

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

Component - Power Supply

Name and address of the applicant  
Nom et adresse du demandeur

SL Power Electronics Corp.  
6050 King Drive, Bldg. A  
Ventura, CA 93003, USA

Name and address of the manufacturer  
Nom et adresse du fabricant

SL Power Electronics Corp.  
6050 King Drive, Bldg. A  
Ventura, CA 93003, USA

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

Industrias SI, S.A. De C.V.  
Costa Rica No. 60, Col. Cuahutemoc  
Mexicali, B.C., Mexico

Rating and principal characteristics  
Valeurs nominales et caractéristiques principales

Input: 100-240 V ac, 5.5-2.5 A, 50/60 Hz  
Output: 12 thru 48 V, 400 W maximum with forced air cooling (GNT4WXYZ-XXXG); 24 thru 48 V,  
400 W maximum with 200 LFM minimum forced air cooling, (MINT1400AWXYZ); 11-16 V, 25 A,  
150 W maximum with convection cooling, 300 W with 35 CFM forced air cooling  
(MISP1300A1873)

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



Model / Type Ref.  
Ref. de type

For models see second page of this certificate.

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

This CB Test Report comprises 6 enclosures. The CB Test Certificate was amended on  
January 10, 2007 to update existing enclosure information. Amended on  
November 14, 2008 to add new model and ratings. Corrected on November 19, 2008  
to update trademark.

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

PUBLICATION

EDITION

**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. Additionally evaluated to EN 60601-1 (1990) with  
Am. 1 (1993) and Am. 2 (1995). See Test Report for National Differences.

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

E116994-A33-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




**Underwriters  
Laboratories**

Underwriters Laboratories Inc. / Certification Programs Office, USA  
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United States of America  
TEL INT\* +1 847 664 3008, FAX INT\* +1 847 313 3008  
email: jolanta.m.wroblewska@us.ul.com

Date: Issued: 2006 October 2  
Amended: 2007 January 10 (Am. 1)  
Amended: 2008 November 14 (Am. 2)  
Corrected: 2008 November 19

Signature:



Jolanta M. Wroblewska



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

### Models:

GNT4WXYZ-XXXG, where W represents the output voltage which may be any number from 12 thru 48; X indicates the type of input connector which may be the letters A, B or C; Y indicates the type of output connector which may be the letter B or T; Z indicates the type of cover or cover/fan options which may be blank or the letter E or T; -XXX indicates value added configurations that have no impact on safety which may be any number from 001 thru 999; and G indicates compliance to RoHS. (ROHS compliance has not been evaluated by UL.) Models MISP1300A1873, and MINT1400AWXYZ, where W represents the output voltage which may be any number from 24 thru 48; X indicates the type of output connector which may be any number from 01 thru 99; Y indicates the type of input connector which may be the letter E, L or P; Z indicates the configuration options which may be the number 01 for standard configuration or 02 thru 99 for modifications that have no impact on safety.

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

This CB Test Report comprises 6 enclosures. The CB Test Certificate was amended on January 10, 2007 to update existing enclosure information. Amended on November 14, 2008 to add new model and ratings. Corrected on November 19, 2008 to update trademark.

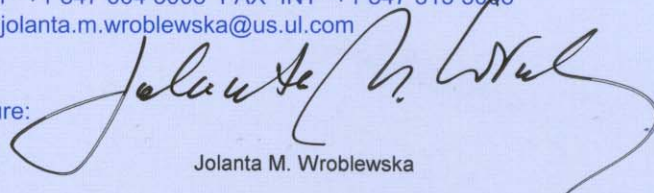
This CB Test Certificate is issued by the National Certification Body  
*Ce Certificat d'essai OC est établi par l'Organisme National de Certification*



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Date: Issued: 2006 October 2  
Amended: 2007 January 10 (Am. 1)  
Amended: 2008 November 14 (Am. 2)  
Corrected: 2008 November 19

Signature:



