CERTIFICATE OF COMPLIANCE

Certificate Number Report Reference Issue Date 20120829-E139109 E139109-A54-UL 2012-AUGUST-29

Issued to:

XP POWER L L C SUITE 150 1241 E DYER RD SANTA ANA CA 92705

This is to certify that representative samples of

COMPONENT - POWER SUPPLIES, INFORMATION TECHNOLOGY EQUIPMENT INCLUDING ELECTRICAL BUSINESS EQUIPMENT See Addendum Page

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety:UL 60950-1, (Information Technology Equipment - Safety -
Part 1: General Requirements)
CSA C22.2 No. 60950-1-07, (Information Technology
Equipment - Safety - Part 1: General Requirements)Additional Information:See the UL Online Certifications Directory at
www.ul.com/database for additional information

Only those products bearing the UL Recognized Component Marks for the U.S. and Canada should be considered as being covered by UL's Recognition and Follow-Up Service and meeting the appropriate U.S. and Canadian requirements.

The UL Recognized Component Mark for the U.S. generally consists of the manufacturer's identification and catalog number, model number or other product designation as specified under "Marking" for the particular Recognition as published in the appropriate UL Directory. As a supplementary means of identifying products that have been produced under UL's Component Recognizion Program, UL's Recognized Component Mark: **N**, may be used in conjunction with the required Recognized Marks. The Recognized Component Mark is required when specified in the UL Directory preceding the recognitions or under "Markings" for the individual recognitions. The UL Recognized Component Mark for Canada consists of the UL Recognized Mark for Canada: **N** and the manufacturer's identification and catalog number, model number or other product designation as specified under "Marking" for the particular Recognition as published in the appropriate UL Directory.

The final acceptance of the component is dependent upon its installation and use in complete equipment submitted to UL LLC.

Look for the UL Recognized Component Mark on the product.

William R. Carroy

William R. Carney, Director, North American Certification Programs UL LLC



Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, plea contact a local UL Customer Service Representative at <u>www.ul.com/contactus</u>

CERTIFICATE OF COMPLIANCE

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This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Switching Power Supply - CLC125USXX (where XX is a number between 12-48, may also be followed by suffixes, (3X5), -D, and C), CLC125US12-XB0154A, and CLC125US12-XB0289

William R. Carroy

William R. Carney, Director, North American Certification Programs



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UL TEST REPORT AND PROCEDURE

| UL 60950-1, 2nd Edition, 2011-12-19 (Information Technology Equipment - Safety - Part 1: General Requirements) CSA C22.2 No. 60950-1-07, 2nd Edition, 2011-12 (Information Technology Equipment - Safety - Part 1: General Requirements) | |
|---|--|
| Component Recognition | |
| QQGQ2, QQGQ8 (Power Supplies for Information Technology Equipment Including Electrical Business Equipment) | |
| Switching Power Supply | |
| CLC125USXX (where XX is a number between 12-48, may also be followed by suffixes, (3X5), -D, and C), CLC125US12-XB0154A, and CLC125US12-XB0289 | |
| Input: 100-240 Vac, 50/60Hz, 2.5 A Output: See CB Test Report, Model Differences for details. | |
| XP POWER LLC SUITE 150 1241 E DYER RD SANTA ANA CA 92705 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 UL LLC ('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 UL LLC (UL) or any authorized licensee of UL.

Prepared by: Karl Bier

Reviewed by: Linus Park

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

Products are switching power supplies for building-in to Information Technology Equipment. It is an open frame power supply intended for building-in Class I or Class II end-products. Double insulated symbol is optionally provided. Earthing symbol may only be provided for Class I power supplies.

Model Differences

All models in the Model CLC125USXX Series are identical with exception to the Mains Transformer, T1, and minor secondary components that allow for different output voltage ratings.

