

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST
CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE
CERTIFICATS D'ESSAIS DES EQUIPEMENTS
ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

Product
Produit

Name and address of the applicant
Nom et adresse du demandeur

Name and address of the manufacturer
Nom et adresse du fabricant

Name and address of the factory
Nom et adresse de l'usine

Note: When more than one factory, please report on page 2
Note: Lorsque il y plus d'une usine, veuillez utiliser la 2^{ème} page

Ratings and principal characteristics
Valeurs nominales et caractéristiques principales

Trademark (if any)
Marque de fabrique (si elle existe)

Type of Manufacturer's Testing Laboratories used
Type de programme du laboratoire d'essais
constructeur

Model / Type Ref.
Ref. De type

Additional information (if necessary may also be
reported on page 2)
Les informations complémentaires (si nécessaire,,
peuvent être indiqués sur la 2^{ème} page

A sample of the product was tested and found
to be in conformity with
Un échantillon de ce produit a été essayé et a été
considéré conforme à la

As shown in the Test Report Ref. No. which forms part
of this Certificate
Comme indiqué dans le Rapport d'essais numéro de
référence qui constitue partie de ce Certificat

CERTIFICAT D'ESSAI OC

Switching Power Supply

XP POWER L L C
Suite 150, 1241 E DYER RD
Santa Ana CA 92705, USA

XP POWER L L C
Suite 150, 1241 E DYER RD
Santa Ana CA 92705, USA

XP POWER INC
990 BENECIA AVE
SUNNYVALE CA 94085-2804
USA

☒ Additional Information on page 2
See Page 2



AHM85PSXXYY-ZZ
See Page 2

National Differences specified in the CB Test Report
☐ Additional Information on page 2

IEC 60601-1(ed.2), IEC 60601-1(ed.2);am1, IEC
60601-1(ed.2);am2

E146893-A46-CB-1 issued on 2013-10-28

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme **National de Certification**



- ☒ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA
- ☐ UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK
- ☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN
- ☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/nbcbnames

Date: 2013-10-28

Signature:

Jolanta M. Wroblewska



Ref. Certif. No.

US-22407-UL

Model Details:

AHM85PSXXYY-ZZ (where XX is any number between 12-24 designating output voltage and YY can be blank or "C2", -ZZ can be "-A", "-6", "-6A", "8", "-8A", or blank)

Factories:

XP POWER (KUNSHAN) LTD
230 BIN JIANG NAN RD
ZHANGPU TOWN
KUNSHAN, JIANGSU 215321
CHINA

Ratings:

Input Rated: 100-240 Vac, 50/60 Hz, 1.0 A

Output Rated: See refer to output rating below and Model Differences for additional details.

Model AHM85PS12: 12 Vdc, 7.08 A

Model AHM85PS15: 15 Vdc, 5.67 A

Model AHM85PS19: 19 Vdc, 4.47 A

Model AHM85PS24: 24 Vdc, 3.54 A

Additional information (if necessary)

Information complémentaire (si nécessaire)



☒ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA

☐ UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK

☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN

☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2013-10-28

Signature:

Jolanta M. Wroblewska

Test Report issued under
the responsibility of:

TEST REPORT
IEC 60601-1
Medical Electrical Equipment
Part 1: General requirements for safety

Report Reference No E146893-A46-CB-1

Date of issue 2013-10-28

Total number of pages 71

CB Testing Laboratory UL Camas

Address 2600 N.W. Lake Road, Camas, WA, 98607, USA

Applicant's name XP POWER L L CSuite 150
Address 1241 E DYER RD
Santa Ana CA 92705
UNITED STATES**Test specification:**

Standard IEC 60601-1:1988 + A1:1991 + A2:1995

Test procedure CB Scheme

Non-standard test method N/A

Test Report Form No. IEC60601_1c/97-04

Test Report Form originator UL LLC


Master TRF dated 97-04

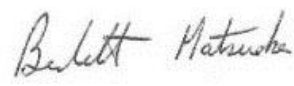
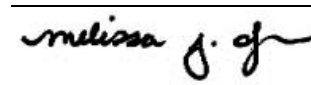
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If this test Report is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description	Switching Power Supply
Trade Mark	
Manufacturer	XP POWER L L C Suite 150 1241 E DYER RD Santa Ana CA 92705 UNITED STATES
Model/Type reference	AHM85PSXXYY-ZZ (where XX is any number between 12-24 designating output voltage and YY can be blank or "C2", -ZZ can be "-A", "-6", "-6A", "8", "-8A", or blank)
Ratings	Input Rated: 100-240 Vac, 50/60 Hz, 1.0 A Output Rated: See refer to output rating below and Model Differences for additional details. Model AHM85PS12: 12 Vdc, 7.08 A Model AHM85PS15: 15 Vdc, 5.67 A Model AHM85PS19: 19 Vdc, 4.47 A Model AHM85PS24: 24 Vdc, 3.54 A

Testing procedure and testing location:	
<input checked="" type="checkbox"/> CB Testing Laboratory	Testing location / address..... : UL Camas 2600 N.W. Lake Road, Camas, WA, 98607, USA
<input type="checkbox"/> Associated CB Test Laboratory	Testing location / address..... :
	Tested by (name + signature) : Bernadette Matsuoka 
	Approved by (name + signature) ... : Melissa DeGuia 
<input type="checkbox"/> Testing Procedure: TMP	Tested by (name + signature) : _____
	Approved by (+ signature) : _____
	Testing location / address..... : _____
<input type="checkbox"/> Testing Procedure: WMT	Tested by (name + signature) : _____
	Witnessed by (+ signature)..... : _____
	Approved by (+ signature) : _____
	Testing location / address..... : _____
<input type="checkbox"/> Testing Procedure: SMT	Tested by (name + signature) : _____
	Approved by (+ signature) : _____
	Supervised by (+ signature) : _____
	Testing location / address..... : _____
<input type="checkbox"/> Testing Procedure: RMT	Tested by (name + signature) : _____
	Approved by (+ signature) : _____
	Supervised by (+ signature) : _____
	Testing location / address..... : _____

List of Attachments

National Differences (16 pages)

Enclosures (86 pages)

Summary of Testing:

No tests were conducted

Summary of Compliance with National Differences:

Countries outside the CB Scheme membership may also accept this report.

List of countries addressed: AT, AU, BE, BR, CA, CH, CZ, DE, DK, FI, FR, GB, GR, HU, IL, IN, IT, JP, KR, NL, NO, PL, RU, SE, SI, SK, UA, US

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST
CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE
CERTIFICATS D'ESSAIS DES EQUIPEMENTS
ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

Product
Produit

Name and address of the applicant
Nom et adresse du demandeur

Name and address of the manufacturer
Nom et adresse du fabricant

Name and address of the factory
Nom et adresse de l'usine

Note: When more than one factory, please report on page 2
Note: Lorsque il y plus d'une usine, veuillez utiliser la 2^{ème} page

Ratings and principal characteristics
Valeurs nominales et caractéristiques principales

Trademark (if any)
Marque de fabrique (si elle existe)

Type of Manufacturer's Testing Laboratories used
Type de programme du laboratoire d'essais constructeur

Model / Type Ref.
Ref. De type

Additional information (if necessary may also be reported on page 2)
Les informations complémentaires (si nécessaire,, peuvent être indiqués sur la 2^{ème} page

A sample of the product was tested and found to be in conformity with
Un échantillon de ce produit a été essayé et a été considéré conforme à la

As shown in the Test Report Ref. No. which forms part of this Certificate
Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat

CERTIFICAT D'ESSAI OC

Switching Power Supply

XP POWER LLC
SUITE 150, 1241 E DYER RD
SANTA ANA CA 92705, USA

XP POWER LLC
SUITE 150, 1241 E DYER RD
SANTA ANA CA 92705, USA

XP POWER INC
990 BENEZIA AVE SUNNYVALE CA 94085
USA

☒ Additional Information on page 2

See Page 2



SMT

AHM85PSXXYY-ZZ
See Page 2

Additionally evaluated to EN 60601-1:2006; National Differences specified in the CB Test Report

☒ Additional Information on page 2

IEC 60601-1(ed.3)

10ME02258 issued on 2012-06-04

This CB Test Certificate is issued by the National Certification Body

Ce Certificat d'essai OC est établi par l'Organisme **National de Certification**



UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA

UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK

UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN

UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2012-06-06

Original Issue Date: 2011-04-21

Signature:

Jolanta M. Wroblewska



Ref. Certif. No.

