

CERTIFICATE OF COMPLIANCE

Certificate Number 20181208-E317867
Report Reference E317867-A6018-UL
Issue Date 2018-DECEMBER-08

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

See addendum page for Models

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.

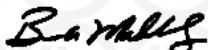
Standard(s) for Safety: UL 62368-1 - Audio/video, information and communication
technology equipment Part 1: Safety requirements
CAN/CSA C22.2 No. 62368-1-14 - Audio/video, information
and communication technology equipment Part 1: Safety
requirements

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 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

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contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>



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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.

Models :

Switching Power Supply:

ECE10USXX (where XX can be any number 03 and 48 designating the output voltage), may also be provided with suffix "-P" optionally for open frame type.



Bruce Mahrenholz, Director North American Certification Program

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UL TEST REPORT AND PROCEDURE

Standard:	UL 62368-1, 2nd Ed, 2014-12-01 (Audio/video, information and communication technology equipment Part 1: Safety requirements) CAN/CSA C22.2 No. 62368-1-14, 2nd Ed (Audio/video, information and communication technology equipment Part 1: Safety requirements)
Certification Type:	Component Recognition
CCN:	QQJQ2, QQJQ8 (Power Supplies for Use in Audio/Video, Information and Communication Technology Equipment)
Complementary CCN:	QQGQ2, QQGQ8 (Power Supplies for Information Technology Equipment Including Electrical Business Equipment)
Product:	Switching Power Supply
Model:	ECE10USXX (where XX can be any number 03 and 48 designating the output voltage), may also be provided with suffix "-P" optionally for open frame type.
Rating:	Input Rated: 100-240 Vac, 0.4 A, 50-60 Hz Output: See Misc. 7-04 models de-rating curve and list for details
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.

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.

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Prepared By: Robert Leon / Project Handler Reviewed By: Walid Beytoughan / 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

The model covered in this report is a component power supply intended for use in Information Technology Equipment. It is an enclosed and potted power supply intended for building-in.

Model Differences

All models in the Model ECE10USXX 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

Table for 50°C ambient:

Model ECE10US03: Output Rated: 3.3 Vdc, 2.6 A

Model ECE10US05: Output Rated: 5 Vdc, 2 A

Model ECE10US09: Output Rated: 9 Vdc, 1.11A

Model ECE10US12: Output Rated: 12 Vdc, 0.83A

Model ECE10US15: Output Rated: 15 Vdc, 0.66 A

Model ECE10US24: Output Rated: 24 Vdc, 0.41 A

Model ECE10US48: Output Rated: 48 Vdc, 0.21 A

See Enclosure - Miscellaneous for de-rating curve 7-04 and models differences table 7-05

ECE10USXX (where XX can be any number between 03 and 48 designating the output voltage), may also be provided with suffix "-P" for open frame type option. All the models without suffix "-P" are housed in plastic enclosure and potted with epoxy.

Test Item Particulars

Classification of use by	Ordinary person
Supply Connection	AC Mains
Supply % Tolerance	+10%/-10%
Supply Connection – Type	Do be determined in end product
Considered current rating of protective device as part of building or equipment installation	20A A; building;
Equipment mobility	for building-in
Over voltage category (OVC)	OVC II

Class of equipment	Not Classified
Access location	N/A
Pollution degree (PD)	PD 2
Manufacturer's specified maximum operating ambient	70 °C
IP protection class	IPX0
Power Systems	TN
Altitude during operation (m)	3048 except for China (evaluated up to 2000 m elevation) m
Altitude of test laboratory (m)	2000 m or less
Mass of equipment (kg)	<0.1 kg

Technical Considerations

- The product was submitted and evaluated for use at the maximum ambient temperature (T_{ma}) permitted by the manufacturer's specification of : 50°C or 70°C (See De-rating Curve, Enclosure 7-04 for details)
- The product is intended for use on the following power systems : TN
- Considered current rating of protective device as part of the building installation (A) : 20
- Mains supply tolerance (%) or absolute mains supply values : +10%/-10%
- The following are available from the Applicant upon request : Installation (Safety) Instructions / Manual
- The following accessible locations (with circuit/schematic designation) are within a limited circuit: Load side of CY1
- The unit was additionally evaluated for Class II insulation.

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 following product-line tests are conducted for this product : Electric Strength
- The following output circuits are at ES1 energy levels : All secondary circuits
- The following output circuits are at PS3 energy levels : All Secondary circuits
- The maximum investigated branch circuit rating is : 20 A
- The investigated Pollution Degree is : 2
- The following input terminals/connectors must be connected to the end-product supply neutral : ACN
- The following end-product enclosures are required : Mechanical
- Electrical
- Fire
- The following magnetic devices (e.g. transformers or inductor) are provided with an OBJ2 insulation system with the indicated rating greater than Class A (105°C) : Class A (105°C): T1 (Class B)
- The power supply was evaluated to be used at altitudes up to : 3048 m
- The power supply terminals and/or connectors are: Suitable for factory wiring only
- Repeat of heating and dielectric test to be considered as part of end product investigation
- Printed Wiring Board is rated 130°C.
- The end-product Electric Strength Test is based upon the mains transient voltage of 2500Vpk
- When Model ECE10US05 is installed in the end product, the maximum temperature at the center position on top of the case (plastic enclosure) should not exceed 100°C for 10W max.
- When installed in a Class II end product, the power supply shall be mounted in a manner that provided sufficient clearance and creepage distance between the hazardous parts of the power supply and accessible conductive parts of the end product.

Additional Information

This report was based on testing performed under CBTR E317867-A68-CB-2 and CBTC US-25975-A1-UL to IEC 60950-1:2005 (Second Edition), Am1:2009 + Am2:2013. Limited testing was considered necessary under this investigation to create this CB Test Report. Based on the previously conducted testing and the review of product technical documentation including photos, schematics, wiring diagrams, and previous datasheets, it has been determined that the product continues to comply with the standard IEC/UL/CSA 62368-1 (Second Edition).

Report Correction:

1. Corrected the clearances in table Minimum Clearances/Creepage Distance to reflect the altitude correction factor
2. Added a clarification statement regarding the method used to determine the Clearances.

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.

Additional Standards

The product fulfills the requirements of: EN 62368-1:2014, UL 62368-1 2ND Ed, Issued December 1, 2014, CSA CAN/CSA-C22.2 NO. 62368-1 2nd Ed, Issued December 1, 2014

Markings and Instructions

Clause Title	Marking or Instruction Details
Equipment identification marking – Manufacturer identification	Listees or Recognized companys name, Trade Name, Trademark or File Number
Equipment identification marking – model identification	Model Number
Equipment rating marking – ratings	"Input Ratings (voltage, frequency/dc, current/power)", "Output Ratings (voltage, frequency/dc, current/power)"

Special Instructions to UL Representative

N/A