CERTIFICATE OF COMPLIANCE

Certificate Number	20180906-E139109
Report Reference	E139109-A62-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; POWER SUPPLIES FOR USE WITH AUDIO/VIDEO, INFORMATION AND COMMUNICATION TECHNOLOGY EQUIPMENT

SEE ADDENDUM PAGE

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

Standard(s) for Safety: UL 60950-1 & 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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Certificate Number	20180906-E139109
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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.

AC/DC Power Adapter
AHM150PSXXYY-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 "-".

AHM150PS12-XB0333

Bruce Mahrenholz, Director North American Certification Program

UL LLC

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:	AC/DC Power Adapter
Model:	AHM150PSXXYY-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 "-". AHM150PS12-XB0333
Rating:	Input: 100 - 240V ac 1.8A, 50/60Hz Output at 40°C (100% load): Model AHM150PS12: 12 Vdc (10.1-13.5 Vdc), 12.5 A max. (150W max) Model AHM150PS15: 15 Vdc (13.6-17.0 Vdc), 10.0 A max. (150W max) Model AHM150PS19: 19 Vdc (17.1-21.0 Vdc), 7.89 A max. (150W max) Model AHM150PS24: 24 Vdc (21.1-26.0 Vdc), 6.25 A max. (150W max) Model AHM150PS28: 28 Vdc (26.1-31.0 Vdc), 5.36 A max. (150W max) Model AHM150PS33: 33 Vdc (31.1-33.0 Vdc), 4.55 A max. (150W max) Model AHM150PS36: 36 Vdc (33.1-42.0 Vdc), 4.17 A max. (150W max) Model AHM150PS48: 48 Vdc (42.1-54.0 Vdc), 3.13 A max. (150W max) Output voltage rating indicated in parenthesis represents voltage tolerance evaluated. All outputs are de-rated to 40% load at 60°C.
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.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

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 models covered in this report are Class I or Class II power supplies intended for use with Information Technology Equipment. They are enclosed power supplies housed within a thermoplastic enclosure. The units connect to mains via a detachable power supply cord and grounded appliance inlet. The output is through a PVC jacketed output cord terminating in a molded-on polarized connector.

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

Model AHM150PS12-XB0333 is identical to AHM150PS12.

Technical Considerations

- Equipment mobility : movable
- 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) : 20A
- Pollution degree (PD) : PD 2

- IP protection class : IP X0
- Altitude of operation (m) : 5000m
- Altitude of test laboratory (m) : less than 2000 meters
- Mass of equipment (kg) : 0.62
- The product was investigated to the following additional standards: IEC 62368-1 2nd Ed (CBTR E139109-A6011-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 40% rated load)
- 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 accessible locations (with circuit/schematic designation) are within a limited current circuit: Load side of Capacitor CY3 and CY4
- The means of connection to the mains supply is: Pluggable A Detachable power cord
- The following are available from the Applicant upon request: Specific data sheets for LED indicators that are class I and operate at wavelength in the 400-710 nm range. 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 (configuration with a ground pin in the appliance inlet)
- LEDs provided in the product are considered low power devices: Yes
- 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.

Additional Information

This report is a Standard upgrade/reissue of CBTR Ref. No.: E139109-A62-CB-2, CB Test Certificate Ref. No.US-21343-UL and No.US-21343-A1-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. A second Humidity Test at tropical conditions was witnessed at the clients test facilities in Singapore. The test equipment used for the humidity test is enclosed.

Required values for clearance are adjusted for 5000 m (1.48 correction factor as per IEC 60664-1, Table A2).

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-A6011-CB-1.

Additional Standards

The product fulfills the requirements of: CSA C22.2 No. 60950-1-07 + A1:2011, EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011, UL 60950-1 2nd Ed. Revised 2011-12-19, IEC 60950-1:2005 + A1:2009, 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)
Fuses - Non-operator access/soldered-in fuses	Unambiguous reference to service documentation for instructions for replacement of fuses replaceable only by service personnel
Warning to service personnel	"CAUTION: Double pole/neutral fusing"

Special Instructions to UL Representative

N/A