

CERTIFICATE OF COMPLIANCE

Certificate Number 20190502-E317867
Report Reference E317867-A17-UL
Issue Date 2019-MAY-02

Issued to: XP POWER L L C
15641 RED HILL AVE, SUITE 100
TUSTIN CA 92780

**This certificate confirms that
representative samples of**

COMPONENT - POWER SUPPLIES, INFORMATION
TECHNOLOGY EQUIPMENT INCLUDING ELECTRICAL
BUSINESS EQUIPMENT ;COMPONENT - POWER
SUPPLIES FOR USE WITH AUDIO/VIDEO,
INFORMATION AND COMMUNICATION TECHNOLOGY
EQUIPMENT

See Addendum Pgae

Have been investigated by UL in accordance with the
component requirements in the Standard(s) indicated on
this Certificate. UL Recognized components are incomplete
in certain constructional features or restricted in
performance capabilities and are intended for installation in
complete equipment submitted for investigation to UL LLC.

Standard(s) for Safety: UL 60950-1, (Information Technology Equipment - Safety -
Part 1: General Requirements)
CAN/CSA C22.2 No. 60950-1-07, (Information Technology
Equipment - Safety - Part 1: General Requirements)

Additional Information: See the UL Online Certifications Directory at
<https://iq.ulprospector.com> for additional information.

This *Certificate of Compliance* does not provide authorization to apply the UL Recognized Component Mark. Only
the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified
and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.



Bruce Mahrenholz, Director North American Certification Program
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, please
contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>



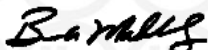
CERTIFICATE OF COMPLIANCE

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Report Reference E317867-A17-UL
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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
ECL05USXX-Y
ECL10USXX-Y
ECL10US05-XA1176A

Where XX is 03, 05, 09, 12, 15, 24 or 48; Y is E, P or T.



Bruce Mahrenholz, Director North American Certification Program

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UL TEST REPORT AND PROCEDURE

Standard:	UL 60950-1, 2nd Edition, 2014-10-14 (Information Technology Equipment - Safety - Part 1: General Requirements) CAN/CSA C22.2 No. 60950-1-07, 2nd Edition, 2014-10 (Information Technology Equipment - Safety - Part 1: General Requirements)
Certification Type:	Component Recognition
CCN:	QQGQ2, QQGQ8 (Power Supplies for Information Technology Equipment Including Electrical Business Equipment)
Complementary CCN:	QQJQ2, QQJQ8 (Power Supplies for Use in Audio/Video, Information and Communication Technology Equipment)
Product:	Switching Power Supply
Model:	ECL05USXX-Y ECL10USXX-Y ECL10US05-XA1176A
Rating:	Where XX is 03, 05, 09, 12, 15, 24 or 48; Y is E, P or T. Input: 100-240Vac 0.4A 50-60Hz ECL10USXX-Y Output at an ambient temperature of 50°C (For 70°C ambient, output rating shall be derated to 50%) ECL10US03-Y 3.3Vdc, 2.6A ECL10US05-Y and ECL10US05-XA1176A 5Vdc, 2A ECL10US09-Y 9Vdc, 1.1A ECL10US12-Y 12Vdc, 0.83A ECL10US15-Y 15Vdc, 0.67A ECL10US24-Y 24Vdc, 0.42A ECL10US48-Y 48Vdc, 0.21A ECL05USXX-Y Output at an ambient temperature of 70°C ECL05US03-Y 3.3Vdc, 1.3A ECL05US05-Y 5Vdc, 1A ECL05US09-Y 9Vdc, 0.55A ECL05US12-Y 12Vdc, 0.415A ECL05US15-Y 15Vdc, 0.335A ECL05US24-Y 24Vdc, 0.21A ECL05US48-Y 48Vdc, 0.105A
Applicant Name and Address:	XP POWER L L C 15641 RED HILL AVE, SUITE 100 TUSTIN CA 92780 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.