US-16953-A1-UL**Model Details:**

AHM85PSXXYY-ZZ (where XX is any number between 12-24 designating output voltage and YY can be blank or "C2", -ZZ can be "-A", "-6", "-6A", "8", "-8A", or blank)

Factories:

XP POWER (KUNSHAN) LTD
230 BIN JIANG NAN RD ZHANGPU TOWN KUNSHAN JIANGSU 215321
CHINA

Ratings:

Input Rated: 100-240 Vac, 50/60 Hz, 1.0 A

Output Rated: See below for 40°C ambient output rating below and Test Report Model Differences for additional details.

Model AHM85PS12: 12 Vdc, 7.08 A

Model AHM85PS15: 15 Vdc, 5.67 A

Model AHM85PS19: 19 Vdc, 4.47 A

Model AHM85PS24: 24 Vdc, 3.54 A

Additional Information:

The original report was modified to include the following changes/additions:

Minor revisions to Critical Components List, added alternate generic RTV material and corrected manufacturer name to XP Power LLC, see Test Report.

Additional information (if necessary)**Information complémentaire (si nécessaire)**

UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA

UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK

UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN

UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2012-06-06

Original Issue Date: 2011-04-21

Signature:

Jolanta M. Wroblewska



Test Report issued under the responsibility of:



IEC 60601-1
Medical electrical equipment
Part 1: General requirements for basic safety and essential performance

Report Reference No.....: 10ME02258

Date of issue: 2011-04-20

Total number of pages.....: 21

CB Testing Laboratory: UL LLC

Address: 455 E. Trimble Rd., San Jose, CA 95131-1230, USA

Applicant's name.....: XP POWER LLC

Address: SUITE 150
1241 E DYER RD
SANTA ANA CA 92705
UNITED STATES

Test specification:

Standard: IEC 60601-1: 2005 + CORR. 1 (2006) + CORR. 2 (2007)

Test procedure: CB Scheme

Non-standard test method.....: N/A

Test Report Form No.: IEC60601_1G

Test Report Form Originator: UL LLC

Master TRF: Dated 2010-11

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This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description: **Switching Power Supply**

Trade Mark:



Manufacturer	XP POWER LLC SUITE 150 1241 E DYER RD SANTA ANA CA 92705 UNITED STATES
Model/Type reference.....	AHM85PSXXYY-ZZ (where XX is any number between 12-24 designating output voltage and YY can be blank or "C2", -ZZ can be "-A", "-6", "-6A", "8", "-8A", or blank)
Ratings	Input Rated: 100-240 Vac, 50/60 Hz, 1.0 A Output Rated: See below for 40°C ambient output rating below and Model Differences for additional details. Model AHM85PS12: 12 Vdc, 7.08 A Model AHM85PS15: 15 Vdc, 5.67 A Model AHM85PS19: 19 Vdc, 4.47 A Model AHM85PS24: 24 Vdc, 3.54 A

Testing procedure and testing location:	
<input type="checkbox"/> CB Testing Laboratory: Testing location/ address :	
<input type="checkbox"/> Associated CB Test Laboratory: Testing location/ address :	
Tested by (name + signature).. :	
Approved by (+ signature) :	
<input type="checkbox"/> Testing procedure: TMP Tested by (name + signature).. : Approved by (+ signature) : Testing location/ address :	
<input type="checkbox"/> Testing procedure: WMT Tested by (name + signature).. : Witnessed by (+ signature) : Approved by (+ signature) : Testing location/ address :	
<input checked="" type="checkbox"/> Testing procedure: SMT Tested by (name + signature).. : Rodney Reyes Approved by (+ signature) : Tac Pham Supervised by (+ signature) : Michael J. Howell	  
Testing location/ address : XP Power/ 1241 E. Dyer Rd #150, Santa Ana, CA 92705, USA	
<input type="checkbox"/> Testing procedure: RMT Tested by (name + signature).. : Approved by (+ signature) : Supervised by (+ signature) : Testing location/ address :	

List of Attachments (including a total number of pages in each attachment):

National Differences (0 pages)

Enclosures (0 pages)

Summary of testing

No tests were conducted.

Summary of compliance with National Differences

List of countries addressed:

US, CAN

☒ The product fulfils the requirements of IEC 60601-1: 2005 + CORR. 1 (2006) + CORR. 2 (2007)

GENERAL INFORMATION	
Test item particulars (see also Clause 6):	
Classification of installation and use	External Transportable
Device type (component/sub-assembly/ equipment/ system)	Component, Power Supply
Intended use (Including type of patient, application location).....	To supply regulated power.
Mode of operation	Continuous
Supply connection	For Building-in
Accessories and detachable parts included	N/A
Other options include	N/A
Testing	
Date of receipt of test item(s).....	N/A
Dates tests performed	N/A
Possible test case verdicts:	
- test case does not apply to the test object	N/A
- test object does meet the requirement	Pass (P)
- test object was not evaluated for the requirement.....	N/E
- test object does not meet the requirement	Fail (F)
Abbreviations used in the report:	
- normal condition	N.C.
- means of Operator protection	MOOP
- single fault condition.....	S.F.C.
- means of Patient protection	MOPP
General remarks:	
<p>"(see Attachment #)" refers to additional information appended to the report.</p> <p>"(see appended table)" refers to a table appended to the report.</p> <p>The tests results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced except in full without the written approval of the testing laboratory.</p> <p>List of test equipment must be kept on file and available for review.</p> <p>Additional test data and/or information provided in the attachments to this report.</p> <p>Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.</p>	
Manufacturer's Declaration per sub-clause 6.2.5 of IEC60060-1:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Not applicable

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies)..... :	XP POWER INC 990 BENECIA AVE SUNNYVALE CA 94085 UNITED STATES XP POWER (KUNSHAN) LTD 230 BIN JIANG NAN RD ZHANGPU TOWN KUNSHAN JIANGSU 215321 CHINA
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Report Summary

The original report was modified on 2012-06-04 to include the following changes/additions:

1. Minor revisions to Critical Components List
2. Add alternate generic RTV material
3. Corrected manufacturer name to XP Power LLC

Product Description

Products covered are external power supplies intended to be used with Medical Electrical Equipment. Units may be either Class I or Class II. Double insulated symbol provided on Class II units.

General product information:

Model Differences

All models in the Model AHM85PSXXYY-ZZ series are identical with exception to the Mains Transformer, T1, and minor secondary components that allow for different output voltage ratings. See below for Model Ratings Table Below for 40°C:

Model AHM85PS12: 12 Vdc, 7.08 A

Model AHM85PS15: 15 Vdc, 5.67 A

Model AHM85PS19: 19 Vdc, 4.47 A

Model AHM85PS24: 24 Vdc, 3.54 A

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

Models may have an additional YY identifier which can be blank or "C2" to designate a Class II configuration.

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) or C18 input connector (Class II construction);

"-A" = C14 style input connector with optional IEC cable retention;

"-6" = C6 style input connector (Class I or Class II construction);

"-6A" = C6 style input connector with optional IEC cable retention;

"-8" = C8 style input connector (Class I or Class II construction)

"-8A" = C8 style input connector with optional IEC cable retention.

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.

Technical Considerations

- The product was investigated to the following additional standards: ANSI/AAMI ES60601-1:2005/C1:2009 (includes National Differences for USA); CAN/CSA-C22.2 No. 60601-1:08 (includes National Differences for Canada), EN 60601-1:2006

- Scope of Power Supply evaluation defers the following clauses to the be determined as part of the end product: Clause 7.5 (Safety Signs), Clause 7.9 (Accompanying Documents), Clause 9 (ME Hazard), Clause 10 (Radiation), Clause 14 (PEMS), Clause 16 (ME Systems)
- Scope of Power Supply evaluation excludes the following:
 - Patient applied parts clauses: 4.6, 7.2.10, 8.3, 8.5.2, 8.5.5, 8.7.4.7-8.7.4.9, 8.9.1.15
 - Battery related clauses: 7.3.3, 15.4.3
 - Hand Control related clauses: 8.10.4
 - Oxygen related clauses: 11.2.2
 - Fluids related clauses: 11.6.2 – 11.6.4
 - Sterilization clause: 11.6.7
 - Biocompatibility Clause: 11.7 (ISO 10993)
 - Motor related clauses: 13.2.13.3, 13.4
 - Heating Elements related clause: 13.2
 - Flammable Anaesthetic Mixtures Protection: Annex G
- The product is evaluated only to the following hazards: Casualty, Fire, Shock
- The degree of protection against harmful ingress of water is: Ordinary
- Software is relied upon for meeting safety requirements related to mechanical, fire and shock: No
- Unit also complied with spacing requirements of UL60601-1 (1st), CSA C22.2 No. 60601-1 (2nd), and IEC 60601-1 (2nd) for Basic for 250 Vac from Primary to Ground, Double/Reinforced for 250Vac from Primary to Secondary, and Supplementary for 250 Vac from Secondary to Earth.