Jolanta M. Wroblewska

## COVER PAGE FOR TEST REPORT

<b>Product Category:</b>	Power Supplies, Medical and Dental
<b>Product Category CCN:</b>	QQHM2, QQHM8
<b>Test Procedure:</b>	Component Recognition
<b>Product:</b>	Component - Power Supply
<b>Model/Type Reference:</b>	GNT4WXYZ-XXXG, where W represents the output voltage which may be any number from 12 thru 48; X indicates the type of input connector which may be the letters A, B or C; Y indicates the type of output connector which may be the letter B or T; Z indicates the type of cover or cover/fan options which may be blank or the letter E or T; -XXX indicates value added configurations that have no impact on safety which may be any number from 001 thru 999; and G indicates compliance to RoHS. (ROHS compliance has not been evaluated by UL.) Models MISP1300A1873, and MINT1400AWXYZ, where W represents the output voltage which may be any number from 24 thru 48; X indicates the type of output connector which may be any number from 01 thru 99; Y indicates the type of input connector which may be the letter E, L or P; Z indicates the configuration options which may be the number 01 for standard configuration or 02 thru 99 for modifications that have no impact on safety.
<b>Rating(s):</b>	Input: 100-240 V ac, 5.5-2.5 A, 50/60 Hz Output: 12 thru 48 V, 400 W maximum with forced air cooling (GNT4WXYZ-XXXG); 24 thru 48 V, 400 W maximum with 200 LFM minimum forced air cooling, (MINT1400AWXYZ); 11-16 V, 25 A, 150 W maximum with convection cooling, 300 W with 35 CFM forced air cooling (MISP1300A1873)  NOTES: 1. Consult factory for application with convection cooling and usage at higher operating ambient temperature.
<b>Standards:</b>	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)
<b>Applicant Name and Address:</b>	SL POWER ELECTRONICS CORP. 6050 KING DRIVE, BLDG. A VENTURA, CA 93003
<b>This Report includes the following parts, in addition to this cover page:</b> <ol style="list-style-type: none"><li>1. Specific Inspection Criteria</li><li>2. Specific Technical Criteria</li><li>3. Clause Verdicts</li><li>4. Critical Components</li><li>5. Test Results</li><li>6. Enclosures</li></ol>	

Issue Date: 2006-09-28  
Amendment 2 2008-11-13

Page 2 of 2

Report Reference #

E116994-A33-UL-1

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:




Michael J. Howell  
Staff Engineer  
Underwriters Laboratories Inc.

## **SPECIFIC INSPECTION CRITERIA**

<b>BA1.0</b>	<b>Special Instructions to UL Representative</b>
<b>BA1.1</b>	The power supplies described in this report have the same model number/construction as the power supplies described in Report Ref. # E135803-A34-UL.

<b>BB1.0</b>	<b>Supporting Documentation</b>
<b>BB1.1</b>	<p>The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:</p> <ul style="list-style-type: none"><li>A Authorization - The Authorization page may include additional Factory Identification Code markings.</li><li>B Generic Inspection Instructions -<ul style="list-style-type: none"><li>i. 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.</li><li>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.</li><li>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.</li></ul></li></ul>

BC1.0	<b>Markings and instructions</b>	
BC1.1	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	
6.1h	Supply Frequency	Rated frequency range in hertz
6.1j	Power Input	Amps, VA, or Watts
6.1p	Output	Rated output voltage, power, frequency.

BD1.0	<b>Production-Line Testing Requirements</b>			
BD1.1	<b>Test Exemptions</b> - The following models are exempt from the indicated test			
	Model	Grounding Continuity	Dielectric Voltage Withstand	Patient Circuit Dielectric Voltage Withstand
	Models GNT400 Series, MISP1300A1873, MINT1400AWXYZ Series	Test	Test	Exempt
BD1.2	<b>Solid-State Component Test Exemptions</b> - The following solid-state components may be disconnected from the remainder of the circuitry during either Dielectric Voltage Withstand Test:			
	N/A			

