

CERTIFICATE OF COMPLIANCE

Certificate Number 20190521-E317867
Report Reference E317867-A6037-UL
Issue Date 2019-MAY-21

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

Please see addendum page

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 and 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 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

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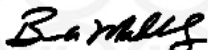
This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Switching Power Supply

ECL30UD03P-XE1039
ECL30UD03P-XE1066
ECL30UD03P-XE1131
ECL30UD03P-XE1132

ECL30XXYY-Z

Where XX is UD, UT, YY is 01, 02, 03, Z is P, T, E, S, SD, blank. May be followed by suffix representing non-safety related options.



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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:	N/A
Product:	Switching Power Supply
Model:	ECL30UD03P-XE1039 ECL30UD03P-XE1066 ECL30UD03P-XE1131 ECL30UD03P-XE1132 ECL30XXYY-Z Where XX is UD, UT, YY is 01, 02, 03, Z is P, T, E, S, SD, blank. May be followed by suffix representing non-safety related options.
Rating:	Input: ECL30UD03P-XE1131 and ECL30UD03P-XE1132: 100-277V~, 0.8 A, 50/60Hz All other models: 100-240V~, 0.8 A, 50/60 Hz Output: See Enclosure - Miscellaneous 7-02 for details.
Applicant Name and Address:	XP POWER L L C 15641 RED HILL AVE, SUITE 100 TUSTIN CA 92780 UNITED STATES

Issue Date: 2019-02-06

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Report Reference #

E317867-A6037-UL

Revision Date: 2019-05-14

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: 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

The unit is a switching type power supply in which electronic components are mounted on PWB for installing to Information Technology Equipment (ITE).

Model Differences

Models listed are identical except minor differences in transformer secondary winding turns, some components to regulate output voltage and current.

Model ECL30XXYY-T is similar to ECL30XXYY-P except for ECL30USXX-T has I/O connectors and ECL30XXYY-P has I/O pins.

Model ECL30XXYY-P is similar to Model ECL30XXYY-E except for ECL30XXYY-E is housed in plastic enclosure with epoxy.

Model ECL30XXYY-S is similar to Model ECL30XXYY-E except for Model ECL30XXYY-S with I/O terminal blocks, ECL30XXYY-E with I/O pins, enclosure shape, PWB layout and model designation.

Model ECL30XXYY-SD is similar to Model ECL30XXYY-S except for Model ECL30XXYY-SD is provided with a DIN rail clip.

Models ECL30UD03P-XE1039 and ECL30UD03P-XE1066 are similar to Model ECL30XXYY-Z Series except for Output Ratings and Transformer Windings.

Models ECL30UD03P-XE1131 is similar to ECL30UD03P-XE1039 and ECL30UD03P-XE1132 is similar to ECL30UD03P-XE1066 except for input Ratings

See Enclosure - Miscellaneous 7-02 for all models and their ratings.

Rated 50°C at full rated load, 70°C at half rated load.

Test Item Particulars

Classification of use by	Skilled person
Supply Connection	AC Mains
Supply % Tolerance	
Supply Connection – Type	Determined by end product
Considered current rating of protective device as part of building or equipment installation	20 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	See Model Differences section. °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)	17 m
Mass of equipment (kg)	0.15 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 : See Model Differences section.
- 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 unit was additionally evaluated for Class II when provided with the optional Enclosure.

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 output circuits are at ES1 energy levels : All output circuits
- The following output circuits are at PS2 energy levels : All Outputs
- The maximum investigated branch circuit rating is : 20 A
- The investigated Pollution Degree is : 2
- The following end-product enclosures are required : Electrical, Fire
- 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) : T1 (Class B), L1 is suitable for up to 110 °C
- The equipment is suitable for direct connection to : AC mains supply
- The power supply terminals and/or connectors are: Suitable for factory wiring only
- The end-product Electric Strength Test is to be based upon the mains transient voltage of 2500Vpk
- Repeat of heating and dielectric test to be considered as part of end product
- Printed Wiring Board rated 130°C.
- When installed in a Class II end product, the power supply shall be mounted in a manner that provides sufficient clearance and creepage distance between the hazardous parts of the power supply and accessible conductive parts of the end product.
- The Clearances and Creepage Distances were evaluated for installation up to 3048m elevation except for China which is limited up to 2000m. Consideration shall be made during the end use evaluation.
- The power supplies in this report have been subject to Capacitance Discharge testing. Additionally, all associated component safeguards have been assessed to the applicable requirement in Annex G.10. Additional testing should not be needed if directly connected to mains e.g. using an appliance inlet, wiring terminals, etc.

