DEMKO CERTIFICATE

Certificate No.	146059-02
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Date of Issue	2008-11-04
Certificate Holder	SL POWER ELECTRONICS CORP. 6050 KING DR. BLDG A VENTURA CA 93003, USA
Manufacturer	SL POWER ELECTRONICS CORP. 6050 KING DR. BLDG A VENTURA CA 93003, USA
Production site	SL POWER ELECTRONICS XIANGHE ANPING ECONOMIC & TECH DEVELOPING ZONE XIANGHE, HEBEI 065402, CHINA
Certified Product	Power Supply
Model	See appendix
Trademark	SL (LOGO)
Rated Voltage / Frequency	100-240 V~, 50-60 Hz
Rated Current	0.5-0.25 A
Insulation Class	-
Degree of protection (IP)	-
Tested acc. to	EN 60601-1:1990 + A1:1993 + A2:1995
Test Report No.	E116994-A47-CB-1, Issue Date 2008-10-06
Additional	for building-in
Expire date	2009-09-12

Certification Manager
Jan-Erik Storgaard

The Manufacturer complies with the Production Surveillance Requirements. Products included in this certificate are allowed to carry the registered approval marks of UL International Demko A/S, Ⓓ or for cables ◅DEMKO▻.The name of UL International Demko A/S can be used in the marketing of the products. This Statement is only valid for products, which are identical to the tested product, and manufactured at the above mentioned production site(s). UL International Demko A/S has to be informed in writing about any changes, in accordance with the " UL International Demko A/S Standard Terms and Conditions" for UL International Demko A/S services. The validity of this certificate is shortend if the EU legislation require re-testing and re-certification, due to new standards or amemdments 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

The Certificate covers the following:

Model/Type reference
MINT1022AWXYZ, where W represents the output voltage which may be any number from 05 thru 24; X indicates the type of output connector which may be any number from 01 thru 99; Y indicates the input connector options which may be any letter from A thru Z; and Z indicates the configuration options which may be the number 01 for standard configuration or 02 thru 99 for modifications.

Output:
MINT1022A05XYZ: 5 V dc, 3.2 A
MINT1022A12XYZ: 12 V dc, 1.83 A
MINT1022A24XYZ: 24 V dc, 0.92 A

This certificate replaces certificate No. 146059-01, dated 2008-09-25.

UL International Demko A/S has issued a new certificate as due to correct output information.

This certificate has been issued on the basis of CB Certificate (CB Test Certificate) No. US/13072A/UL, issued by Underwriters Laboratories Inc., dated 2008-10-06.

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
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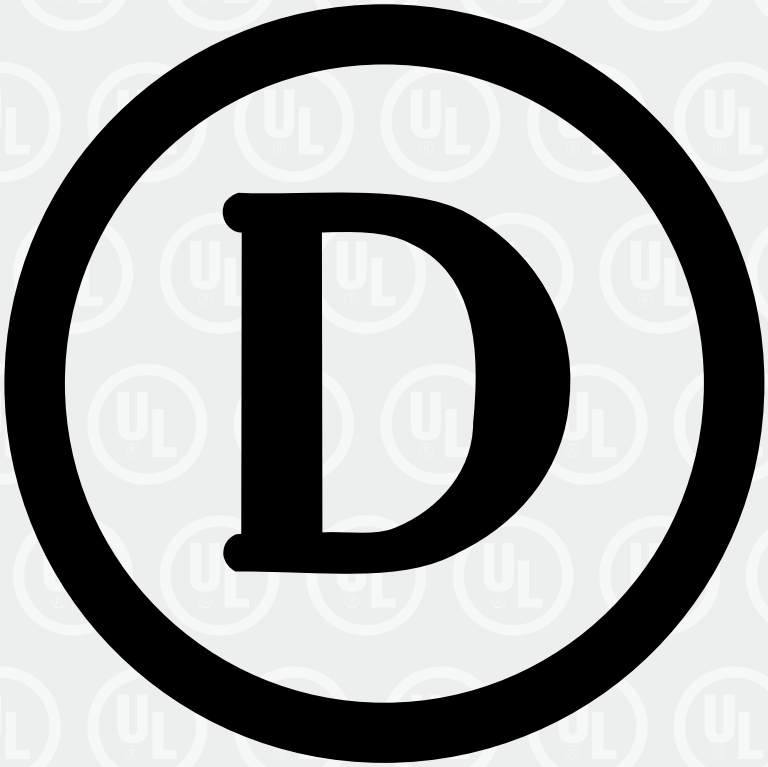