Issue Date: 2009-02-24
2019-04-23

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Report Reference #

E317867-A17-UL

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: Adam Tangocci / Project Handler

Reviewed by: Gregory Ray / Reviewer

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

Electronic components mounted on PWB, and housed in plastic enclosure with epoxy for Model ECL10USXX-E series. Models ECL10USXX-T and ECL10USXX-P without plastic enclosure with epoxy.

Model Differences

Model ECL10USXX-T is similar to ECL10USXX-P except for ECL10USXX-T with I/O terminals and ECL10USXX-P with I/O pins. Model ECL10USXX-T is similar to Model ECL10USXX-E except for ECL10USXX-E is housed in plastic enclosure with epoxy. (XX can be 03, 05, 09, 12, 15, 24 or 48 to represent the output voltage of the model.)

Model ECL05USXX-Y is similar to ECL10SXX-Y series except for re-arrangement components location on pwb layout with identical circuit schematic and model designation.

Technical Considerations

- Equipment mobility : for building-in
- Connection to the mains : for building-in
- Operating condition : continuous
- Access location : for building-in
- Over voltage category (OVC) : OVC II
- Mains supply tolerance (%) or absolute mains supply values : +10%, -10% (manufacturer declared)
- Tested for IT power systems : No
- IT testing, phase-phase voltage (V) : N/A
- Class of equipment : Not classified to be determined in the end product
- Considered current rating of protective device as part of the building installation (A) : 20
- Pollution degree (PD) : PD 2
- IP protection class : IP X0
- Altitude of operation (m) : 3048
- Altitude of test laboratory (m) : 200
- Mass of equipment (kg) : 0.15
- The product was submitted and evaluated for use at the maximum ambient temperature (T_{ma}) permitted by the manufacturer's specification of: 50 degree C for output with full load, 70 degree C

for output with half load

- The product is intended for use on the following power systems: TN
- The Clearances and Creepage Distances have additionally been assessed for suitability up to 3048m elevation.

Engineering Conditions of Acceptability

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 end-product Electric Strength Test is to be based upon a maximum working voltage of: Primary-SELV: 275 Vrms, 577 Vpk
- The following secondary output circuits are SELV: All Output Circuits
- The following secondary output circuits are at non-hazardous energy levels: All Output Circuits
- The power supply terminals and/or connectors are: Suitable for factory wiring only
- The maximum investigated branch circuit rating is: 20 A
- The investigated Pollution Degree is: 2
- 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): Transformer T1 (CLASS B), L1 (130°C)
- The following end-product enclosures are required: Electrical, Fire,
- Secondary circuits are isolated from primary circuits by double or reinforced insulation, however the Class of equipment shall be considered in the end product.

Additional Information

E317687-A17-UL-1 was Physical Transfer of File E300271-A1-UL-1.

This is a UL report update. Updates to this report are considered not to affect compliance with the requirements of the standard. Because of this and previously performed testing, no sample or additional testing was considered necessary. Changes and notes:

- Updated Models and Ratings sections for clarity.
- Bleeder resistors were updated for 60950 and 62368 in the critical components table.
- Added complimentary CCNs QQJQ2/8.
- Bridge Diode (BR1) and Transistor (Q1): updated technical data to show that required current provided is a minimum.

Additional Standards

The product fulfills the requirements of: -

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 Number

Model	
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 Inspect the transformer(s) listed in BD1.1 per AA1.1- (C). 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 BD1.1 be conducted at the component manufacturer.	

Production-Line Testing Requirements <u>Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.</u>							
Model	Component	Removable Parts	Test probe location	V rms	V dc	Test Time, s	
all	T1	N/A	Pri-Sec	300 0	or 4242	1	
<u>Earthing Continuity Test Exemptions - This test is not required for the following models:</u>							
All Models							
<u>Electric Strength Test Exemptions - This test is not required for the following models:</u>							
-							
<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>							
-							
<u>Sample and Test Specifics for Follow-Up Tests at UL</u>							
Model	Component	Material	Test	Sample(s)		Test Specifics	
N/A							