

# CERTIFICATE OF COMPLIANCE

**Certificate Number** 20180906-E139109  
**Report Reference** E139109-A57-UL  
**Issue Date** 2018-SEPTEMBER-06

**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 Complementary Product Category

See next page

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

**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  
[www.ul.com/database](http://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/>



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**Certificate Number** 20180906-E139109  
**Report Reference** E139109-A57-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.

**Models:**

Switching Brick Power Supply  
AHM85PSXXYY-ZW##V

Where XX is any number between 12-24, 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 "-".



Bruce Mahrenholz, Director North American Certification Program

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## UL TEST REPORT AND PROCEDURE

<b>Standard:</b>	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)
<b>Certification Type:</b>	Listing
<b>CCN:</b>	QQGQ, QQGQ7 (Power Supplies for Information Technology Equipment Including Electrical Business Equipment)
<b>Complementary CCN:</b>	QQJQ, QQJQ7 (Power Supplies for Use in Audio/Video, Information and Communication Technology Equipment)
<b>Product:</b>	Switching Brick Power Supply
<b>Model:</b>	AHM85PSXXYY-ZW##V
<b>Rating:</b>	<p>Where XX is any number between 12-24, 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 1.0A, 50/60Hz</p> <p>Output at 40°C (100% load): Model AHM85PS12: 12 Vdc (10.1-13.5 Vdc), 7.08 A max. (85W max) Model AHM85PS15: 15 Vdc (13.6-17.0 Vdc), 5.67 A max. (85W max) Model AHM85PS19: 19 Vdc (17.1-21.0 Vdc), 4.47 A max. (85W max) Model AHM85PS24: 24 Vdc (21.1-26.0 Vdc), 3.54 A max. (85W max)</p> <p>Output voltage rating indicated in parenthesis represents voltage tolerance evaluated.</p> <p>All outputs are de-rated to 60% load at 60°C.</p>
<b>Applicant Name and Address:</b>	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

The devices are a series of brick power supplies to be used to power ITE equipment.

### 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 12-24 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

### 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 : Yes
- IT testing, phase-phase voltage (V) : 230
- Class of equipment : Class I (earthed) and Class II (double insulated)
- Considered current rating of protective device as part of the building installation (A) : 20 A
- Pollution degree (PD) : PD 2
- IP protection class : IP X0
- Altitude of operation (m) : Up to 5000
- Altitude of test laboratory (m) : less than 2000 meters
- Mass of equipment (kg) : 0.4

- The product was investigated to the following additional standards: IEC 62368-1 2nd Ed (CBTR E139109-A6015-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).
- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 40°C (at 100% rated load); 60°C (at 60% rated load)
- The means of connection to the mains supply is: Detachable power cord Pluggable A
- The product is intended for use on the following power systems: TN IT
- The equipment disconnect device is considered to be: Appliance inlet
- 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)
- According to IEC60664-1, Table A2, required Clearances have been adjusted by multiplying the clearance at sea level by a factor of 1.48 for operating at an altitude of 5000 meters. The correction factor is based on barometric pressure of 70kPa and Overvoltage Category II. If the calculated Clearance exceeded the Creepage, the Creepage was adjusted to the value of clearance. No other additional requirements were considered at this time as they are not explicitly addressed in 60950-1.

**Additional Information**

This report is a Standard upgrade/reissue of CBTR Ref. No.: E139109-A57-CB-2, CB Test Certificate Ref. No.US-20899-UL, No.US-20899-A1-UL, No.US-20899-A2-UL, and No.US-20899-A3-UL to IEC 60950-1:2005 (Second Edition), Am1:2009 + Am2:2013. Based on the previously conducted testing and the review of product technical documentation including photos, schematics, wiring diagrams and similar, only the construction review and the review of previous tests was deemed necessary. All required tests were carried out under the original investigation. Humidity Test for tropical conditions was re-tested and witnessed at the clients Singapore test facilities.

Marking label is representative of all models. The nameplate labels included in this report depict the draft artwork for the marking plate pending approval by National Certification Bodies and it will not be affixed to products prior to such approval.

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-A6015-CB-1.

**Additional Standards**

The product fulfills the requirements of: EN 60950-1:2006 + A1:2010 + A11:2009 + A12:2011 + A2:2013, 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
1.7.1 Power rating - Ratings	Ratings (voltage, frequency/dc, current)
1.7.1 Power	Listee's or Recognized company's name, Trade Name, Trademark or File

rating - Company identification	Number
1.7.1 Power rating - Model	Model Number
1.7.6 Fuses - Rating	Rated current and voltage and type located on or adjacent to fuse or fuseholder.
2.7.6 Warning to service personnel	"CAUTION: Double pole/neutral fusing"
1.7.1 Power rating - Class II symbol	Symbol for Class II construction
1.7.6 Fuses - Non-operator access/soldered-in fuses	Unambiguous reference to service documentation for instructions for replacement of fuses replaceable only by service personnel
<b>Special Instructions to UL Representative</b> Class II symbol only provided on models with suffix "C2", see model differences.	

**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	-	Pri/SELV	300 0	4200	1

**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:**

N/A

**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

**Sample and Test Specifics for Follow-Up Tests at UL**

Model	Component	Material	Test	Sample(s)	Test Specifics
N/A					