Risk Controls/ Engineering Condition of Acceptability

- The component shall be provided in compliance with the Marking (clause 7) and Separation (clause 8) requirements of the end use application.
- The product was submitted and evaluated for use at the maximum ambient temperature (T_{ma}) permitted by the manufacturer's specification of: 40°C output loaded to 100% rated, 60°C output loaded to 60% rated (See De-rating Curve, Enclosure 7-01 for details)
- Repeating Leakage current testing should be considered as part of the end product application.
- This power supply was evaluated with Two MOPP between Primary and Secondary; One MOPP primary and Earth/Secondary Reference Conductor; and One MOPP 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 end product should ensure that the requirements related to accompanying documents, clause 7.9, are met.
- 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): 416 Vpk, 240 Vrms; Primary-SEC: 416 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, L6, and T1 are Class B (130°C).

- Accompanying documents to be provided as part of the end-product.
- Cleaning test to be considered as part of end product evaluation.
- Marking Durability was conducted, however the need for Marking Durability and Marking Legibility 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.

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST
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(IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE
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ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

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Produit

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Nom et adresse du demandeur

Name and address of the manufacturer
Nom et adresse du fabricant

Name and address of the factory
Nom et adresse de l'usine

Note: When more than one factory, please report on page 2
Note: Lorsque il y plus d'une usine, veuillez utiliser la 2^{ème} page

Ratings and principal characteristics
Valeurs nominales et caractéristiques principales

Trademark (if any)
Marque de fabrique (si elle existe)

Type of Manufacturer's Testing Laboratories used
Type de programme du laboratoire d'essais constructeur

Model / Type Ref.
Ref. De type

Additional information (if necessary may also be reported on page 2)
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Un échantillon de ce produit a été essayé et a été considéré conforme à la

As shown in the Test Report Ref. No. which forms part of this Certificate
Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat

CERTIFICAT D'ESSAI OC

Switching Power Supply

XP POWER L L C
SUITE 150
1241 E DYER RD
SANTA ANA CA 92705, USA

XP POWER LLC
SUITE 150
1241 E DYER RD
SANTA ANA CA 92705, USA

XP POWER LLC
990 BENECIA AVE SUNNYVALE CA 94085
USA

☒ Additional Information on page 2

See Page 2



AHM100PS24 XD0112A, AHM100PSXXYY-ZZ
See Page 2

National Differences specified in the CB Test Report.

☒ Additional Information on page 2

IEC 60601-1(ed.2), IEC 60601-1(ed.2);am1,
IEC 60601-1(ed.2);am2

E146893-A6-CB-1 issued on 2013-11-18

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Ce Certificat d'essai OC est établi par l'Organisme **National de Certification**



☒ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA
☐ UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK
☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN
☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/nbnames

Date: 2013-11-18
Original Issue Date: 2010-07-06

Signature:

Jolanta M. Wroblewska



Ref. Certif. No.

US-15297-A3-UL

Model Details:

AHM100PSXXYY-ZZ (where XX is any number between 12-48 designating output voltage and YY can be blank or "C2", -ZZ can be "-A", "-6", "-6A", "8", "-8A", or blank)

Factories:

XP POWER (KUNSHAN) LTD
230 BIN JIANG NAN RD ZHANGPU TOWN KUNSHAN JIANGSU 215321
CHINA

Ratings:

Input Rated: 100-240 Vac, 50/60 Hz, 1.2 A

Output Rated: See reference to output rating below and Test Report - Model Differences for additional details.

Model AHM100PS12: 12 Vdc, 8.33 A

Model AHM100PS15: 15 Vdc, 6.67 A

Model AHM100PS19: 19 Vdc, 5.26 A

Model AHM100PS24: 24 Vdc, 4.16 A

Model AHM100PS48: 48 Vdc, 2.08 A

Additional Information:

The original report was modified to include the following changes/additions:

Add alternate component, modify applicant/manufacturer/factory name, see test report.

Additional information (if necessary)

Information complémentaire (si nécessaire)



☒ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA

☐ UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK

☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN

☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2013-11-18

Original Issue Date: 2010-07-06

Signature:

Jolanta M. Wroblewska



Test Report issued under
the responsibility of:



TEST REPORT
IEC 60601-1
Medical Electrical Equipment
Part 1:General requirements for safety

Report Reference No : E146893-A6-CB-1

Date of issue : 2010-07-06

Total number of pages : 19

CB Testing Laboratory : UL San Jose

Address : 455 E. Trimble Rd., San Jose, CA, 95131-1230, USA

Applicant's name : XP POWER L L C

Address : SUITE 150
1241 E DYER RD
SANTA ANA CA 92705
UNITED STATES

Test specification:

Standard : IEC 60601-1:1988 + A1:1991 + A2:1995

Test procedure : CB Scheme

Non-standard test method : N/A

Test Report Form No. : IEC60601_1c/97-04

Test Report Form originator : UL LLC


Master TRF : dated 97-04


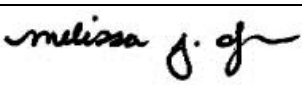
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If this test Report is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description	Switching Power Supply
Trade Mark	
Manufacturer	XP POWER LLC SUITE 150 1241 E DYER RD SANTA ANA CA 92705 UNITED STATES
Model/Type reference	AHM100PSXXYY-ZZ (where XX is any number between 12-48 designating output voltage and YY can be blank or "C2", -ZZ can be "-A", "-6", "-6A", "8", "-8A", or blank), AHM100PS24 XD0112A
Ratings	Input Rated: 100-240 Vac, 50/60 Hz, 1.2 A Output Rated: See reference to output rating below and Model Differences for additional details. Model AHM100PS12: 12 Vdc, 8.33 A Model AHM100PS15: 15 Vdc, 6.67 A Model AHM100PS19: 19 Vdc, 5.26 A Model AHM100PS24: 24 Vdc, 4.16 A Model AHM100PS48: 48 Vdc, 2.08 A

Testing procedure and testing location:	
<input checked="" type="checkbox"/> CB Testing Laboratory	
Testing location / address..... :	UL San Jose 455 E. Trimble Rd., San Jose, CA, 95131-1230, USA
<input type="checkbox"/> Associated CB Test Laboratory	
Testing location / address..... :	
Tested by (name + signature)	Timothy L. Gambrell
Approved by (name + signature) ... :	Melissa DeGuia
	 
<input type="checkbox"/> Testing Procedure: TMP	
Tested by (name + signature)	
Approved by (+ signature)	
Testing location / address..... :	
<input type="checkbox"/> Testing Procedure: WMT	
Tested by (name + signature)	
Witnessed by (+ signature)..... :	
Approved by (+ signature)	
Testing location / address..... :	
<input type="checkbox"/> Testing Procedure: SMT	
Tested by (name + signature)	
Approved by (+ signature)	
Supervised by (+ signature)	
Testing location / address..... :	
<input type="checkbox"/> Testing Procedure: RMT	
Tested by (name + signature)	
Approved by (+ signature)	
Supervised by (+ signature)	
Testing location / address..... :	

List of Attachments

National Differences (3 pages)

Enclosures (0 pages)

Summary of Testing:

No tests were conducted

Summary of Compliance with National Differences:

Countries outside the CB Scheme membership may also accept this report.

List of countries addressed: AT, AU, BE, BR, CA, CH, CZ, DE, DK, FI, FR, GB, GR, HU, IL, IN, IT, KR, NL, PL, RU, SE, SI, SK, UA, US

Issue Date: 2010-07-06
Amendment 3 2013-11-18

Page 4 of 19

Report Reference #

E146893-A6-CB-1

Copy of Marking Plate - Refer to Enclosure titled Marking Plate for copy.

