

## 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>	Power Supplies for Information Technology Equipment Including Electrical Business Equipment
<b>CCN:</b>	QQGQ2, QQGQ8
<b>Product:</b>	AC/DC Power Supply
<b>Model:</b>	CPFE1000F-12 CPFE1000F-28 CPFE1000F-48
<b>Rating:</b>	CPFE1000F-12 Input: 100-240 Vac, 12A, 50-60 Hz, 1000W max Output: 9.6-14.4Vdc, 60A, 720W  CPFE1000F-28 Input: 100-240 Vac, 16A, 50-60 Hz, 1300W max Output: 22.4-33.6Vdc, 36A, 1008W  CPFE1000F-48 Input: 100-240 Vac, 16A, 50-60 Hz, 1300W max Output: 38.4-57.6Vdc, 21A, 1008W
<b>Applicant Name and Address:</b>	TDK-LAMBDA AMERICAS INC 3055 DEL SOL BLVD SAN DIEGO CA 92154 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.

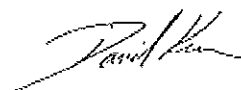
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Report Reference # E133400-A6-UL

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**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**

AC/DC Open Frame Power Supply

**Model Differences**

All models are similar except for components and component ratings as noted in Table 1.5.1, transformer windings and minor changes to secondary circuits.

**Technical Considerations**

- Equipment mobility : for building-in
- Connection to the mains : pluggable A
- Operating condition : continuous
- Over voltage category : OVC II
- Mains supply tolerance (%) : +10%, -10%
- Tested for IT power systems : No
- IT testing, phase-phase voltage (V) : -
- Class of equipment : Class I (earthed)
- Mass of equipment (kg) : 0.34 Kg
- Pollution degree : PD 2
- IP protection class : IP X0
- The means of connection to the mains supply is: Pluggable A

- The product is intended for use on the following power systems: TN
- The equipment disconnect device is considered to be: evaluated in the end product.
- Model CPFE1000F-12 - from 85 to 265 V ac input operation, max ambient is 60°C (Max baseplate temperature: 85°C)
- Models CPFE1000F-28 and CPFE1000F-48 - from 170 to 265 V ac input operation, max ambient is 60°C , linearly de-rated to 50°C at 85 V ac input. (Max baseplate temperature: 85°C at 170 to 265 V ac operation, 70°C below 170 V ac operation)

**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: Earthing Continuity, Electric Strength
- The end-product Electric Strength Test is to be based upon a maximum working voltage of: Primary-SELV: 265 Vrms, 374 Vpk
- The following secondary output circuits are SELV: CPFE1000F-12, CPFE1000F-28
- The following secondary output circuits are at hazardous energy levels: All
- 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 end-product enclosures are required: Mechanical, Fire, Electrical
- The equipment is suitable for direct connection to: be evaluated in the end product.

**Additional Information**

NA

**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.
<b>Special Instructions to UL Representative</b> N/A	

<b>Production-Line Testing Requirements</b>						
<b><u>Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.</u></b>						
Model	Component	Removable Parts	Test probe location	V rms	V dc	Test Time, s
N/A						
<b><u>Earthing Continuity Test Exemptions - This test is not required for the following models:</u></b>						
<b><u>Electric Strength Test Exemptions - This test is not required for the following models:</u></b>						
<b><u>Electric Strength Test Component Exemptions - The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test:</u></b>						
<b><u>Sample and Test Specifics for Follow-Up Tests at UL</u></b>						
Model	Component	Material	Test	Sample(s)	Test Specifics	
N/A						