CERTIFICATE OF COMPLIANCE

Certificate Number	20150928-E146893
Report Reference	E146893-A52-UL
Issue Date	2015-SEPTEMBER-28

Issued to: XP POWER L L C

15641 RED HILL AVE, SUITE 100
TUSTIN CA 92780

This is to certify that representative samples of COMPONENT - POWER SUPPLIES, MEDICAL AND DENTAL

Component Switching Power Supply - AHM180PSXXYY-ZZ (where XX is any number between 12-48 designating output voltage, where YY can be "C2" or blank, and -ZZ can be "-A", "-6", "-6A", "-8"," -8A", or blank)

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

Standard(s) for Safety: UL 60601-1, 1st Edition, 2006-04-26 (Medical Electrical Equipment, Part 1: General Requirements for Safety)
CAN/CSA-C22.2 No. 601.1-M90, 2005 (Medical Electrical Equipment - Part 1: General Requirements for Safety)

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.

Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for use as components of complete equipment submitted for investigation rather than for direct separate installation in the field. The final acceptance of the component is dependent upon its installation and use in complete equipment submitted to UL LLC.

Look for the UL Certification Mark on the product.

Bruce Mahrenholz, Director North American Certification Program

UL LLC

UL TEST REPORT AND PROCEDURE

Standard:	UL 60601-1, 1st Edition, 2006-04-26 (Medical Electrical Equipment, Part 1: General Requirements for Safety) CAN/CSA-C22.2 No. 601.1-M90, 2005 (Medical Electrical Equipment - Part 1: General Requirements for Safety)
Certification Type:	Component Recognition
CCN:	QQHM2, QQHM8 (Power Supplies, Medical and Dental)
Product:	Component Switching Power Supply
Model:	AHM180PSXXYY-ZZ (where XX is any number between 12-48 designating output voltage, where YY can be “C2” or blank, and -ZZ can be "-A", "-6", "-6A", "-8"," -8A", or blank)
Rating:	Input Rated: 100-240 Vac, 50/60 Hz, 2.2 A Output Rated: Refer to Model Differences for additional details.
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.

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: Melissa DeGuia Reviewed by: Timothy L. Gambrell

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

Products covered are external power supplies intended to be used with Medical Electrical Equipment.

Model Differences

All models in the Model AHM180PSXXYY-ZZ series are identical with exception to the Mains Transformer, T1, and minor secondary components that allow for different output voltage ratings per the output voltage range noted below. See below for Model Ratings Table Below for 40°C:

Model AHM180PS12: 10.1-13.5 Vdc, 13.75 A max. (180W max.)
Model AHM180PS15: 13.6-17.0 Vdc, 12 A max. (180W max.)
Model AHM180PS19: 17.1-21.0 Vdc, 9.47 A max. (180W max.)
Model AHM180PS24: 21.1-26.0 Vdc, 7.5 A max. (180W max.)
Model AHM180PS28: 26.1-31 Vdc, 6.43 A max. (180W max.)
Model AHM180PS33: 31.1-33 Vdc, 5.45 A max. (180W max.)
Model AHM180PS36: 33.1-42 Vdc, 5.0 A max. (180W max.)
Model AHM180PS48: 42.1-54.0 Vdc, 3.75 A max. (180W max.)

See Enclosure - Miscellaneous for de-rated output values for higher ambient.

Models may have an additional -ZZ identifier which can be "-A", "-6", "-6A", "-8", "-8A", or blank to designate the type of input connector:
blank = C14 style input connector (Class I construction) ;
"-A" = C14 style input connector with optional IEC cable retention;
"-6" = C6 style input connector (Class I);
"-6A" = C6 style input connector with optional IEC cable retention;
"-8" = C8 style input connector (Class I)
"-8A" = C8 style input connector with optional IEC cable retention.

Models may have an additional YY identifier which can be blank or "C2". Units designated “C2” have a Class II configuration.

