.3A

Output: 12 Vdc, 5.25 A to 48 Vdc, 1.35 A, maximum 65 Watts.

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Amendment 1 2010-04-08

Testin	g procedure and testing location:		
[]	CB Testing Laboratory		
	Testing location / address::		
[]	Associated CB Test Laboratory		
	Testing location / address::		
	Tested by (name + signature):		
	Approved by (+ signature):		
[]	Testing Procedure: TMP		
	Tested by (name + signature):		
	Approved by (+ signature):		
	Testing location / address::		
[]	Testing Procedure: WMT		
	Tested by (name + signature):		
	Witnessed by (+ signature):		
	Approved by (+ signature):		
	Testing location / address::		
[x]	Testing Procedure: SMT		
	Tested by (name + signature):	Dan Mitchell	Danil W. wither
	Approved by (+ signature):	Ahmad Daoudi	ALDS.
	Supervised by (+ signature)::	Denise Leung Klinker	Denier Ly ULL
	Testing location / address:	SL Power Electronics Inc., 605 CA 93003	50 King Drive Bldg A, Ventura,
[]	Testing Procedure: RMT		
	Tested by (name + signature):		
	Approved by (+ signature)::		
	Supervised by (+ signature)::		
	Testing location / address::		

Issue Date: 2008-06-23 Page 4 of 16 Report Reference # E116994-A44-CB-1

Amendment 1 2010-04-08

Summary of Testing:

Unless otherwise indicated, all tests were conducted at SL Power Electronics Inc., 6050 King Drive Bldg A, Ventura, CA 93003.

Tests performed (name of test and test clause)	Testing location / Comments
Power Input (7.1)	
Dielectric Voltage Withstand (20.4)	Conducted after Humidity Preconditioning Test
Humidity Preconditioning Treatment (44.5)	

Summary of Compliance with National Differences:

AT, AU, BE, BR, CA, CH, CS, CZ, DE, DK, FI, FR, GB, GR, HU, IE, IL, IN, IT, KE, KR, NL, NO, PL, PT, RU, SE, SI, SK, TR, UA, US

Copy of Marking Plate - Refer to Enclosure titled Marking Plate for copy.

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Amendment 1 2010-04-08

Test item particulars :			
Classification of installation and use		For building-in	
Supply connection:		Header or Terminal Block or other op	otions
Accessories and detachable parts included in the evaluation		None	
Options included		None	
Possible test case verdicts:			
- test case does not apply to the test object:		N/A	
- test object does meet the requirement:		P(Pass)	
- test object does not meet the requirement:		F(Fail)	
Abbreviations used in the report:			
- normal condition:	N.C.	- single fault condition:	S.F.C.
- operational insulation:	OP	- basic insulation:	ВІ
- basic insulation between parts of opposite polarity:	ВОР	- supplementary insulation:	SI
- double insulation:	DI	- reinforced insulation:	RI
Testing:			
Date(s) of receipt of test item		2010-02-10	
Date(s) of Performance of tests		2010-02-16 to 2010-03-01	
Conoral remarks			

General remarks:

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

This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

List of test equipment must be kept on file and be available for review.

"(see Enclosure #)" refers to additional information appended to the report.

"(see appended table)" refers to a table appended to the report.

Throughout this report a point is used as the decimal separator.

Refer to the Cover Page For Test Report for a list of all Factory Locations.

GENERAL PRODUCT INFORMATION:

Report Summary

The original report was modified on 2010-04-08 to include the following changes/additions: Amendment 1:

Addition of Models MINT1065BY75CZ, where Y is any number 12 through 48, where Z is any number 01 through 99, designates additional configurations indicating non-safety related options.

Modified the following, based on the addition of the above models:

TRF No.: IEC60601_1C Underwriters Laboratories Inc.

Issue Date: 2008-06-23 Page 6 of 16 Report Reference # E116994-A44-CB-1

Amendment 1 2010-04-08

-Electrical Ratings corrected to indicate that the output ratings can be any voltage within the 12 Vdc to 48 Vdc range.