Test item particulars :	
Classification of installation and use	Transportable
Supply connection	Appliance coupler
Accessories and detachable parts included in the evaluation	None
Options included	None
Possible test case verdicts:	
- test case does not apply to the test object	N / A
- test object does meet the requirement	P(Pass)
- test object does not meet the requirement	F(Fail)
Abbreviations used in the report:	
- normal condition	N.C. - single fault condition
- operational insulation	OP - basic insulation
- basic insulation between parts of opposite polarity:	BOP - supplementary insulation
- double insulation	DI - reinforced insulation
Testing:	
Date(s) of receipt of test item	N/A
Date(s) of Performance of tests	N/A
General remarks:	
<p>The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the testing laboratory.</p> <p>List of test equipment must be kept on file and be available for review.</p> <p>"(see Enclosure #)" refers to additional information appended to the report. "(see appended table)" refers to a table appended to the report.</p> <p>Throughout this report a point is used as the decimal separator.</p>	
Manufacturer's Declaration per Sub Clause 6.2.5 of IEC 60335-1:	
<p>The application for obtaining a CB Test Certificate includes more than one factory and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided</p> <p>When differences exist, they shall be identified in the General Product Information section.</p>	
Name and address of Factory(ies):	<p>XP POWER LLC 990 BENECIA AVE SUNNYVALE CA 94085 UNITED STATES</p> <p>XP POWER (KUNSHAN) LTD 230 BIN JIANG NAN RD ZHANGPU TOWN KUNSHAN</p>

JIANGSU 215321 CHINA

GENERAL PRODUCT INFORMATION:

Report Summary

The original report was modified on 2013-11-18 to include the following changes/additions:
Add alternate insulating tape to T2 manufactured by 3M, type 1350F. Additionally revised
Applicant/Manufacturer/Factory name from XP Power Inc to XP Power LLC.

Product Description

Products covered are external power supplies intended to be used with Medical Electrical Equipment. Units may be either Class I or Class II. Double insulated symbol is optionally provided on units Class II units. Earthing symbol may only be provided for Class I power supplies.

Model Differences

All models in the Model AHM100PSXXYY-ZZ series are identical with exception to the Mains Transformer, T2, and minor secondary components that allow for different output voltage ratings. See below for Model Ratings Table Below for 40°C:

Model AHM100PS12: 12 Vdc, 8.33 A

Model AHM100PS15: 15 Vdc, 6.67 A

Model AHM100PS19: 19 Vdc, 5.26 A

Model AHM100PS24: 24 Vdc, 4.16 A

Model AHM100PS48: 48 Vdc, 2.08 A

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

Models may have an additional YY identifier which can be blank or "C2" to designate a Class II configuration.

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) or C18 input connector (Class II construction);

"A" = C14 style input connector with optional IEC cable retention;

"6" = C6 style input connector (Class I or Class II construction);

"6A" = C6 style input connector with optional IEC cable retention;

"8" = C8 style input connector (Class I or Class II construction)

"8A" = C8 style input connector with optional IEC cable retention.

Model AHM100PS24 XD0112A is identical to Model AHM100PS24 with exception to the addition of an alternate input connector.

Additional Information

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.

Multiple Location Manufacturer Codes:

"K" XP Power, Jiangsu, China
"FS" XP Power, Sunnyvale, Ca

Receiving NCB may challenge CB Test Certificates, which are based on reports that are more than 3 years old.

Technical Considerations

- 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 36, Electromagnetic Compatibility (IEC 601-1-2) , Clause 48, Biocompatibility (ISO 10993-1) , Clause 52.1, Programmable Electronic Systems (IEC 601-1-4)
- The product is Classified only to the following hazards: Casualty , Fire , Shock
- 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

When installed in an end-product, consideration must be given to the following:

- This component has been judged on the basis of the required spacings in the Second Edition of the Standards for Medical Electrical Equipment, Part 1: General Requirements for Safety, UL 60601-1, which covers the end use product for which the component is designed. --
- Repeating leakage current testing should be considered in the end product application. --
- This power supply was evaluated as having: Basic Insulation between Primary to Earth (For Class I units), Reinforced insulation between Primary and Secondary (For All Units), Basic from Secondary to Earth (For Class I units). --
- The available voltage for the secondary outputs does not exceed 25 Vac or 60 Vdc, under normal and single fault conditions. --
- The end product should ensure that the requirements related to accompanying documents, clause 6.8, are met. --
- The product was submitted and evaluated for use at the maximum ambient temperature (T_{mra}) permitted by the manufacturer's specification of: 40°C (See De-rating Curve, Enclosure 7-01 for details) --
- The output circuits have not been evaluated for direct patient connection (Type B, BF or CF). --
- The Electric Strength Test conducted on this power supply was based upon a maximum working voltage of: Primary-Earthed Dead Metal (Class I units): 240 Vrms, Primary-SEC: 243 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, L2, L3, L4, and T2 are Class B (130°C) --
- Accompanying documents to be provided as part of the end-product. --

- Cleaning test to be considered as part of end product evaluation. --

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST
CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE
CERTIFICATS D'ESSAIS DES EQUIPEMENTS
ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

Product
Produit

Name and address of the applicant
Nom et adresse du demandeur

Name and address of the manufacturer
Nom et adresse du fabricant

Name and address of the factory
Nom et adresse de l'usine

Note: When more than one factory, please report on page 2
Note: Lorsque il y plus d'une usine, veuillez utiliser la 2^{ème} page

Ratings and principal characteristics
Valeurs nominales et caractéristiques principales

Trademark (if any)
Marque de fabrique (si elle existe)

Type of Manufacturer's Testing Laboratories used
Type de programme du laboratoire d'essais constructeur

Model / Type Ref.
Ref. De type

Additional information (if necessary may also be reported on page 2)
Les informations complémentaires (si nécessaire,, peuvent être indiqués sur la 2^{ème} page

A sample of the product was tested and found to be in conformity with
Un échantillon de ce produit a été essayé et a été considéré conforme à la

As shown in the Test Report Ref. No. which forms part of this Certificate
Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme **National de Certification**

CERTIFICAT D'ESSAI OC

Switching Power Supply

XP POWER LLC.
SUITE 150
1241 E DYER RD
SANTA ANA CA 92705, USA

XP POWER LLC.
SUITE 150
1241 E DYER RD
SANTA ANA CA 92705, USA

XP POWER LLC
990 BENEZIA AVE
SUNNYVALE CA 94085
USA

☒ Additional Information on page 2

Input Rated: 100-240 Vac, 50/60 Hz, 1.2 A
Output Rated: See test report for details.



SMT

AHM100PS24 XD0112A, AHM100PSXXYY-ZZ
See Page 2

The original report was modified to include the following changes/additions:
Modifying critical component table.

☐ Additional Information on page 2

IEC 60601-1(ed.3)

11CA41872 issued on 2012-05-17



- ☒ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA
- ☐ UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK
- ☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN
- ☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2012-05-21
Original Issue Date: 2011-11-21

Signature:

Jolanta M. Wroblewska



Ref. Certif. No.

US-18097-A1-UL

Model Details:

AHM100PSXXYY-ZZ (where XX is any number between 12-48 designating output voltage and YY can be blank or "C2", -ZZ can be "-A", "-6", "-6A", "8", "-8A", or blank)

Factories:

XP POWER (KUNSHAN) LTD
230 BIN JIANG NAN RD, ZHANGPU TOWN
KUNSHAN, JIANGSU 215321
CHINA

Additional information (if necessary)

Information complémentaire (si nécessaire)



☒ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA

☐ UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK

☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN

☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2012-05-21

Original Issue Date: 2011-11-21

Signature:

Jolanta M. Wroblewska



Test Report issued under the responsibility of:



IEC 60601-1
Medical electrical equipment
Part 1: General requirements for basic safety and essential performance

Report Reference No.....: 11CA41872

Date of issue: 2011-11-21

Total number of pages.....: 20

CB Testing Laboratory.....: UL LLC

Address: 455 E. Trimble Rd., San Jose, CA 95131-1230, USA

Applicant's name.....: XP POWER LLC.

Address: SUITE 150
1241 E DYER RD
SANTA ANA CA 92705
UNITED STATES

Test specification:

Standard.....: IEC 60601-1: 2005 + CORR. 1 (2006) + CORR. 2 (2007)

Test procedure: CB Scheme

Non-standard test method.....: N/A

Test Report Form No.....: IEC60601_1G

Test Report Form Originator: UL LLC

Master TRF: Dated 2010-11

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This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description: **Switching Power Supply**

Trade Mark:



Manufacturer	XP POWER LLC SUITE 150 1241 E DYER RD SANTA ANA CA 92705 UNITED STATES
Model/Type reference.....	AHM100PSXXYY-ZZ (where XX is any number between 12-48 designating output voltage and YY can be blank or "C2", -ZZ can be "-A", "-6", "-6A", "8", "-8A", or blank), AHM100PS24 XD0112A
Ratings	Input Rated: 100-240 Vac, 50/60 Hz, 1.2 A Output Rated: See Model Differences for details.

