

CERTIFICATE OF COMPLIANCE

Certificate Number 20181003-E139109
Report Reference E139109-A155-UL
Issue Date 2018-OCTOBER-03

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

**This is to certify that
representative samples of**

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

Power adapter
ALM65USXXYY-ZW##V

Where XX is any number between 12-48, YY can be blank
or C2, Z can be blank or A, W can be blank, 6, or 8, # can
be blank or any alphanumeric character, and V can be
blank or any alphanumeric character, may be provided with
or without "-".

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

Standard(s) for Safety: UL 60950-1 and 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
www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's
Certification and Follow-Up Service.

Look for the UL Certification 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/>



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:	Listing
CCN:	QQGQ, QQGQ7 (Power Supplies for Information Technology Equipment Including Electrical Business Equipment)
Complementary CCN:	QQJQ, QQJQ7 (Power Supplies for Use in Audio/Video, Information and Communication Technology Equipment)
Product:	Power adapter
Model:	ALM65USXXYY-ZW##V
Rating:	<p>Where XX is any number between 12-48, YY can be blank or C2, Z can be blank or A, W can be blank, 6, or 8, # can be blank or any alphanumeric character, and V can be blank or any alphanumeric character, may be provided with or without "-".</p> <p>Input: 100 - 240V ac 1.4A, 50/60Hz</p> <p>Output at 40°C (100% load): ALM65US12: 12Vdc (10.1 - 13.5 Vdc), 5.3A (63.6W max.) ALM65US15: 15Vdc (13.5 - 17.0 Vdc), 4.3A (65W max.) ALM65US19: 19Vdc (17.1 - 21.0 Vdc), 3.4A (65W max.) ALM65US24: 24Vdc (21.0 - 26.0 Vdc), 2.7A (65W max.) ALM65US48: 48Vdc (42.1 - 54.0 Vdc), 1.35A (65W max.)</p> <p>Output voltage rating indicated in parenthesis represents voltage tolerance evaluated.</p> <p>All outputs are de-rated to 40% load at 60°C.</p>
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.

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Prepared by: Patrick Lan / 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 in PWB and housed within V-1 min. plastic enclosure.

Model Differences

All models within the series are identical with exception of the main transformer (T1) winding and other minor changes to secondary circuit to accommodate different output voltages and current ratings.

In the model number:

XX is any number between 12-48 designating output voltage

YY can be blank or C2 designating Class II configuration

Z can be blank or A designating optional IEC cable retention

W can be blank, 6, or 8 designating appliance inlet type (blank = C14 or C18, 6 = C6, 8 = C8)

can be blank or any alphanumeric character for marketing purposes

V can be blank or any alphanumeric character designating casing color

For Class II models, the EMI shield is floating.

Technical Considerations

- Equipment mobility : transportable
- Connection to the mains : pluggable A
- Operating condition : continuous
- Access location : operator accessible
- Over voltage category (OVC) : OVC II
- Mains supply tolerance (%) or absolute mains supply values : +10%, -10%
- Tested for IT power systems : No
- IT testing, phase-phase voltage (V) : N/A
- Class of equipment : Class I (earthed) or Class II (double insulated)
- 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) : 5000

- Altitude of test laboratory (m) : less than 2000 meters
- Mass of equipment (kg) : 0.28
- The product was submitted and evaluated for use at the maximum ambient temperature (T_{ma}) permitted by the manufacturer's specification of: 40°C at 100% load; 60°C at 40% load.
- The means of connection to the mains supply is: Pluggable A, Detachable power cord
- The product is intended for use on the following power systems: TT, TN
- The equipment disconnect device is considered to be: Appliance inlet
- The product was investigated to the following additional standards: IEC 62368-1 2nd Ed (CBTR E139109-A6014-CB-1), EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013 (which includes all European national differences, including those specified in this test report)., Clearance and creepage distances have been evaluated according to IEC 60664-1 table A.2 with a multiplication factor of 1.48 throughout this report.
- The following accessible locations (with circuit/schematic designation) are within a limited current circuit: Load side of C9 in series with C8 (Pri to Sec bridging capacitor)
- The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS): 12V output, 15V output, 19V output, 24V output, 48V output
- The following are available from the Applicant upon request: Installation (Safety) Instructions / Manual
- The equipment employs Functional Earthing per 2.6.2. As anticipated by the NOTE for 1.2.4, it does not conform to one of the common Classes (I, II, or III). The following insulation is provided between the primary and accessible dead metal parts and circuits: Double/Reinforced (configurations with a ground pin in the appliance inlet), ,

Additional Information

For CB Report only, original report:

This report is a reissue of CBTR Ref. No. E139109-A155-CB-1 including Amendments 1 and 2, issued date: 2015-07-17 with CB Test Certificate Ref. No. DK-47180-UL, DK-47180-UL-A1 and DK-47180-A2. As part of this reissue, the manufacturer submitted representative production samples of ALM65US12 and ALM65US24 with optional Copper Shielding added to T1. Based on previously conducted testing and the review of product construction, only limited tests were deemed necessary.

Technical Amendment:

- Added Australian/New Zealand National Deviations as Enclosure 7-05.
- Added Japan National Deviations as Enclosure 7-04.


This is a technical amendment:

- Models and ratings sections were updated for clarity.
- The manufacturer submitted representative production samples of these models for construction review and testing. Evaluation and testing were performed for compliance to UL 62368-1 Edition 2 and CSA C22.2 NO. 62368-1-14 - Edition 2. Evaluation specifics can be found under CBTR E139109-A6014-CB-1.

Additional Standards

The product fulfills the requirements of: CSA C22.2 No. 60950-1-07 + A1:2011 + A2:2013, EN 60950-1:2006 + A1:2010 + A11:2009 + A12:2011 + A2:2013, IEC 60950-1:2005 + A1:2009 + A2:2013. Japan National Differences to IEC 60950-1:2005, Second Edition, A1:2009 + A2:2013 J60950-1 (H29) refer to Miscellaneous Enclosure 7-04. Australian/New Zealand National Differences to IEC 60950-1:2005, Second Edition, A1:2009 + A2:2013 60950-1, AS/NZS 60950.1:2015 refer to Miscellaneous Enclosure 7-05. UL 62368-1 - Edition 2 - Issue Date 2014-12-01, CSA C22.2 NO. 62368-1-14 - Edition 2 - Issue Date 2014-12-01

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
Power rating - Class II symbol	Symbol for Class II construction  (60417-2-IEC-5172)
Warning to service personnel	"CAUTION: Double pole/neutral fusing"
Special Instructions to UL Representative -- Only units provided with suffix "C2" provided with Class II marking. -- Information in bracket "()" under 'Rating' refers to the voltage tolerance that was evaluated. Inspection of rating label should be based on nominal voltage.	

Production-Line Testing Requirements

Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.

Model	Component	Removable Parts	Test probe location	V rms	V dc	Test Time, s
All models	T1	--	Primary winding to secondary winding	300 0 Vac	--	1s
All models	T1	--	Secondary winding to core	300 0 Vac	--	1s

Earthing Continuity Test Exemptions - This test is not required for the following models:

All models

Electric Strength Test Exemptions - This test is not required for the following models:

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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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Sample and Test Specifics for Follow-Up Tests at UL

Model	Component	Material	Test	Sample(s)	Test Specifics
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