- -Tables 7, 19, 20, and Critical Components
- -Created Marking Plate Enclosure. Added label for Model 1065B Series, and moved MINT1065A Series label from Enclosures Miscellaneous
- -General Product Information Conditions of Acceptability, Product Description and Model Differences.
- -Clauses: 14 (USA Difference); 5.1 (Class I & II); 6.1f; 6.1l; 6.1p; and 18I
- -Enclosures Photographs, PWB+Schematics, and Manual.
- -Insulation Diagram and Table to Insulation Diagram.
- -Markings and Instructions

Product Description

The MINT1065AY75CZ Series (Class I type), and MINT1065BY75CZ Series (Class II type) are open-frame AC/DC power supplies, designed for building-in to an end-product.

Model Differences

The power supplies in the MINT1065XY75CZ Series are similar to each other and differ only in minor component changes in the secondary circuit and the number for windings for T1 to accommodate for the different output voltage and amps. The MINT1065XY75CZ Series are Class I or Class II type, and are available with different types of input and output connectors.

MINT1065BY75CZ Series (Class II) is identical to MINT1065AY75CZ (Class I) Series except the following components have been removed: CYP1, CYP2, CYP3, CYS1, the ground terminal (quick connect tab on PWB adjacent to input connector "CON1"), and jumper wire W1.

All models have one dc output.

The following are additional differences between Model MINT1065XY75CZ, where X is A or B, where Y is any number 12 through 48, where Z is any number 01 through 99.

MINT1065AY75CZSeries: A designates Class I type, Y suffix designates output voltages from 12 to 48 Vdc, Z suffix designates additional configurations indicating non-safety related options.

MINT1065BY75CZ Series: B designates Class II type, Y suffix designates output voltages from 12 to 48 Vdc, Z suffix designates additional configurations indicating non-safety related options.

Additional Information

The schematics for these models are kept on file at the CB Testing Laboratory mentioned in the first page of this test report, and can be provided by the manufacturer upon request by an accepting NCB.

CB Test certificates and proofs of compliance for components are included in Licenses Enclosure. In accordance with the current rules of the CB scheme, a CB Test certificate is required for critical components, and the certificate is effective for 3 years. Recognizing NCB may challenge the CBTC when a certificate is more than 3 years old, or when it is not provided.

Nameplate Labels provided in "Enclosures - Marking Plate", are representative of all Models and the Electrical Ratings of the entire series. The units can be configured to have a 12 Vdc to 48 Vdc output. with a

TRF No.: IEC60601 1C Underwriters Laboratories Inc.

Issue Date: 2008-06-23 Page 7 of 16 Report Reference # E116994-A44-CB-1

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maximum 65 watt output. The output wattage rating on the label is optional, and is not provided on the labels shown in this report.

Technical Considerations

The product was investigated to the following additional standards: UL 60601-1, 1st Edition, 2006-04-26 (includes National Differences for USA), CAN/CSA-C22.2 No. 601.1-M90 (R2005) (includes National Differences for Canada), EN 60601-1: 1990 + A1:1993 + A2:1995, , (except EMC limitations, EN 60601-1-2, Biocompatibility, EN 10993-1, Programmable Electronic Systems, IEC 60601-1-4)

The product was not investigated to the following standards or clauses: Clause 36, Electromagnetic Compatibility (IEC 601-1-2), Clause 48, Biocompatibility (ISO 10993-1), Clause 52.1, Programmable Electronic Systems (IEC 601-1-4)

The product is Classified only to the following hazards: Casualty, Shock, Fire

The degree of protection against harmful ingress of water is: Ordinary

The following accessories were investigated for use with the product: None

The mode of operation is: Continuous

Software is relied upon for meeting safety requirements related to mechanical, fire and shock: No