Testing procedure and testing location: <input type="checkbox"/> CB Testing Laboratory: Testing location/ address : <input type="checkbox"/> Associated CB Test Laboratory: Testing location/ address : Tested by (name + signature).. : Approved by (+ signature)..... :	
<input type="checkbox"/> Testing procedure: TMP Tested by (name + signature).. : Approved by (+ signature)..... : Testing location/ address :	
<input type="checkbox"/> Testing procedure: WMT Tested by (name + signature).. : Witnessed by (+ signature)..... : Approved by (+ signature)..... : Testing location/ address :	
<input checked="" type="checkbox"/> Testing procedure: SMT Tested by (name + signature).. : Chin Chee Siang Approved by (+ signature)..... : Tac Pham Supervised by (+ signature) : Michael J. Howell Testing location/ address : XP Power, 1241 E. Dyer Rd #150, Santa Ana, CA 92705/XP Power, 401 Commonwealth Dr., Haw Par Technocentre, Lobby B, #02-02, Singapore 149598	  
<input type="checkbox"/> Testing procedure: RMT Tested by (name + signature).. : Approved by (+ signature)..... : Supervised by (+ signature) : Testing location/ address :	

List of Attachments (including a total number of pages in each attachment):

National Differences (0 pages)

Enclosures (0 pages)

Summary of testing

No tests were conducted.

Summary of compliance with National Differences

List of countries addressed:

US, CAN

☒ The product fulfils the requirements of IEC 60601-1: 2005 + CORR. 1 (2006) + CORR. 2 (2007)

GENERAL INFORMATION	
Test item particulars (see also Clause 6):	
Classification of installation and use	External Transportable
Device type (component/sub-assembly/ equipment/ system)	Component, Power Supply
Intended use (Including type of patient, application location)	To supply regulated power.
Mode of operation	Continuous
Supply connection	Appliance coupler
Accessories and detachable parts included	N/A
Other options include	N/A
Testing	
Date of receipt of test item(s)	N/A
Dates tests performed	N/A
Possible test case verdicts:	
- test case does not apply to the test object	N/A
- test object does meet the requirement	Pass (P)
- test object was not evaluated for the requirement	N/E
- test object does not meet the requirement	Fail (F)
Abbreviations used in the report:	
- normal condition	N.C.
- means of Operator protection	MOOP
- single fault condition	S.F.C.
- means of Patient protection	MOPP
General remarks:	
<p>"(see Attachment #)" refers to additional information appended to the report.</p> <p>"(see appended table)" refers to a table appended to the report.</p> <p>The tests results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced except in full without the written approval of the testing laboratory.</p> <p>List of test equipment must be kept on file and available for review.</p> <p>Additional test data and/or information provided in the attachments to this report.</p>	
<p>Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.</p>	
Manufacturer's Declaration per sub-clause 6.2.5 of IEC60060-1:	
<p>The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided</p>	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> Not applicable</p>
<p>When differences exist; they shall be identified in the General product information section.</p>	

Name and address of factory (ies)	XP POWER LLC 990 BENECIA AVE SUNNYVALE CA 94085 UNITED STATES XP POWER (KUNSHAN) LTD 230 BIN JIANG NAN RD ZHANGPU TOWN KUNSHAN JIANGSU 215321 CHINA

Report Summary

The original report was modified on 2012-05-17 to include the following changes/additions:

1. Minor revisions to Critical Components List
2. Add alternate generic RTV material

Product Description

Products covered are external power supplies intended to be used with Medical Electrical Equipment. Units may be either Class I or Class II. Double insulated symbol is optionally provided on units Class II units.

Earthing symbol may only be provided for Class I power supplies.

General product information:

Model Differences

All models in the Model AHM100PSXXYY-ZZ series are identical with exception to the Mains Transformer, T2, and minor secondary components that allow for different output voltage ratings. See Table below for Model Ratings at 40°C:

Model AHM100PS12: 12 Vdc, 8.33 A
Model AHM100PS15: 15 Vdc, 6.67 A
Model AHM100PS19: 19 Vdc, 5.26 A
Model AHM100PS24: 24 Vdc, 4.16 A
Model AHM100PS48: 48 Vdc, 2.08 A

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

Models may have an additional YY identifier which can be blank or "C2" to designate a Class II configuration.

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) or C18 input connector (Class II construction);

"A" = C14 style input connector with optional IEC cable retention;

"6" = C6 style input connector (Class I or Class II construction);

"6A" = C6 style input connector with optional IEC cable retention;

"8" = C8 style input connector (Class I or Class II construction)

"8A" = C8 style input connector with optional IEC cable retention.

Model AHM100PS24 XD0112A is identical to Model AHM100PS24 with exception to the addition of an alternate input connector.

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.

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.

Multiple Location Manufacturer Codes:

"K" XP Power, Jiangsu, China
"FS" XP Power, Sunnyvale, Ca

Technical Considerations

- The product was investigated to the following additional standards: ANSI/AAMI ES60601-1:2005/C1:2009 (includes National Differences for USA); CAN/CSA-C22.2 No. 60601-1:08 (includes National Differences for Canada), EN 60601-1:2006
- Scope of Power Supply evaluation defers the following clauses to the be determined as part of the end product: Clause 7.5 (Safety Signs), Clause 7.9 (Accompanying Documents), Clause 9 (ME Hazard), Clause 10 (Radiation), Clause 14 (PEMS), Clause 16 (ME Systems)
- The product is evaluated only to the following hazards: Casualty, Fire, Shock
- The degree of protection against harmful ingress of water is: Ordinary
- Software is relied upon for meeting safety requirements related to mechanical, fire and shock: No
- Unit also complied with spacing requirements of UL60601-1 (1st), CSA C22.2 No. 60601-1 (2nd), and IEC 60601-1 (2nd) for Basic for 250 Vac from Primary to Ground, Double/Reinforced for 250Vac from Primary to Secondary, and Supplementary for 250 Vac from Secondary to Earth.

Risk Controls/ Engineering Condition of Acceptability

- The component shall be provided in compliance with the Marking (clause 7) and Separation (clause 8) requirements of the end use application.
- 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)
- Repeating leakage current testing should be considered in the end product application.
- This power supply was evaluated with Two MOPP between Primary and Secondary; One MOPP primary and Earth/Secondary Reference Conductor; and One MOPP 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 end product should ensure that the requirements related to accompanying documents, clause 7.9, are met.
- 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): 430 Vpk, 240 Vrms; Primary-SEC: 430 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 and T2 are Class B (130°C).

- Cleaning test to be considered as part of end product evaluation.
- The need for Marking Durability and Marking Legibility 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.

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST
CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE
CERTIFICATS D'ESSAIS DES EQUIPEMENTS
ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE CERTIFICAT D'ESSAI OC

Product
Produit

Switching Power Supply

Name and address of the applicant
Nom et adresse du demandeur

XP POWER LLC
SUITE 150 1241 E DYER RD
SANTA ANA CA 92705, USA

Name and address of the manufacturer
Nom et adresse du fabricant

XP POWER LLC
SUITE 150 1241 E DYER RD
SANTA ANA CA 92705, USA

Name and address of the factory
Nom et adresse de l'usine

XP POWER LLC
990 BENEZIA AVE
SUNNYVALE CA 94085
USA

Note: When more than one factory, please report on page 2
Note: Lorsque il y a plus d'une usine, veuillez utiliser la 2^{ème} page

Ratings and principal characteristics
Valeurs nominales et caractéristiques principales

☒ Additional Information on page 2
See Page 2

Trademark (if any)
Marque de fabrique (si elle existe)



Type of Manufacturer's Testing Laboratories used
Type de programme du laboratoire d'essais constructeur

SMT

Model / Type Ref.
Ref. De type

AHM150PSXXYY-ZZ
See Page 2

Additional information (if necessary may also be reported on page 2)
Les informations complémentaires (si nécessaire,, peuvent être indiqués sur la 2^{ème} page

☒ Additional Information on page 2

A sample of the product was tested and found to be in conformity with
Un échantillon de ce produit a été essayé et a été considéré conforme à la

IEC 60601-1(ed.3)

As shown in the Test Report Ref. No. which forms part of this Certificate
Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat

10ME03010 issued on 2012-05-02

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme **National de Certification**



- ☒ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA
- ☐ UL (Denko), Borupvang 5A DK-2750 Ballerup, DENMARK
- ☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN
- ☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2012-05-04
Original Issue Date: 2011-06-07

Signature:

Jolanta M. Wroblewska

Model Details:

AHM150PSXXYY-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)

Factories:

XP POWER (KUNSHAN) LTD
230 BIN JIANG NAN RD
ZHANGPU TOWN KUNSHAN JIANGSU 215321
CHINA

Ratings:

Input Rated: 100-240 Vac, 50/60 Hz, 1.8 A

Output Rated: See below for 40°C ambient output rating below and Model Differences for additional details.