Additional Information

This report was based on testing performed under CBTR E317867-A58-CB-3, CBTR E317867-A58-CB-3-A1, CBTC US-29106-UL and CBTC US-29106-A1-UL to IEC 60950-1:2005 (Second Edition), Am1:2009 + Am2:2013. Limited testing was considered necessary under this investigation to create this new 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).

The following tests were conducted under CTFP SMT/CTF Stage 3 to IEC 60950-1 E2+A1+A2 at XP POWER LLC, 15641 RED HILL AVE, SUITE 100, TUSTIN, CA 92780, USA:

Input: Single-Phase (1.6.2)

Capacitance Discharge (2.1.1.7)

SELV Reliability Test Including Hazardous Voltage Measurements (2.2.2, 2.2.3, 2.2.4, Part 22 6.1)

Humidity (2.9.1, 2.9.2, 5.2.2)

Determination of Working Voltage; Working Voltage Measurement (2.10.2)

Distance Through Insulation Measurements (2.10.5)

Heating (4.5.1, 1.4.12, 1.4.13)

Ball Pressure (4.5.5, 4.5)

Electric Strength (5.2.2)

Component Failure (5.3.1, 5.3.4, 5.3.7)

Abnormal Operation (5.3.1 - 5.3.9)

Transformer Abnormal Operation (5.3.3, 5.3.7b, Annex C.1)

Power Supply Output Short-Circuit/Overload (5.3.7)

The following additional tests were conducted on a sample of model ECL30UD03P-4 in accordance with IEC 62368-1:2014 (Second Edition) at XP POWER LLC, 15641 RED HILL AVE, SUITE 100, TUSTIN, CA 92780 USA:

Electric Strength Test (5.4.9)

Prospective Touch Voltage and Touch Current Measurement (5.7)

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

Some IEC licenses may be older than 3 years, manufacturer to provide updated IEC licenses upon request.

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

This is a technical amendment. Based on a review of product technical documentation such as photos, schematics, and wiring diagrams, changes associated with 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:

-Models section updated for clarity.

-Conditions of Acceptability: Statement added regarding Capacitance Discharge testing.

-Additional Information: Further information added about tests waived and performed.

-Added A11:2017 to EN 62368 in additional standards.

-Safeguards Table: DC Output corrected to PS2.

-Clause 5.4.4: Evaluation corrected as TIW is used.

-Clause 5.4.9.1: Comment corrected to "Method 1 used."

-Table 4.1.2: Alternate bleeder resistor from TZAI YUAN ENTERPRISE CO LTD added.

-Table 5.4.2.2 and 5.4.2.3: Values corrected for evaluation to 62368-1.

-Table 5.4.9: Inapplicable test rows removed.

-Table 5.4.9: Locations expanded to be more specific.

-Table 5.4.9: Test values and units updated for clarity.

-Table 5.5.2.2: Applicable data from 60950-1 evaluation added.

-Table 6.6.2: PS classification for outputs corrected to PS2.

-Table B.2.5: "Hz" column added to Input Test Table.

-Enclosures: Schematics removed from enclosures.

This is a technical amendment. Based on a review of product technical documentation such as photos, schematics, and wiring diagrams, changes associated with this report are considered not to affect compliance

Additional Standards

The product fulfills the requirements of: EN 62368-1:2014 + A11:2017, 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

If markings are not laser engraved a label is required. See table 4.1.2.

BD1.0	TABLE: Production-Line Testing Requirements					
BD1.1	Electric Strength Test Special Constructions – Refer to Generic Inspection Instructions, Part AC for further information.					
Model	Component	Removable parts	Test probe location	Test V rms	Test V dc	Test Time, s
All Models	Transformer T1	N/A	Pri. to Sec.	3000	4200	1
BD1.2	Earthing Continuity Test Exemptions – This test is not required for the following models:					
	All					
BD1.3	Electric Strength Test Exemptions – This test is not required for the following models:					
	N/A					
BD1.4	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.					
	N/A					

BE1.0	Sample and Test Specifics for Follow-Up Tests at UL				
Model	Component	Material	Test	Sample (s)	Test Specifics