

## UL TEST REPORT AND PROCEDURE

<b>Standard:</b>	UL 60950-1, 2nd Edition, 2007-03-27 (Information Technology Equipment - Safety - Part 1: General Requirements) CSA C22.2 No. 60950-1-07, 2nd Edition, 2007-03 (Information Technology Equipment - Safety - Part 1: General Requirements)
<b>Certification Type:</b>	Component Recognition
<b>CCN:</b>	QQGQ2, QQGQ8 (Power Supplies for Information Technology Equipment Including Electrical Business Equipment)
<b>Product:</b>	Switching Power Supply
<b>Model:</b>	MINT1180AXXYKZZ, MINT1200AXXYKZZ, CINT1180AXXYKZZ, CINT1200AXXYKZZ, Where A is A or B, where XX is any number 12 through 48, where YY or ZZ is any number 01 through 99.
<b>Rating:</b>	Input: 100-240 V~, 50-60 Hz, 3.0A  Output: For MINT1180AXXYKZZ, CINT1180AXXYKZZ: 12 Vdc, 15 A to 48 Vdc, 3.75 A, maximum 180 Watts.  For:MINT1200AXXYKZZ, CINT1200AXXYKZZ: 12 Vdc, 16.67 A to 48 Vdc, 4.17A, maximum 200 Watts.
<b>Applicant Name and Address:</b>	SL POWER ELECTRONICS CORP BLDG A 6050 KING ST VENTURA CA 93003 UNITED STATES

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.

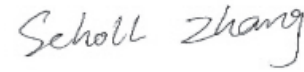
Issue Date: 2011-05-23 Page 2 of 14  
2011-07-20

Report Reference # E135803-A63-UL

Prepared by: Jenly Ge  
Underwriters Laboratories Inc.



Reviewed by: Scholl Zhang  
Underwriters Laboratories Inc.



### 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 -
  - 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.
  - 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.

### Product Description

The units are open-frame AC/DC power supplies, designed for building-in to an end-product.

The units were evaluated to operate upto the altitude of 3000m.

### Model Differences

The power supplies in the MINT1180AXXYKZZ are similar to each other except for output ratings and secondary winding of power transformer.

MINT1200AXXYKZZ and MINT1180AXXYKZZ are similar to each other in construction except for the output ratings and the additional cooling system required for MINT1200AXXYKZZ.

MINT1200AXXYKZZ is identical to CINT1200AXXYKZZ except for model designation.

MINT1180AXXYKZZ is identical to CINT1180AXXYKZZ except for model designation.

The Model number nomenclature explains construction as below:

where A is A or B, A is for Class I construction, B is for Class II construction, , where XX is any number 12 through 48, represents the output voltage, where YY or ZZ is any number 01 through 99, designates additional configurations indicating non-safety related options, K is an Alpha character that represents input options.

### Technical Considerations

- Equipment mobility : for building-in
- Connection to the mains : To be determined
- Operating condition : continuous
- Access location : To be determined
- Over voltage category (OVC) : OVC II

- Mains supply tolerance (%) or absolute mains supply values : +10%, -10%
- Tested for IT power systems : Yes
- IT testing, phase-phase voltage (V) : N/A
- Class of equipment : Class I (earthed) or Class II (double insulated)
- Considered current rating (A) : 16A (20A for north America)
- Pollution degree (PD) : PD 2
- IP protection class : IP X0
- Altitude of operation (m) : no more than 3000m
- Altitude of test laboratory (m) : no more than 2000m
- Mass of equipment (kg) : 0.34
- The product was submitted and evaluated for use at the maximum ambient temperature (T<sub>ma</sub>) permitted by the manufacturer's specification of: 40 degree C or 50 degree C for units with Class F transformer T200.
- The means of connection to the mains supply is: Determined in end-product
- The product is intended for use on the following power systems: TN
- The equipment disconnect device is considered to be: Determined in end product
- The product was investigated to the following additional standards: EN 60950-1:2006+ A11:2009 (which includes all European national differences, including those specified in this test report).
- The following are available from the Applicant upon request: Installation (Safety) Instructions / Manual

#### **Engineering Conditions of Acceptability**

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:

- The following Production-Line tests are conducted for this product: Electric Strength
- The end-product Electric Strength Test is to be based upon a maximum working voltage of: Primary-SELV: 289 Vrms, 460 Vpk, Primary-Earth: 240 Vrms, 378 Vpk
- The following secondary output circuits are SELV: All outputs
- The following secondary output circuits are at hazardous energy levels: All outputs
- The power supply terminals and/or connectors are: Not investigated for field wiring
- The maximum investigated branch circuit rating is: 20 A
- The investigated Pollution Degree is: 2
- Proper bonding to the end-product main protective earthing termination is: Required
- An investigation of the protective bonding terminals has: Not been conducted
- The following input terminals/connectors must be connected to the end-product supply neutral: N pin of input connector
- The following magnetic devices (e.g. transformers or inductor) are provided with an OBJY2 insulation system with the indicated rating greater than Class A (105°C): T200 (Class B or Class F)
- The following end-product enclosures are required: Mechanical, Fire, Electrical
- The maximum continuous power supply output (Watts) relied on forced air cooling from: For Models MINT1200AXXYKZZ and CINT1200AXXYKZZ: One cooling fan with 16CFM(100LFM) applied to front the unit. Refer to enclosure 7-02 for test condition.
- The equipment is suitable for direct connection to: AC mains supply
- Dual fuses used in this product, Clause 2.7.6 shall be reconsidered in end use.

#### **Additional Information**

(11CA35638) E135803-A63, Amendment 1:

1. Add Class II construction for all models, and revise the model names accordingly ("Where A is A or B" is added)
2. Add an alternate transformer T200 (Class F), which with the same construction as previously evaluated Class B transformer
3. Revise the Tma to 50 Degree C with Class F transformer
4. Factory is changed

Previous factory:  
INDUSTRIAS S L S A DE C V  
COSTA RICA #60  
COL CUAHUTEMOC  
MEXICALI  
BC MEXICO

Modified factory:  
SL POWER ELECTRONICS MEXICALI , MX  
INDUSTRIAS SL S.A. DE C.V.  
CALLE: CIRCUITO SIGLO XXI #2055  
COLONIA: PARQUE INDUSTRIAL EX-XXI  
C.P. 21254  
MEXICALI, B.C. MEXICO

**Additional Standards**

The product fulfills the requirements of: EN 60950-1:2006 + A11:2009

**Markings and instructions**

Clause Title	Marking or Instruction Details
Power rating - Ratings	Ratings (voltage, frequency/dc, current)
Power rating - Company identification	Listee's or Recognized company's name, Trade Name, Trademark or File Number
Power rating - Model	Model Number
Fuses - Rating	Rated current and voltage and type located on or adjacent to fuse or fuseholder.

**Special Instructions to UL Representative**

Inspect the transformer(s) listed in table "Electric Strength Test Special Constructions" per BD1.1:  
When the tests are conducted at other location, inspect test record and specification sheet provided by the component manufacturer. Verify the specification sheet indicates 100% routine test specified in the table be conducted at the component manufacturer.