Model AHM150PS12: 12 Vdc, 12.5 A

Model AHM150PS15: 15 Vdc, 10.0 A

Model AHM150PS19: 19 Vdc, 7.89 A

Model AHM150PS24: 24 Vdc, 6.25 A

Model AHM150PS48: 48 Vdc, 3.13 A

Additional Information:

The original report was modified to update the model designation, Critical Components List, test tables and marking label.

National Differences specified in the CB Test Report.

Additional information (if necessary)**Information complémentaire (si nécessaire)**

UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA

UL (Denko), Borupvang 5A DK-2750 Ballerup, DENMARK

UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN

UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2012-05-04

Original Issue Date: 2011-06-07

Signature:



Jolanta M. Wroblewska



Test Report issued under the responsibility of:



**Underwriters
Laboratories**

**IEC 60601-1
Medical electrical equipment**

Part 1: General requirements for basic safety and essential performance

Report Reference No.....: 10ME03010

Date of issue: 2011-06-07

Total number of pages: 45

CB Testing Laboratory.....: UL San Jose

Address: 455 E. Trimble Rd., San Jose, CA 95131-1230, USA

Applicant's name.....: XP POWER LLC

Address: SUITE 150
1241 E DYER RD
SANTA ANA CA 92705
UNITED STATES

Test specification:

Standard: IEC 60601-1: 2005 + CORR. 1 (2006) + CORR. 2 (2007)

Test procedure: CB Scheme

Non-standard test method.....: N/A

Test Report Form No.....: IEC60601_1G

Test Report Form Originator: Underwriters Laboratories Inc.

Master TRF: Dated 2010-11

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If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo shall be removed




This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description: **Switching Power Supply**

Trade Mark:



Manufacturer.....:	XP POWER LLC SUITE 150 1241 E DYER RD SANTA ANA CA 92705 UNITED STATES
Model/Type reference	AHM150PSXXYY-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)
Ratings	Input Rated: 100-240 Vac, 50/60 Hz, 1.8 A Output Rated: See below for 40°C ambient output rating below and Model Differences for additional details. Model AHM150PS12: 12 Vdc, 12.5 A Model AHM150PS15: 15 Vdc, 10.0 A Model AHM150PS19: 19 Vdc, 7.89 A Model AHM150PS24: 24 Vdc, 6.25 A Model AHM150PS48: 48 Vdc, 3.13 A

Testing procedure and testing location:		
<input type="checkbox"/>	CB Testing Laboratory: Testing location/ address	
<input type="checkbox"/>	Associated CB Test Laboratory: Testing location/ address	
	Tested by (name + signature) .. :	
	Approved by (+ signature)	
<input type="checkbox"/>	Testing procedure: TMP Tested by (name + signature) .. : Approved by (+ signature)	
	Testing location/ address	
<input type="checkbox"/>	Testing procedure: WMT Tested by (name + signature) .. : Witnessed by (+ signature)	
	Approved by (+ signature)	
	Testing location/ address	
<input checked="" type="checkbox"/>	Testing procedure: SMT Tested by (name + signature) .. : Approved by (+ signature)	Rodney Reyes  Tac Pham 
	Supervised by (+ signature) :	Michael J. Howell 
	Testing location/ address	XP Power, 1241 E. Dyer Rd #150, Santa Ana, CA 92705, USA
<input type="checkbox"/>	Testing procedure: RMT Tested by (name + signature) .. : Approved by (+ signature)	
	Supervised by (+ signature) :	
	Testing location/ address	

List of Attachments (including a total number of pages in each attachment):

Enclosures (11 pages)

Summary of testing

Unless otherwise indicated, all tests were conducted at XP Power, 1241 E. Dyer Rd #150, Santa Ana, CA 92705, USA.

The tests were conducted as part of the UL60601-1, 1st Edition/ IEC 60601-1, 2nd Edition Evaluation and the results were considered representative of the following tests:

Tests performed (name of test and test clause):

Testing location:

Touch Current (8.7.4.6)

Dielectric Strength (8.8.3)

Summary of compliance with National Differences

List of countries addressed:

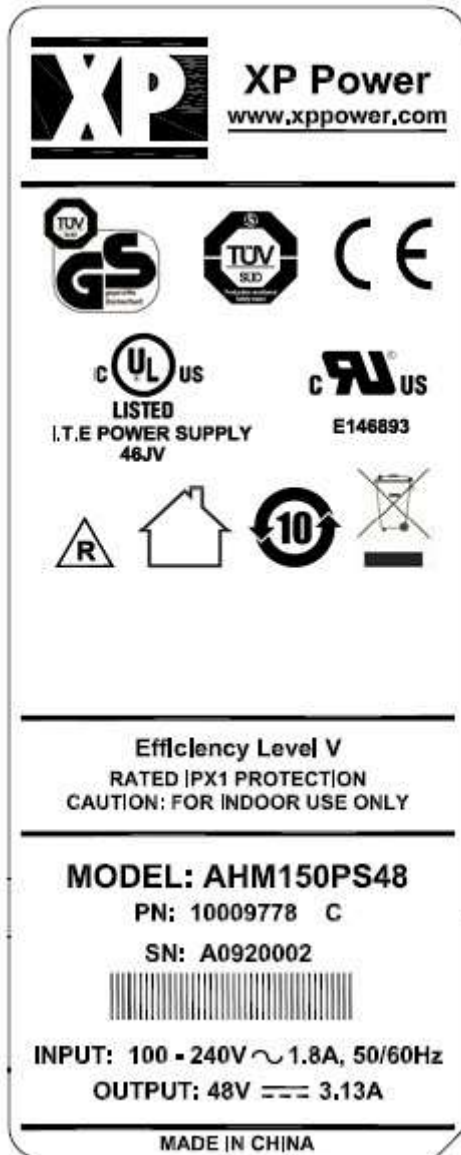
US, CAN

☒ The product fulfils the requirements of IEC 60601-1: 2005 + CORR. 1 (2006) + CORR. 2 (2007)

Copy of marking plate

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

Labels provided are considered representative of the entire series.



GENERAL INFORMATION	
Test item particulars (see also Clause 6):	
Classification of installation and use	External Transportable
Device type (component/sub-assembly/ equipment/ system)	Component, Power Supply
Intended use (Including type of patient, application location).....	To supply regulated power.
Mode of operation	Continuous
Supply connection	Appliance coupler
Accessories and detachable parts included	N/A
Other options include	N/A
Testing	
Date of receipt of test item(s).....	2012-04-06
Dates tests performed	2012-04-06
Possible test case verdicts:	
- test case does not apply to the test object	N/A
- test object does meet the requirement	Pass (P)
- test object was not evaluated for the requirement	N/E
- test object does not meet the requirement	Fail (F)
Abbreviations used in the report:	
- normal condition	N.C.
- single fault condition.....	S.F.C.
- means of Operator protection	MOOP
- means of Patient protection	MOPP
General remarks:	
<p>"(see Attachment #)" refers to additional information appended to the report.</p> <p>"(see appended table)" refers to a table appended to the report.</p> <p>The tests results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced except in full without the written approval of the testing laboratory.</p> <p>List of test equipment must be kept on file and available for review.</p> <p>Additional test data and/or information provided in the attachments to this report.</p> <p>Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.</p>	
Manufacturer's Declaration per sub-clause 6.2.5 of IEC60601-1:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Not applicable

When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies)..... :	XP POWER LLC 990 BENECIA AVE SUNNYVALE CA 94085 UNITED STATES XP POWER (KUNSHAN) LTD 230 BIN JIANG NAN RD ZHANGPU TOWN KUNSHAN JIANGSU 215321 CHINA

Report Summary

The original report was modified on 2012-05-02 to include the following changes/additions:

1. Updated the model designation and added Class II models provided with additional suffix "C2"
2. Minor revisions to Critical Components List
3. Update to test tables.
4. Added alternate generic RTV material
5. Updated the marking label

Product Description

Products covered are external power supplies intended to be used with Medical Electrical Equipment. Units are Class I or Class II.

General product information:

Model Differences

All models in the Model AHM150PSXXYY-ZZ series are identical with exception to the Mains Transformer, T1, and minor secondary components that allow for different output voltage ratings. See below for Model Ratings Table Below for 40°C:

Model AHM150PS12: 12 Vdc, 12.5 A
Model AHM150PS15: 15 Vdc, 10.0 A
Model AHM150PS19: 19 Vdc, 7.89 A
Model AHM150PS24: 24 Vdc, 6.25 A
Model AHM150PS48: 48 Vdc, 3.13 A

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.