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

## SPECIFIC TECHNICAL CRITERIA

<b>TEST REPORT UL 60601-1 Medical Electrical Equipment Part 1: General requirements for safety</b>	
Report Reference No .....	E116994-A33-UL-1
Compiled by .....	Ahmad Daoudi
Reviewed by .....	Michael J. Howell
Date of issue .....	2006-09-28
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
<b>Test item</b> description .....	<b>Component - Power Supply</b>
Trademark .....	See Enclosure Miscellaneous for Trade Mark
Model and/or type reference ...:	GNT4WXYZ-XXXG, where W represents the output voltage which may be any number from 12 thru 48; X indicates the type of input connector which may be the letters A, B or C; Y indicates the type of output connector which may be the letter B or T; Z indicates the type of cover or cover/fan options which may be blank or the letter E or T; -XXX indicates value added configurations that have no impact on safety which may be any number from 001 thru 999; and G indicates compliance to RoHS. (ROHS compliance has not been evaluated by UL.) Models MISP1300A1873, and MINT1400AWXYZ, where W represents the output voltage which may be any number from 24 thru 48; X indicates the type of output connector which may be any number from 01 thru 99; Y indicates the type of input connector which may be the letter E, L or P; Z indicates the configuration options which may be the number 01 for standard configuration or 02 thru 99 for modifications that have no impact on safety.
Rating(s) .....	Input: 100-240 V ac, 5.5-2.5 A, 50/60 Hz Output: 12 thru 48 V, 400 W maximum with forced air cooling (GNT4WXYZ-XXXG); 24 thru 48 V, 400 W maximum with 200 LFM minimum forced air cooling, (MINT1400AWXYZ); 11-16 V, 25 A, 150 W maximum with convection cooling, 300 W with 35 CFM forced air cooling (MISP1300A1873)  NOTES: 1. Consult factory for application with convection cooling and usage at higher operating ambient temperature.



Issue Date: 2006-09-28  
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<b>GENERAL INFORMATION</b>	
<b>Test item particulars (see also clause 5):</b>	
Classification of installation and use .....	For building-in
Supply connection .....	Terminal Block or Header or Appliance inlet
Accessories and detachable parts included in the evaluation .....	None
Options included .....	Cover/Fan (Options E and T) (GNT4WXYZ-XXXG)
<b>Possible test case verdicts:</b>	
- 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 .....
- operational insulation .....	OP - basic insulation .....
- basic insulation between parts of opposite polarity:	BO - supplementary insulation : P
- double insulation .....	DI - reinforced insulation .....
<b>General remarks:</b>	
- "(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	

<b>General Product Information:</b>	
CA1.0	<b>Report Summary</b>
CA1.1	N/A
CB1.0	<b>Product Description</b>
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.

	<p>The GNT4WXYZ-XXXG Series, MINT1400AWXYZ Series and MISP1300A1873 are designed for building-in to an end product.</p>
<p><b>CC1.0</b></p>	<p><b>Model Differences</b></p>
<p><b>CC1.1</b></p>	<p>The power supplies in the GNT4WXYZ-XXXG Series are similar to each other and differ only in secondary circuit for the different outputs. The power supplies MINT1400AWXYZ Series are similar to the GNT4WXYZ-XXXG Series with some minor improvements. The chassis has no slots, the insulator gap pad between the mini cover and the transformer T5 is replaced with an aluminum block bolted to the cover, and insulator gap pad is added between the primary heatsink and chassis. The power supply MISP1300A1873 is a custom power supply similar to model GNT415ABG. The difference is in secondary with added circuitry to allow output to be adjustable from 11-16 V by external analog signal to control output voltage. Also, the insulator gap pad between the mini cover and the transformer T5 is replaced with an aluminum block bolted to the cover.</p> <p>The GNT4WXYZ-XXXG Series is available with three different types of input connector and two different type of output connector. Also, there are two different cover/fan options; option E with fan mounted on end and includes an appliance inlet for the input, and option T with fan mounted on top. The following are the various options for the GNT4WXYZ-XXXG:</p> <p>W = Main Output from 12 thru 48              12 = 12 V dc/33.3 A              15 = 15 V dc/26.7 A              24 = 24 V dc/16.7 A              28 = 28 V dc/14.3 A              36 = 36 V dc/11.1 A              48 = 48 V dc/8.4 A</p> <p>X = Input Connectors A, B, or C              A = Eby P/N 5002-03-N-12              B = Phoenix Contact P/N 1732034 (GMKDSP 3/3)              C = Amp P/N MTA-156 Series</p> <p>Y = Output Connectors              B = Bussbars              T = Phoenix Contact P/N 1731721</p> <p>Z = Cover Options              Blank = Standard Mini Cover              E = Cover with Vertically Mounted Fan on End              When used, AC inlet is used (Schurter P/N 6100.3100) and input connector X is C by default.              T = Cover with Horizontally Mounted Fan on Top</p> <p>-XXX = Value added configurations that have no impact on safety which may be any number from 001 thru 999</p> <p>G = Compliance to RoHS</p>