The product is suitable for use in the presence of a flammable anesthetics mixture with air or oxygen or with nitrous oxide: No

Engineering Conditions of Acceptability

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

This component has been judged on the basis of the required spacings in the First Edition of the Standards for Medical Equipment, Part 1: General Requirements for Safety, UL60601-1 and CSA 22.2 No. 601.1, which covers the end use product for which the component is designed. --

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

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

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

MINT1065AY75CZ (Class I) models should be properly bonded to the ground in the end-use equipment. --

The temperature test was performed at room ambient of 25 °C and calculated for an ambient of 40 °C. --

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

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

Model MINT1065AY75CZ Series: The integrity of the Protective Earth/Bonding connection shall considered in the end use product. --

DEMKO CERTIFICATE

Certificate No. 145534-02

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Date of Issue 2010-04-09

Certificate Holder SL POWER ELECTRONICS CORP

6050 KING DRIVE, BLDG. A VENTURA, CA 93003, USA

Manufacturer SL POWER ELECTRONICS CORP

6050 KING DRIVE, BLDG. A VENTURA, CA 93003, USA

Production site SL POWER ELECTRONICS XIANGHE

ANPING ECONOMIC & TECH DEVELOPING ZONE

XIANGHE, HEBEI 065402, CHINA

Certified Product Component - Power Supply

Model MINT1065XY75CZ, See Appendix

Model WIINT 1005X 1750Z, See Appe

O O POWER ELECTRONICE

Rated Voltage / Frequency 100-240 V~, 50-60 Hz

Rated Current / Power 1.3A

Trademark

Insulation Class

Degree of protection (IP)

Tested acc. to EN 60601-1:1990 + A1:1993 + A2:1995

Test Report No. E116994-A44-CB-1 issue date 2008-06-23 and

amendment 1 dated 2010-04-08

Additional See appendix Expire date 2012-06-01

Certification Manager

Jan-Erik Storgaard

The product and production sites listed on the certificate comply with the D-mark requirements and the UL Global Service Agreement, with reference to Terms and Conditions for the D mark. The Owner of the certificate is entitled to use the

or for cables «DEMKO», for the products listed on the certificate and manufactured at the production sites listed. UL has to be informed in writing about any changes to the product or production site in accordance with the Term and Conditions of the D mark. The validity of the certificate is shortened if the EU legislation require re-testing and re-certification due to new standards or amendments coming into force before the expiry date.

Certification Body

UL International Demko A/S, Lyskaer 8, P.O. Box 514, DK-2730 Herlev, Denmark, Tel. +45 44 85 65 65, info.dk@dk.ul.com www.ul-europe.com



Appendix DEMKO CERTIFICATE

Certificate No. 145534-02

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Date of Issue 2010-04-09

Additional

For building-in

Type key :where X is A or B, where Y is any number 12 through 48, where Z is any number 01 through 99, designates additional configurations indicating non-safety related options.

Output: 12 Vdc, 5.25 A to 48 Vdc, 1.35 A, maximum 65 Watts.

This certificate replaces the certificate No. 145534-01, dated 2008-07-10

UL International Demko A/S has issued a new certificate due to to add models, modify output ratings information, clauses, tables and enclosures.

The certificate has been issued on the basis of CB certificate (CB Test certificate) No. US/12756A/UL, issued by Underwriters Laboratories, dated 2010-04-08

Certification Body

UL International Demko A/S, Lyskaer 8, P.O. Box 514, DK-2730 Herlev, Denmark, Tel. +45 44 85 65 65, info.dk@dk.ul.com www.ul-europe.com



Appendix DEMKO Certificate

Certification Mark

D-mark

Certificate No.