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.

Technical Considerations

- The product was investigated to the following additional standards: ANSI/AAMI ES60601-1:2005/C1:2009 (includes National Differences for USA); CAN/CSA-C22.2 No. 60601-1:08 (includes National Differences for Canada), EN 60601-1:2006
- Scope of Power Supply evaluation defers the following clauses to be determined as part of the end product: Clause 7.5 (Safety Signs), Clause 7.9 (Accompanying Documents), Clause 9 (ME Hazard), Clause 10 (Radiation), Clause 14 (PEMS), Clause 16 (ME Systems)
- The product is evaluated only to the following hazards: Casualty, Fire, Shock
- The degree of protection against harmful ingress of water is: Ordinary
- Software is relied upon for meeting safety requirements related to mechanical, fire and shock: No
- Unit also complied with spacing requirements of UL60601-1 (1st), CSA C22.2 No. 60601-1 (2nd), and IEC 60601-1 (2nd) for Basic for 250 Vac from Primary to Ground, Double/Reinforced for 250Vac from Primary to Secondary, and Supplementary for 250 Vac from Secondary to Earth.

Risk Controls/ Engineering Condition of Acceptability

- The component shall be provided in compliance with the Marking (clause 7) and Separation (clause 8) requirements of the end use application.
- 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.
- Repeating leakage current testing should be considered in the end product application.
- This power supply was evaluated with Two MOPP between Primary and Secondary; One MOPP primary and Earth/Secondary Reference Conductor; and One MOPP 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 end product should ensure that the requirements related to accompanying documents, clause 7.9, are met.
- 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): 432 Vpk, 244 Vrms; Primary-SEC: 432 Vpk, 244 Vrms.
- The following magnetic devices (e.g. transformers or inductor) are provided with an OBJ2 insulation system with the indicated rating greater than Class A (105°C): L1-L4, L5, L7 and T1 are min. Class B (130°C).
- Cleaning test to be considered as part of end product evaluation.
- The need for Marking Durability and Marking Legibility 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.

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST
CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE
CERTIFICATS D'ESSAIS DES EQUIPEMENTS
ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE CERTIFICAT D'ESSAI OC

Product
Produit

Switching Power Supply

Name and address of the applicant
Nom et adresse du demandeur

XP POWER LLC
SUITE 150, 1241 E DYER RD
SANTA ANA, CA 92750, USA

Name and address of the manufacturer
Nom et adresse du fabricant

XP POWER LLC
SUITE 150, 1241 E DYER RD
SANTA ANA, CA 92750, USA

Name and address of the factory
Nom et adresse de l'usine

XP POWER LLC
990 BENEZIA AVE
SUNNYVALE CA 94085
USA

Note: When more than one factory, please report on page 2
Note: Lorsque il y a plus d'une usine, veuillez utiliser la 2^{ème} page

Ratings and principal characteristics
Valeurs nominales et caractéristiques principales

☒ Additional Information on page 2
See Page 2

Trademark (if any)
Marque de fabrique (si elle existe)



Type of Manufacturer's Testing Laboratories used
Type de programme du laboratoire d'essais
constructeur

SMT

Model / Type Ref.
Ref. De type

AHM180PSXXYY-ZZ
See Page 2

Additional information (if necessary may also be
reported on page 2)
Les informations complémentaires (si nécessaire,,
peuvent être indiqués sur la 2^{ème} page

National Differences specified in the CB Test Report.
☒ Additional Information on page 2

A sample of the product was tested and found
to be in conformity with
Un échantillon de ce produit a été essayé et a été
considéré conforme à la

IEC 60601-1(ed.3)

As shown in the Test Report Ref. No. which forms part
of this Certificate
Comme indiqué dans le Rapport d'essais numéro de
référence qui constitue partie de ce Certificat

10ME03009 issued on 2013-07-11

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme **National de Certification**



- ☒ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA
- ☐ UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK
- ☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN
- ☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2013-07-15
Original Issue Date: 2011-06-09

Signature:

Jolanta M. Wroblewska

Model Details:

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

Factories:

XP POWER (KUNSHAN) LTD
230 BIN JIANG NAN RD
ZHANGPU TOWN KUNSHAN JIANGSU 215321
CHINA

Ratings:

Input Rated: 100-240 Vac, 50/60 Hz, 2.2 A

Output Rated: See refer to output rating below and Model Differences for additional details.

Model AHM180PS12: 12 Vdc, 13.75 A

Model AHM180PS15: 15 Vdc, 12 A

Model AHM180PS19: 19 Vdc, 9.47 A

Model AHM180PS24: 24 Vdc, 7.5 A

Model AHM180PS48: 48 Vdc, 3.75 A

Additional Information:

The original report was modified to include the following changes/additions:

Add National Differences and ratings data for test table 4.11. (See test report)

Additional information (if necessary)**Information complémentaire (si nécessaire)**

UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA

UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK

UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN

UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2013-07-15

Original Issue Date: 2011-06-09

Signature:




Jolanta M. Wroblewska

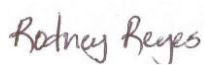




Test Report issued under the responsibility of:



IEC 60601-1 Medical electrical equipment Part 1: General requirements for basic safety and essential performance	
Report Reference No.....	10ME03009
Date of issue	2011-06-07
	Amendment 2: 2013-07-11
Total number of pages.....	27
CB Testing Laboratory.....	Underwriters Laboratories Inc.
Address	455 E. Trimble Rd., San Jose, CA 95131-1230, USA
Applicant's name.....	XP Power LLC
Address	Suite 150, 1241 E Dyer Rd, Santa Ana, CA 92750, USA
Test specification:	
Standard.....	IEC 60601-1: 2005 + CORR. 1 (2006) + CORR. 2 (2007)
Test procedure.....	CB Scheme
Non-standard test method.....	
Test Report Form No.....	IEC60601_1G
Test Report Form Originator	UL
Master TRF	Dated 2010-11
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Test item description	Switching Power Supply
Trade Mark	

Manufacturer	XP Power LLC Suite 150, 1241 E Dyer Rd, Santa Ana, CA 92705, USA
Model/Type reference.....	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)
Ratings	Input Rated: 100-240 Vac, 50/60 Hz, 2.2 A Output Rated: See refer to output rating below and Model Differences for additional details. Model AHM180PS12: 12 Vdc, 13.75 A Model AHM180PS15: 15 Vdc, 12 A Model AHM180PS19: 19 Vdc, 9.47 A Model AHM180PS24: 24 Vdc, 7.5 A Model AHM180PS48: 48 Vdc, 3.75 A

Testing procedure and testing location:	
<input type="checkbox"/> CB Testing Laboratory: Testing location/ address	
<input type="checkbox"/> Associated CB Test Laboratory: Testing location/ address	
Tested by (name + signature) .. : Approved by (+ signature)	
<input type="checkbox"/> Testing procedure: TMP Tested by (name + signature) .. : Approved by (+ signature)	
Testing location/ address	
<input type="checkbox"/> Testing procedure: WMT Tested by (name + signature) .. : Witnessed by (+ signature)	
Approved by (+ signature)	
Testing location/ address	
<input checked="" type="checkbox"/> Testing procedure: SMT Tested by (name + signature) .. : Rodney Reyes Approved by (+ signature)	  
Supervised by (+ signature) : Michael J. Howell	
Testing location/ address : XP Power LLC Suite 150, 1241 E Dyer Rd., Santa Ana, CA 92705, USA	
<input type="checkbox"/> Testing procedure: RMT Tested by (name + signature) .. : Approved by (+ signature)	
Supervised by (+ signature) : Testing location/ address	

List of Attachments (including a total number of pages in each attachment):

Test Table (1 page)

National Differences (14 pages)

Summary of testing

All testing conducted by XP Power LLC located at Suite 150, 1241 E Dyer Rd., Santa Ana, CA 92705, USA under their SMT status.

Tests performed (name of test and test clause):

Input Test (clause 4.11)

Testing location:

XP Power LLC

Summary of compliance with National Differences

List of countries addressed: US, CA, CH, JP

☒ The product fulfils the requirements of IEC 60601-1:2005 + CORR.1 (2006) + CORR. 2 (2007)

Copy of marking plate

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.