	<p>The MINT1400AWXYZ Series is available with three different types of input connector which are the following:</p> <p>W = Main Output from 24 thru 48                  24 = 24 V dc/16.7 A                  28 = 28 V dc/14.3 A                  36 = 36 V dc/11.1 A                  48 = 48 V dc/8.4 A</p> <p>X = Output Connectors 01 thru 99</p> <p>Y = Input Connectors E, L, or P                  L = Eby P/N 5002-03-N-12                  P = Phoenix Contact P/N 1732034 (GMKDSP 3/3)                  E = Molex P/N 2139 Series or Amp P/N MTA-156 Series</p> <p>Z = Configuration Options 01 or 02 thru 99                  01 = Standard Mini Cover                  02 thru 99 = Added option not effecting safety</p> <p>G = Compliance to RoHS</p>	
<b>CD1.0</b>	<b>Additional Information</b>	
<b>CD1.1</b>	<p>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 applicant upon request by CBTLs.</p> <p>The power supplies described in this report have the same model number/construction as the power supplies described in Report Ref. # E135803-A34.</p> <p>Capacitors Type 339 Series by Vishay and Type MEX Series by Meritek and Varistors Type MVR Series by Meritek, Type TVR by Thinking Electronics, and Type ERZV14D471 by Matsushita/Panasonic have been previously evaluated to the requirements of their respective applicable UL standards by UL, and are under UL's component recognition program. Additionally the above components have been evaluated to the requirements of their respective applicable IEC/EN standards. Certificates of compliance to the applicable IEC standard for these component can be requested from the manufacturer at the discretion of the accepting NCB.</p>	
<b>CE1.0</b>	<b>Technical Considerations</b>	
CE1.1	<p>The product was investigated to the following additional standards:</p>	<p>EN 60601-1: 1990 + A1:1993 + A2:1995 + A13:1996, CAN/CSA C22.2 No. 601.1-M90 (R1997), CAN/CSA C22.2 No. 601.1S1-94, and CAN/CSA C22.2 No. 601.1B-98 (National Differences for Canada), UL 60601-1(except EMC limitations, EN 60601-1-2, Biocompatibility, EN 10993-1, Programmable Electronic Systems, IEC 60601-1-4)</p>
CE1.2	<p>The product was not investigated to the following standards or clauses:</p>	<p>Clause 36, Electromagnetic Compatibility (IEC 601-1-2), Clause 48, Biocompatibility (ISO</p>

		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. <a href="http://www.slpower.com">http://www.slpower.com</a> or can request for a copy by writing to SL Power Electronics Corp. at: 6050 King Drive, Bldg. A, Ventura, CA 93003.	--
<b>CF1.0</b>	<b>Engineering Conditions of Acceptability</b>	
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 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.	
CF2.2	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 connector for models with option E is acceptable for field connection and all other models the input/output 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 temperature test was performed in a raised ambient of 40°C on Models GNT4WXYZ-XXXG Series and MINT1400AWXYZ Series, and was performed in a raised ambient of 50°C on Model MISP1300A1873.	--
CF2.7	Leakage Current testing should be repeated in the end-product application.	--
CF2.8	The main Power Transformer (T5), Drive Transformer (T6) and Bias Transformer (T100). comply with Class	--



	F (155°C) limits.	
CF2.9	Power supply is provided/tested with two fuses, UL R/C (JDYX2), rated T 6.3 A, 250 V, one on each input line.	--

# DEMKO CERTIFICATE

Certificate No. 142247-03  
Page 1/3  
Date of Issue 2008-12-04

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 INDUSTRIAS SL, S.A. DE C.V.  
COSTA RICA NO. 60, COL. CUAHUTEMOC  
MEXICALI, B.C. MEXICO

Certified Product Component - Power Supply  
Model GNT4WXYZ-XXXG, MINT1400AWXYZ, MISP1300A1873,

Trademark



Rated Voltage / Frequency 100-240 V ac, 50/60 Hz  
Rated Current 5.5-2.5 A

Insulation Class  
Degree of protection (IP)

Tested acc. to EN 60601-1:1990 + A1:1993 + A2:1995  
Test Report No. E116994-A33-CB-1 Issue date 2006-09-28, amendment 1  
2007-01-08, amendment 2 2008-11-13