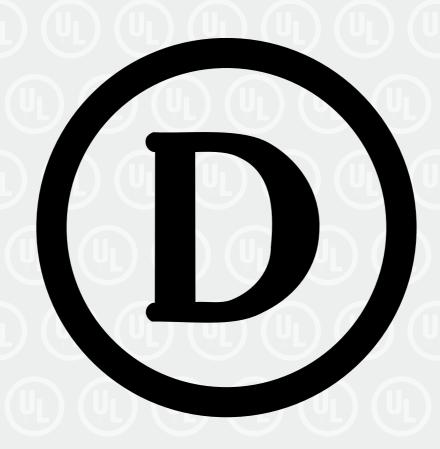
145534-02

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Date of Issue

2010-04-09



Certification Body

UL International Demko A/S, Lyskaer 8, P.O. Box 514, DK-2730 Herlev, Denmark, Tel. +45 44 85 65 65, info.dk@dk.ul.com www.ul-europe.com

Issue Date: 2008-06-23 Page 1 of 2 Report Reference # E116994-A44-UL-1

Amendment 1 2010-04-08

COVER PAGE FOR TEST REPORT

Product Category: Power Supplies, Medical and Dental

Product Category CCN: QQHM2, QQHM8

Test Procedure: Component Recognition
Product: Component - Power Supply

Model/Type Reference: MINT1065XY75CZ, where X is A or B, where Y is any number 12 through 48,

where Z is any number 01 through 99, designates additional configurations

indicating non-safety related options.

Rating(s): Input: 100-240 V~, 50-60 Hz, 1.3A

Output: 12 Vdc, 5.25 A to 48 Vdc, 1.35 A, maximum 65 Watts.

Standards: UL 60601-1, 1st Edition, 2006-04-26 (Medical Electrical Equipment, Part 1:

General Requirements for Safety)

CAN/CSA-C22.2 No. 601.1-M90, 2005 (Medical Electrical Equipment - Part 1:

General Requirements for Safety)

Applicant Name and SL

Address:

SL POWER ELECTRONICS CORP

6050 KING DRIVE, BLDG. A VENTURA, CA 93003, USA

This Report includes the following parts, in addition to this cover page:

1. Specific Inspection Criteria

2. Specific Technical Criteria

3. Clause Verdicts

4. Critical Components

5. Test Results

6. National Differences

7. Enclosures

Issue Date: 2008-06-23 Page 2 of 2 Report Reference # E116994-A44-UL-1

Amendment 1 2010-04-08

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 Underwriters Laboratories Inc. ('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.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

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 Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

Test Report By:

Ahmad Daoudi

Engineering Associate

Underwriters Laboratories Inc.

Reviewed By:

Denise Leung Klinker

Denie Ly ULL

Staff Engineer

Underwriters Laboratories Inc.

Issue Date: 2008-06-23 Page 1 of 16 Report Reference # E116994-A44-UL-1

Amendment 1 2010-04-08

SPECIFIC INSPECTION CRITERIA

BA1.0	Special Instructions to UL Representative
BA1.1	N/A

BB1.0	Supporting Documentation			
BB1.1	The following documents located at the beginning of this Procedure supplement the requirement 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.			

BC1.0	Markings and i	Markings and instructions		
BC1.1	The following m	The following markings and instructions are provided as indicated.		
BC1.2	All clause references are from UL 60601-1, 1st Edition, 2006-04-26 (Medical Electrical Equipment, Part 1: General Requirements for Safety).			
Standard Clause	Clause Title Marking or Instruction Details			
6.1e	Company identification	Classified or Recognized company's name, Trade name, Trademark or File		
6.1f	Model	Model number		
6.1g	Supply Connection	Voltage range, ac/dc, phases if more than single phase		
	Alternating current	\sim		
6.1h	Supply Frequency	Rated frequency range in hertz		
6.1j	Power Input	Amps, VA, or Watts		
6.11	Class II equipment			
6.1p	Output	Rated output voltage, power, frequency.		

TRF No.: IEC60601_1C Underwriters Laboratories Inc.