See below for Model Ratings at 50°C Table Below:

Model CLC125US12: Output Rated: 12 Vdc, 10.4 A Model CLC125US24: Output Rated: 24 Vdc, 5.2 A Model CLC125US48: Output Rated: 48 Vdc, 2.6 A

See Enclosure - Miscellaneous for details on de-rated outputs based upon higher ambients.

Units provided with suffix "C" provided with cover.

Units provide with suffix "(3X5)" provided with components mounted on larger printed wiring board.

Units provided with suffix "-D" provided with secondary diode, CR3.

Models CLC125US12-XB0289 and CLC125US12-XB0154A are identical to CLC125US12 except for minor differences in the circuit which do not affect safety.

Technical Considerations

- Equipment mobility : for building-in
- Connection to the mains : for building-in

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- Operating condition : continuous
- Access location : N/A for building-in
- Over voltage category (OVC) : OVC II
- Mains supply tolerance (%) or absolute mains supply values : +6%, -10%
- Tested for IT power systems : No
- IT testing, phase-phase voltage (V) : N/A
- Class of equipment : Class I or Class II (Determined by end product)
- Considered current rating of protective device as part of the building installation (A) : 20A max.
- Pollution degree (PD) : PD 2
- IP protection class : IP X0
- Altitude of operation (m) : 3048
- Altitude of test laboratory (m) : less than 2000 meters
- Mass of equipment (kg) : 175 g
- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 50°C (See De-rating Curve, Enclosure 7-01, for details)
- The means of connection to the mains supply is: for building-in
- The product is intended for use on the following power systems: TN
- The equipment disconnect device is considered to be: provided as part of the end product.,
- The product was investigated to the following additional standards: EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 (which includes all European national differences, including those specified in this test report).

Engineering Conditions of Acceptability

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For use only in or with complete equipment where the acceptability of the combination is determined by UL LLC. 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, Earthing Continuity,
- The end-product Electric Strength Test is to be based upon a maximum working voltage of: Primary-Earthed Dead Metal: 242 Vrms, 339 Vpk, Primary-SELV: 238 Vrms, 559 Vpk
- The following secondary output circuits are SELV: 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: Been conducted
- The following input terminals/connectors must be connected to the end-product supply neutral: J1-N
- 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): L1, L2, L3 and T1 (Class F, 155°C),
- The following end-product enclosures are required: Mechanical, Fire, Electrical
- When mounted inside the chassis, adequate creepage/ clearance shall be provided between live parts, including primary and secondary heatsinks, and accessible metal parts.
- Suitable disconnect device is to be provided in the end system.
- Leakage and Dielectric Strength testing shall be considered in the end system.
- The need for protective bonding test to be determined as part of the end product evaluation.
- Units were evaluated for use with 10 cfm external airflow. The need of cooling shall be determined as part of the end product.
- Required values for clearance are adjusted for 3048 m (1.15 correction factor as per IEC 60664-1, Table A2)

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Additional Information

Required values for clearance are adjusted for 3048 m (1.15 correction factor as per IEC 60664-1, Table A2).

The need for the additional testing and evaluation shall be determined in the end product investigation.

The nameplate markings provided as an Enclosure - Marking Plate are considered representative of the entire series.

The power supply series covered by this report employ Double/Reinforced Insulation between Primary and Secondary circuits.

This Test Report is a reissue of CBTR Ref. No. E139109-A54-CB-1, CB Test Certificate Ref. No. US/15076/UL. Based on previously conducted testing and the review of product technical documentation it was determined that the product complies with the upgrade of the Second Edition of the standard to Amendment 1.

Additional Standards

The product fulfills the requirements of: CSA C22.2 No. 60950-1-07 + A1:2011, EN 60950-1:2006 + A1:2010 + A11:2009 + A12:2011, IEC 60950-1:2005 + A1:2009, UL 60950-1 2nd Ed. Revised 2011-12-19

| 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 - Non-operator access/soldered-in fuses | Unambiguous reference to service documentation for instructions for replacement of fuses replaceable only by service personnel | | |
| Special Instructions to UL Representative | | | |
| N/A | | | |