Technical Considerations

- Classification of installation and use : Portable
- Supply connection : Appliance coupler
- Accessories and detachable parts included in the evaluation : None
- Options included : None
- The product was investigated to the following additional standards:: UL 60601-1, 1st Edition, 2006-04-26 (includes National Differences for USA), EN 60601-1: 1990 + A1:1993 + A2:1995, CAN/CSA-C22.2 No. 601.1-M90 (R2005) (includes National Differences for Canada), (except EMC limitations, EN 60601-1-2, Biocompatibility, EN 10993-1, Programmable Electronic Systems, IEC 60601-1-4)
- The product was not investigated to the following standards or clauses:: Clause 52.1, Programmable Electronic Systems (IEC 601-1-4), Clause 36, Electromagnetic Compatibility (IEC 601-1-2), Clause 48, Biocompatibility (ISO 10993-1),
- The degree of protection against harmful ingress of water is:: Ordinary
- The mode of operation is:: Continuous
- Software is relied upon for meeting safety requirements related to mechanical, fire and shock:: No
- The product is suitable for use in the presence of a flammable anesthetics mixture with air or oxygen or with nitrous oxide:: No

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 power supply was evaluated for use in 40°C ambient at Full Rated Output and 60% of the Rated Output in 60°C ambient. (See De-rating Curve, Enclosure 7-01 for details).
- Repeat of Leakage Current, Temperature, and Dielectric Voltage Withstand testing should be considered in the end product application.
- This power supply was evaluated with Double/Reinforced isolation between Primary and Secondary; Basic isolation between Primary and Earth/Secondary Reference Conductor; and Basic Isolation between Secondary and Earth/ Secondary Reference Conductor.
- This power supply has been evaluated as a continuous operation, ordinary equipment and has not been evaluated for use in the presence of a flammable anesthetic mixture with air, oxygen, or nitrous oxide. The output circuits have not been evaluated for direct patient connection (Type B, BF or CF).
- The available voltage for the secondary outputs does not exceed 25 Vac or 60 Vdc, under normal and single fault conditions
- The output connectors are not acceptable for field connections; they are only intended for connection to mating connectors of the end-use machine.
- The Electric Strength Test conducted on this power supply was based upon a maximum working voltage of: Primary-Earthed Dead Metal (Class I units): 440 Vpk, 240 Vrms; Primary-SEC: 440 Vpk, 240 Vrms.
- 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-L4, L5, L7 and T1 are Class B (130°C).
- Cleaning test to be considered as part of end product evaluation.
- The need for Marking Durability Testing to be considered as part of the end product installation.
- Power cord suitable for the application to be provided as part of the end product evaluation.
- The end-product evaluation shall ensure that the requirements related to Accompanying Documents, Clause 6.8 are met.

Additional Information

The schematics are kept on file at the CBTL and can be provided by the manufacturer upon request by NCB's/CBTL's.

When submitting this Test Report to other Certification Body, the manufacturer is responsible for providing any additional information that the Body may need in order to issue its Mark, including testing for compliance with the applicable collateral standards.

The nameplate markings provided are considered representative of the entire series.

No testing was deemed necessary to evaluate the models covered under this Report to IEC 60601-1, Second Edition based on previously conducted testing to IEC 60601-1, Edition 3, CB Scheme investigation conducted to IEC 60950-1, 2nd ED issued under Report Reference E139109-A48-CB-1, and the review of product technical documentation including photos, schematics, wiring diagrams, etc. conducted under separate CB Scheme investigation issued under CBTR No. 4786309172, CBTC No. US-22960-UL.

Additional Standards

The product fulfills the requirements of: This series has been additionally evaluated to ANSI/AAMI ES60601-1:2005/(R)2012, CSA CAN/CSA-C22.2 NO. 60601-1:14, and IEC 60601-1, 3rd with AM 1 (2012).

Markings and instructions	
Clause Title	Marking or Instruction Details
Company identification	Classified or Recognized company's name, Trade name, Trademark or File
Model	Model number
Supply Connection	Voltage range, ac/dc, phases if more than single phase
Alternating current	
Direct current	
Power Input	Amps, VA, or Watts
Protective earth ground	
Special Instructions to UL Representative N/A	

Production-Line Testing Requirements			
Test Exemptions - The following models are exempt from the indicated test			
Model	Grounding Continuity	Dielectric Voltage Withstand	Patient Circuit Dielectric Voltage Withstand
All models	Not exempt	Not exempt	Exempt
Solid-State Component Test Exemptions - The following solid-state components may be disconnected from the remainder of the circuitry during either Dielectric Voltage Withstand Test:			
N/A			
Sample and Test Specifics for Follow-Up Tests at UL			
The following tests shall be conducted in accordance with the Generic Inspection Instructions			
Model	Samples	Test	Test Details
N/A	N/A	N/A	N/A