Issue Date: 2008-06-23 Page 2 of 16 Report Reference # E116994-A44-UL-1

Amendment 1 2010-04-08

BD1.0	Production-Line Testing Requirements			
BD1.1	Test Exemptions - The following models are exempt from the indicated test			
	Dielectric Voltage Dielectric V		Patient Circuit Dielectric Voltage Withstand	
	MINT1065XY75CZ Series	Exempt	Exempt	Exempt
BD1.2	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:			
	N/A			

BE1.0	Sample and Test Specifics for Follow-Up Tests at UL			
BE1.1	The following tests shall be conducted in accordance with the Generic Inspection Instructions			
	Model Samples Test Test D		Test Details	
	N/A N/A N/A N/A			

Issue Date: 2008-06-23 Page 3 of 16 Report Reference # E116994-A44-UL-1

Amendment 1 2010-04-08

SPECIFIC TECHNICAL CRITERIA

TEST REPORT UL 60601-1

Medical Electrical Equipment

Part 1: General requirements for safety

Report Reference No..... E116994-A44-UL-1

Compiled by Ahmad Daoudi

Reviewed by Denise Leung Klinker

Date of issue 2008-06-23

Standards UL 60601-1, 1st Edition, 2006-04-26 (Medical Electrical Equipment,

Part 1: General Requirements for Safety)

CAN/CSA-C22.2 No. 601.1-M90, 2005 (Medical Electrical Equipment -

Part 1: General Requirements for Safety)

Test procedure Component Recognition

Non-standard test method: N/A

Test item description Component - Power Supply

Trademark:

SIL

Model and/or type reference: MINT1065XY75CZ, where X is A or B, where Y is any number 12

through 48, where Z is any number 01 through 99, designates additional configurations indicating non-safety related options.

Rating(s) Input: 100-240 V~, 50-60 Hz, 1.3A

Output: 12 Vdc, 5.25 A to 48 Vdc, 1.35 A, maximum 65 Watts.

Issue Date: 2008-06-23 Page 4 of 16 Report Reference # E116994-A44-UL-1

Amendment 1 2010-04-08

GENERAL INFORMATION			
Test item particulars (see also clause 5):			
Classification of installation and use	:	For building-in	
Supply connection	:	Header or Terminal Block or other op	tions
Accessories and detachable parts included in the evaluation	:	None	
Options included	:	None	
Possible test case verdicts:			
- test case does not apply to the test object	:	N / A	
- test object does meet the requirement	:	P(Pass)	
- test object does not meet the requirement	:	F(Fail) (acceptable only if a correspondant national requirement is "Pas	
Abbreviations used in the report:			
- normal condition:	N.C.	- single fault condition:	S.F.C.
- operational insulation:	OP	- basic insulation:	BI
- basic insulation between parts of opposite polarity:	ВОР	- supplementary insulation:	SI
- double insulation:	DI	- reinforced insulation:	RI
General remarks:			
- "(see Enclosure #)" refers to additional information appended to the Test Report			
- "(see appended table)" refers to a table appended	to the	Test Report	

General	General Product Information:				
CA1.0	Report Summary				
CA1.1	N/A				
CB1.0	Product Description				
CB1.1	The MINT1065AY75CZ Series (Class I type), and MINT1065BY75CZ Series (Class II type) are open-frame AC/DC power supplies, designed for building-in to an end-product.				
CC1.0	Model Differences				
CC1.1	The power supplies in the MINT1065XY75CZ Series are similar to each other and differ only in minor component changes in the secondary circuit and the number for windings for T1 to accommodate for the different output voltage and amps. The MINT1065XY75CZ Series are Class I or Class II type, and are available with different types of input and output connectors.				
	MINT1065BY75CZ Series (Class II) is identical to MINT1065AY75CZ (Class I) Series except the following components have been removed: CYP1. CYP2. CYP3. CYS1. the ground terminal				