SPECIFIC TECHNICAL CRITERIA

TEST REPORT
UL 60601-1
Medical Electrical Equipment
Part 1: General requirements for safety

Report Reference No ..... :	E116994-A47-UL-1
Compiled by ..... :	Ahmad Daoudi
Reviewed by ..... :	Elizabeth Drew
Date of issue ..... :	2008-09-18
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 ..... :	Power Supply
Trademark ..... :	SL POWER ELECTRONICS
Model and/or type reference ..... :	MINT1022AWXYZ, where W represents the output voltage which may be any number from 05 thru 24; X indicates the type of output connector which may be any number from 01 thru 99; Y indicates the input connector options which may be any letter from A thru Z; and Z indicates the configuration options which may be the number 01 for standard configuration or 02 thru 99 for modifications.
Rating(s) ..... :	Input: 100-240 V~, 50-60 Hz, 0.5-0.25 A Output: MINT1022A05XYZ: 5 V dc, 3.2 A MINT1022A12XYZ: 12 V dc, 1.83 A MINT1022A24XYZ: 24 V dc, 0.92 A

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 options			
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 corresponding, less stringent national requirement is "Pass")			
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:	BOP	- 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				
- Throughout the Test Report a point is used as the decimal separator				

General Product Information:	
CA1.0	**Report Summary**
CA1.1	N/A
CB1.0	**Product Description**
CB1.1	The equipment (DC power supplies) covered by this report, are components, which are intended for use in end-product equipment used in a hospital or related health care facility, evaluated to standard Medical Equipment. The MINT1022 Series is designed for building-in to an end piece of equipment.
CC1.0	**Model Differences**
CC1.1	The power supplies in the MINT1022 Series are identical to each other with exception to Transformer, T2, and minor component changes in the secondary circuit for the different outputs.

	The MINT1022 Series is available with different types of input and output connector. Model Number System: Example: MINT 1 022 A 05 05 I 01 1 2 3 4 5 6 7 8 1. Medical Internal Model number prefix. 2. Signifies number of outputs: 1 3. Output wattage: 022 = 22 W 4. Signifies generational differences such as energy star level changes, EMC level changes; may be any letter from A to Z. 5. Output voltage: 05=5V, 12 = 12 V, 24 = 24 V 6. Output connector options: 5 = 4 Pin SPOX type or equiv. May be any Numeric Characters 00-99. 7. Input connector options: I = 4 Pin SPOX or equiv. May be any Alpha Character A-Z. 8. Configuration: 01 = standard, 02-99 for modifications.	
CD1.0	**Additional Information**	
CD1.1	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 CBTLs.	
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), EN 60601-1: 1990 + A1:1993 + A2:1995 + A13:1996, CAN/CSA-C22.2 No. 601.1-M90 (R2005) (includes National Differences for Canada), (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 use with the product:	None
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
CE2.0	The Accompanying Documents referred to by this standard refer to the Installation Instructions. The installation instructions are not shipped with this unit. They can be found on the company website. http//www.slpower.com or can request for a copy by writing to SL Power Electronics Corp. at: 6050 King Drive, Bldg. A, Ventura, CA 93003.	--
CF1.0	**Engineering Conditions of Acceptability**	
CF1.1	For use only in or with complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc. When installed in an end-product, consideration must be given to the following:	
CF2.0	This power supply has been evaluated as Class I, continuous operation, ordinary equipment and has not been evaluated for use in the presence of a flammable anesthetic mixture with air, oxygen or nitrous oxide.	--
CF2.1	This component has been judged on the basis of the required spacings in the Standard 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.	--
CF2.2	The component shall be installed in compliance with the enclosure, mounting, spacings, casualty markings and segregation requirements of the end-use application.	--
CF2.3	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.	--
CF2.4	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).	--
CF2.5	The component should be properly bonded to the ground in the end-use equipment.	--
CF2.6	The maximum recommended ambient temperature was considered to be 40 °C.	--
CF2.7	Leakage Current testing should be repeated in	--

	the end-product application.	
CF2.8	The Power Transformer (T2) comply with Class A (105°C) limits.	--
CF2.9	Only one fuse is provided on the line side of the input. The need for additional fusing shall be provided as part of the end-product.	--
CF3	Consideration in conducting the Earthing Test on Heat Sink, HS1, should made as part of the end-use product.	--