

UL TEST REPORT AND PROCEDURE

Standard:	UL 62368-1, 4th Ed, 2025-07-31 (Audio/Video, information and communication technology equipment Part 1: Safety requirements) CAN/CSA C22.2 No. 62368-1:25, 4th Ed, 2025-07-31 (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:	ECX40UYZZ ECX60UYZZ Where X is C or M, Y is D or T, ZZ is 21, 22, 31-37. May be followed by 3X5.
Rating:	ECX40UYZ: INPUT~ 100-240VAC 50/60Hz 1A Total output max 40W. Outputs (2 or 3 Provided) (Voltage ranges in parenthesis): 3.3 Vdc, 1.5A 3.3 Vdc, 6A 5 Vdc, 1.5A 5 Vdc, 6A 12 Vdc (10.1 to 13.5), 2A -12 Vdc (-10.1 to -13.5), 0.5A 15 Vdc (13.6 to 17), 1.5A -15 Vdc (-13.6 to -17), 0.5A 24 Vdc (21.1 to 26), 1A ECX60UYZZ: INPUT~ 100-240VAC 50/60Hz 1.5A Total output max 60W. Outputs (2 or 3 Provided) (Voltage ranges in parenthesis): 3.3 Vdc, 1.5A 3.3 Vdc, 8A

	5 Vdc, 3A 5 Vdc, 8A 12 Vdc (10.1 to 13.5), 3A -12 Vdc (-10.1 to -13.5), 0.5A 15 Vdc (13.6 to 17), 2.5A -15 Vdc (-13.6 to -17), 0.5A 24 Vdc (21.1 to 26), 1.5A
Applicant Name and Address:	XP POWER L L C 340 COMMERCE, SUITE 100 IRVINE CA 92602 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: Joan Wei / Project Handler

Reviewed By: Lucio Cinelli / Project 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

Models covered in this report are component power supplies. They are open frame power supplies intended for building-in for Class I or Class II applications.

Model Differences

ECX40UYZZ

ECX60UYZZ

X is C or M. No differences exist between C and M models other than model designation.

Y is D or T representing dual or triple outputs provided, respectively.

ZZ is 21, 22, 31-37 representing output configuration. See Enclosure 07-01 for details.

All models are identical except output electrical ratings, designation and may be provided with either dual or triple outputs. Models rated 40 W are identical in construction to models rated 60 W and differ for marketing purposes only.

40W Models:

Tma = 60°C at 100% load (40W), Convection cooling

Tma = 70°C at 75% load (30W), Convection cooling

Tma = 70°C at 100% load (40W), Forced air cooling

Tma = 80°C at 75% load (30W), Forced air cooling

60W Models:

Tma = 50°C at 100% load (60W), Convection cooling

Tma = 70°C at 50% load (30W), Convection cooling

Tma = 60°C at 100% load (60W), Forced air cooling

Tma = 80°C at 50% load (30W), Forced air cooling

Convection cooling consists of no external forced air cooling.

Test Item Particulars

Product group	built-in component
Classification of use by	Ordinary person
Supply connection	AC Mains
Supply tolerance	+10%/-10%
Supply connection - type	For building-in
Considered current rating of protective device ...	20 A; Location: building
Equipment mobility	for building-in
Overvoltage category (OVC)	OVC II
Class of equipment	Not Classified
Special installation location	N/A
Pollution degree (PD)	PD 2
Manufacturer's specified Tma	See Model Differences section. °C
IP protection class	IPX0
Power systems	TN
Altitude during operation (m)	3048 m
Altitude of test laboratory (m)	2000 m or less
Mass of equipment (kg)	0.15 kg

Technical Considerations

- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of : See Model Differences section.
- The product is intended for use on the following power systems : TN
- The equipment disconnect device is considered to be : To be determined in the end-product.
- Required Clearances have been adjusted by multiplying the clearance at sea level by a factor of 1.15 for operating at an altitude of 3048 meters. If the calculated Clearance exceeded the Creepage, the Creepage was adjusted to the value of clearance.
- Power supplies covered by this report were evaluated for both Class I and Class II (double insulated). Double insulated symbol is optionally provided. Earthing symbol may only be provided for Class I power supplies.

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 Outputs
- The following output circuits are at PS3 energy levels : All Outputs
- 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 (Class I)
- An investigation of the protective bonding terminals has : Not been conducted
- The following input terminals/connectors must be connected to the end-product supply neutral : AC N
- The following end-product enclosures are required : Mechanical, Fire, Electrical
- 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 and T1 (Class F, 130°C)
- The power supply was evaluated to be used at altitudes up to : "3048 m"
- When installed in a Class I end product, the power supply shall be mounted in a manner that provides the minimum required Clearance between the primary side of power supply and protectively earthed accessible conductive parts.
- A suitable main disconnect device shall be provided in the end product.
- The power supplies covered by this report have a fuse in the neutral of the primary circuit. A warning for service persons to be considered in the end product.
- Consideration to repeating the Touch Current test should be given in the end-product 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.
- When installed in a Class II end product, the power supply shall be mounted on insulating posts in a manner that provides the minimum required Clearance between the power supply and any accessible conductive parts.

Additional Information

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This report is based on IEC 62368-1:2014 (2nd Edition) IECEE Test Report Ref. No. E139109-A6072-CB-1-Original, E139109-A6072-CB-1-Amendment-1, IECEE Test Certificate Ref. No. US-33356-UL, US-33356-M1-UL. Based on the previously conducted testing and the review of construction including provided technical documentation, photos, schematics, wiring diagrams and similar, it has been determined that the products comply with IEC 62368-1: 2023(4th Edition). All tests are still valid and no additional tests were considered necessary for all existing approved models.

In addition,

1. The following alternate constructions were added:

- Alternate interchangeable certified Capacitors for Y type C2, C3, C22 with the same ratings as existing approved capacitors were added. Due to the same ratings and the same compliance requirements, no testing was considered necessary for these alternate certified capacitors.
- Alternate interchangeable certified Capacitors for X type C1 with the same ratings as existing approved capacitors were added. Due to the same ratings and the same compliance requirements, no testing was considered necessary for these alternate certified capacitors.

2. New trademark was used/replaced.

All tests in the Summary of Testing were carried out at XP POWER LLC, 15641 RED HILL AVE, SUITE 100, TUSTIN, CA 92780 USA under CTF Stage 3 program during the original investigation.

At the time when this report is issued, the CTF3 location XP POWER L L C, 15641 RED HILL AVE, SUITE 100. TUSTIN, CA 92780 UNITED STATES is no longer Active.

This report may contain component licenses or certificates that are older than 3 years or issued to previous IEC/EN Standard editions. It has been determined that the components comply with current safety requirements. Acceptance of these licenses or certificates is at the discretion of the Receiving NCB.

Marking Plate is representative of all models.

Markings and Instructions

Clause Title	Marking or Instruction Details
Equipment identification marking – Manufacturer identification	Listee's or Recognized Company's name, Trade Name, Trademark or File Number
Equipment identification marking – model identification	Model Number
Equipment rating marking – ratings	

Special Instructions to UL Representative

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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	--	Primary to Secondary	2830	4000	1
BD1.2	Earthing Continuity Test Exemptions – This test is not required for the following models:					
	All models exempt.					
BD1.3	Electric Strength Test Exemptions – This test is not required for the following models:					
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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.					
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BE1.0	Sample and Test Specifics for Follow-Up Tests at UL				
Model	Component	Material	Test	Sample (s)	Test Specifics