- Throughout the Test Report a point is used as the decimal separator

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	(quick connect tab on PWB adjacent to input cor	nnector "CON1"), and jumper wire W1.		
	All models have one dc output.			
	The following are additional differences between Model MINT1065XY75CZ, where X is A or B, where Y is any number 12 through 48, where Z is any number 01 through 99.			
	MINT1065AY75CZSeries: A designates Class I type, Y suffix designates output voltages from 12 to 48 Vdc, Z suffix designates additional configurations indicating non-safety related options.			
	MINT1065BY75CZ Series: B designates Class 12 to 48 Vdc, Z suffix designates additional conf			
CD1.0	Additional Information			
CD1.1	The schematics for these models are kept on file first page of this test report, and can be provided accepting NCB.			
	CB Test certificates and proofs of compliance for components are included in Licenses Enclosure. In accordance with the current rules of the CB scheme, a CB Test certificate is required for critical components, and the certificate is effective for 3 years. Recognizing NCB matchallenge the CBTC when a certificate is more than 3 years old, or when it is not provided.			
	Nameplate Labels provided in "Enclosures - Marking Plate", are representative of all Models and the Electrical Ratings of the entire series. The units can be configured to have a 12 Vdc to 48 Vdc output, with a maximum 65 watt output. The output wattage rating on the label is optional, and is not provided on the labels shown in this report.			
CE1.0	Technical Considerations			
CE1.1	The product was investigated to the following additional standards:	UL 60601-1, 1st Edition, 2006-04-26 (includes National Differences for USA), CAN/CSA-C22.2 No. 601.1-M90 (R2005) (includes National Differences for Canada), EN 60601-1: 1990 + A1:1993 + A2:1995, , (except EMC limitations, EN 60601-1-2, Biocompatibility, EN 10993-1, Programmable Electronic Systems, IEC 60601-1-4)		
CE1.2	The product was not investigated to the following standards or clauses:	Clause 36, Electromagnetic Compatibility (IEC 601-1-2), Clause 48, Biocompatibility (ISO 10993-1), Clause 52.1, Programmable Electronic Systems (IEC 601-1-4)		
CE1.3	The product is Classified only to the following hazards:	Casualty, Shock, Fire		
CE1.4	The degree of protection against harmful ingress of water is:	Ordinary		
CE1.5	The following accessories were investigated for	None		
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	use with the product:	
CE1.6	The mode of operation is:	Continuous
CE1.7	Software is relied upon for meeting safety requirements related to mechanical, fire and shock:	No
CE1.8	The product is suitable for use in the presence of a flammable anesthetics mixture with air or oxygen or with nitrous oxide:	No
	T=	
CF1.0	Engineering Conditions of Acceptability	
CF1.1	For use only in or with complete equipment whe determined by Underwriters Laboratories Inc.	
	When installed in an end-product, consideration	must be given to the following:
CF2.0	This component has been judged on the basis of the required spacings in the First Edition of the Standards for Medical Equipment, Part 1: General Requirements for Safety, UL60601-1 and CSA 22.2 No. 601.1, which covers the end use product for which the component is designed.	
CF2.1	The component shall be installed in compliance with the enclosure, mounting, spacings, casualty markings and segregation requirements of the end-use application.	
CF2.2	Consideration should be given to measuring the temperature on power electronic components and transformer windings when the power supply is installed in the end-use equipment.	
CF2.3	The input/output connectors are not acceptable for field connection, they are only intended for connection to mating connectors of internal wiring inside the end-use machine. the output circuits have not been evaluated for direct patient connection (Type B, BF or CF).	
CF2.4	MINT1065AY75CZ (Class I) models should be properly bonded to the ground in the end-use equipment.	
CF2.5	The temperature test was performed at room ambient of 25 °C and calculated for an ambient of 40 °C.	
CF2.6	Leakage Current testing should be repeated in the end-product application.	
CF2.7	The Power Transformer (T1) comply with Class B (130°C) limits.	
CF2.8	Model MINT1065AY75CZ Series: The intearity	

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of the Protective Earth/Bonding connection shall considered in the end use product.