Additional For building-in, see appendix  
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 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](http://www.ul-europe.com)

# Appendix DEMKO CERTIFICATE

Certificate No. 142247-03  
Page 2/3  
Date of Issue 2008-12-04

## The Certificate covers the following:

### 001: GNT4WXYZ-XXXG

W represents the output voltage which may be any number from 12 thru 48; X indicates the type of input connector which may be the letters A, B or C; Y indicates the type of output connector which may be the letter B or T; Z indicates the type of cover or cover/fan options which may be blank or the letter E or T; -XXX indicates value added configurations that have no impact on safety which may be any number from 001 thru 999; and G indicates compliance to RoHS. (ROHS compliance has not been evaluated by UL.)

### 002: MISP1300A1873

### 003: MINT1400AWXYZ

W represents the output voltage which may be any number from 24 thru 48; X indicates the type of output connector which may be any number from 01 thru 99; Y indicates the type of input connector which may be the letter E, L or P; Z indicates the configuration options which may be the number 01 for standard configuration or 02 thru 99 for modifications that have no impact on safety.

Output: 12 thru 48 V, 400 W maximum with forced air cooling (GNT4WXYZXXXG);  
24 thru 48 V, 400 W maximum with 200 LFM minimums forced air cooling, (MINT1400AWXYZ); 11-16 V, 25 A, 150 W maximum with convection cooling, 300 W with 35 CFM forced air cooling (MISP1300A1873)

This certificate replaces the certificate No. 142247-02, dated 2007-01-26.

UL International Demko A/S has issued a new certificate as due to add new models/rating and trademark.

The certificate has been issued on the basis of CB certificate (CB Test certificate) No. US/10844B/UL, dated 2008-11-14 and US/10844C/UL, dated 2008-11-19, Issued by Underwriters Laboratories.

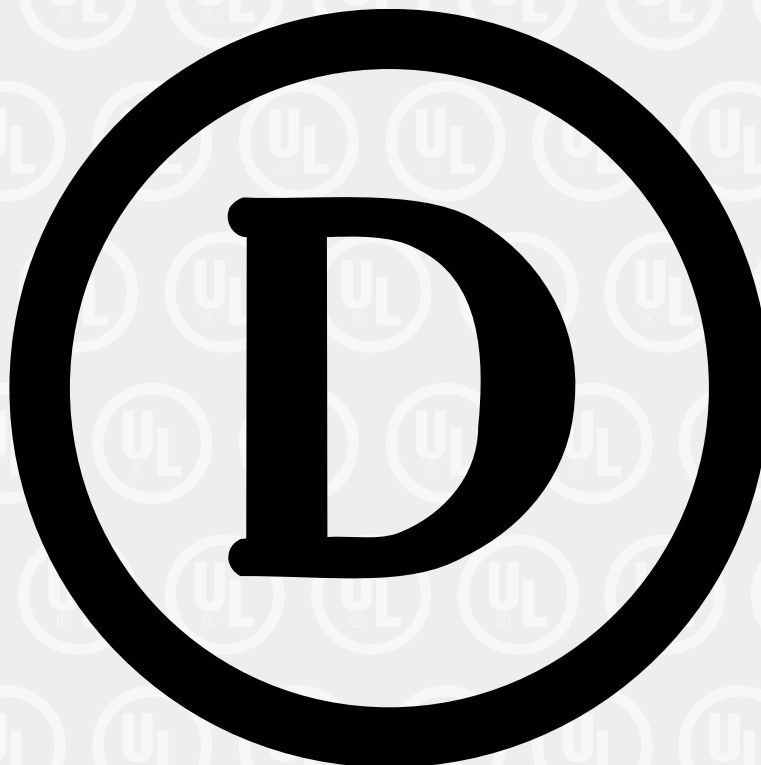
. The Manufacturer complies with the Production Surveillance Requirements. Products included in this certificate are allowed to carry the registered approval marks of UL International Demko A/S, ® or for cables «DEMKO». The name of UL International Demko A/S can be used in the marketing of the products. 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 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  
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# Appendix DEMKO Certificate

Certification Mark    D-mark  
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. 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 shortened if the EU legislation require re-testing and re-certification, due to new standards or amendments coming into force, before the expiry date

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