GENERAL INFORMATION	
Test item particulars (see also Clause 6):	
Classification of installation and use	External transportable
Device type (component/sub-assembly/ equipment/ system)	Component, Power supply
Intended use (Including type of patient, application location)	To supply regulated power
Mode of operation	Continuous
Supply connection	Appliance coupler
Accessories and detachable parts included	N/A
Other options include	N/A
Testing	
Date of receipt of test item(s)	2010-02-24, 2010-10-10, 2010-04-26, 2010-02-28, 2012-02-04
Dates tests performed	2011-05-25 to 2011-05-26, 2011-03-02 to 2011-03-10, 2010-11-01 to 2010-11-25, 2010-03-23 to 2010-05-27, 2012-03-26
Possible test case verdicts:	
- test case does not apply to the test object	N/A
- test object does meet the requirement	Pass (P)
- test object was not evaluated for the requirement	N/E
- test object does not meet the requirement	Fail (F)
Abbreviations used in the report:	
- normal condition	N.C.
- means of Operator protection	MOOP
- single fault condition	S.F.C.
- means of Patient protection	MOPP
General remarks:	
<p>"(see Attachment #)" refers to additional information appended to the report.</p> <p>"(see appended table)" refers to a table appended to the report.</p> <p>The tests results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced except in full without the written approval of the testing laboratory.</p> <p>List of test equipment must be kept on file and available for review.</p> <p>Additional test data and/or information provided in the attachments to this report.</p>	
Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.	

Amendment 2: 2013-07-11

Manufacturer's Declaration per sub-clause 6.2.5 of IEC60060-1:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....: ☒ Yes ☐ Not applicable

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies)..... : XP POWER LLC
990 BENEZIA AVE
SUNNYVALE CA 94085
UNITED STATES

XP POWER (KUNSHAN) LTD
230 BIN JIANG NAN RD
ZHANGPU TOWN
KUNSHAN
JIANGSU 215321 CHINA

Amendment 2: 2013-07-11**Report Summary**

The original report was modified on 2013-07-11 to include the following changes/additions:

1. Add missing data from original investigation for 50 Hz testing to Table 4.11
2. Add Switzerland National Differences
3. Add Japan National Differences

General product information:**Product Description**

Products covered are external power supplies intended to be used with Medical Electrical Equipment. Units are Class I or Class II.

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. See below for Model Ratings Table Below for 40°C:

Model AHM180PS12: 12 Vdc, 13.75 A

Model AHM180PS15: 15 Vdc, 12 A

Model AHM180PS19: 19 Vdc, 9.47 A

Model AHM180PS24: 24 Vdc, 7.5 A

Model AHM180PS48: 48 Vdc, 3.75 A

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.

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.

Technical Considerations

- The product was investigated to the following additional standards: ANSI/AAMI ES60601-1:2005/C1:2009 (includes National Differences for USA); CAN/CSA-C22.2 No. 60601-1:08 (includes National Differences for Canada), EN 60601-1:2006
- Scope of Power Supply evaluation defers the following clauses to the be determined as part of the end product: Clause 7.5 (Safety Signs), Clause 7.9 (Accompanying Documents), Clause 9 (ME Hazard), Clause 10 (Radiation), Clause 14 (PEMS), Clause 16 (ME Systems)
- The product is evaluated only to the following hazards: Casualty, Fire, Shock
- The degree of protection against harmful ingress of water is: Ordinary

Amendment 2: 2013-07-11

- Software is relied upon for meeting safety requirements related to mechanical, fire and shock: No
- Unit also complied with spacing requirements of UL60601-1 (1st), CSA C22.2 No. 60601-1 (2nd), and IEC 60601-1 (2nd) for Basic for 250 Vac from Primary to Ground, Double/Reinforced for 250Vac from Primary to Secondary, and Supplementary for 250 Vac from Secondary to Earth.

Risk Controls/ Engineering Condition of Acceptability

- The component shall be provided in compliance with the Marking (clause 7) and Separation (clause 8) requirements of the end use application.
 - 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.
 - Leakage current testing should be conducted in the end product application.
 - This power supply was evaluated with Two MOPP between Primary and Secondary; One MOPP primary and Earth/Secondary Reference Conductor; and One MOPP 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 end product should ensure that the requirements related to accompanying documents, clause 7.9, are met.
 - 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 min. Class B (130°C).
 - Cleaning test to be considered as part of end product evaluation.
 - The need for Marking Durability and Marking Legibility 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.
- General product information:**

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

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST
CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE
CERTIFICATS D'ESSAIS DES EQUIPEMENTS
ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

Product
Produit

Name and address of the applicant
Nom et adresse du demandeur

Name and address of the manufacturer
Nom et adresse du fabricant

Name and address of the factory
Nom et adresse de l'usine

Note: When more than one factory, please report on page 2
Note: Lorsque il y a plus d'une usine, veuillez utiliser la 2^{ème} page

Ratings and principal characteristics
Valeurs nominales et caractéristiques principales

Trademark (if any)
Marque de fabrique (si elle existe)

Type of Manufacturer's Testing Laboratories used
Type de programme du laboratoire d'essais
constructeur

Model / Type Ref.
Ref. De type

Additional information (if necessary may also be
reported on page 2)
Les informations complémentaires (si nécessaire,,
peuvent être indiqués sur la 2^{ème} page

A sample of the product was tested and found
to be in conformity with
Un échantillon de ce produit a été essayé et a été
considéré conforme à la

As shown in the Test Report Ref. No. which forms
part of this Certificate
Comme indiqué dans le Rapport d'essais numéro de
référence qui constitue partie de ce Certificat

CERTIFICAT D'ESSAI OC

Switching Power Supply

XP POWER LLC
SUITE 150
1241 E DYER RD
SANTA ANA CA 92705, USA

XP POWER LLC
SUITE 150
1241 E DYER RD
SANTA ANA CA 92705, USA

XP POWER LLC
990 BENEZIA AVE
SUNNYVALE CA 94085
USA

☒ Additional Information on page 2

Input Rated: 100-240 Vac, 50/60 Hz, 3 A

Output Rated: See Model Differences for details.



SMT

AHM250PSXX-ZZ
See Page 2

The original report was modified to include the following
changes/additions:

Modifying critical component table

☐ Additional Information on page 2

IEC 60601-1(ed.3)

11CA41865 issued on 2012-06-04

This CB Test Certificate is issued by the National Certification Body

Ce Certificat d'essai OC est établi par l'Organisme **National de Certification**



UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA

UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK

UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN

UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2012-06-07

Original Issue Date: 2011-11-04

Signature:

Jolanta M. Wroblewska



Ref. Certif. No.

US-18020-A1-UL

Model Details:

AHM250PSXX-ZZ (where XX is any number between 12-48 designating output voltage, ZZ can be blank, "A", "6", or "6A")

Factories:

XP POWER (KUNSHAN) LTD
230 BIN JIANG NAN RD
ZHANGPU TOWN, KUNSHAN, JIANGSU 215321
CHINA

Additional information (if necessary)

Information complémentaire (si nécessaire)



☒ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA

☐ UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK

☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN

☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2012-06-07

Original Issue Date: 2011-11-04

Signature:

Jolanta M. Wroblewska



Test Report issued under the responsibility of:



IEC 60601-1
Medical electrical equipment
Part 1: General requirements for basic safety and essential performance

Report Reference No.....: 11CA41865

Date of issue: Original: 2011-11-03
Amendment 1: 2012-06-04

Total number of pages.....: 22

CB Testing Laboratory.....: UL LLC

Address: 455 E. Trimble Rd., San Jose, CA 95131-1230, USA

Applicant's name.....: XP POWER LLC.

Address: SUITE 150
1241 E DYER RD
SANTA ANA CA 92705
UNITED STATES

Test specification:

Standard.....: IEC 60601-1: 2005 + CORR. 1 (2006) + CORR. 2 (2007)

Test procedure: CB Scheme

Non-standard test method.....: N/A

Test Report Form No.....: IEC60601_1G

Test Report Form Originator: UL LLC

Master TRF.....: Dated 2010-11

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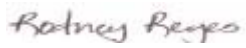


This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description: Switching Power Supply

Trade Mark:



Manufacturer	XP POWER LLC SUITE 150 1241 E DYER RD SANTA ANA CA 92705 UNITED STATES
Model/Type reference.....	AHM250PSXX-ZZ (where XX is any number between 12-48 designating output voltage, ZZ can be blank, "A", "6", or "6A")
Ratings	Input Rated: 100-240 Vac, 50/60 Hz, 3 A Output Rated: See Model Differences for details.

Testing procedure and testing location:	
<input type="checkbox"/> CB Testing Laboratory: Testing location/ address	
<input type="checkbox"/> Associated CB Test Laboratory: Testing location/ address	
Tested by (name + signature).. Approved by (+ signature)	
<input type="checkbox"/> Testing procedure: TMP Tested by (name + signature).. Approved by (+ signature)	
Testing location/ address	
<input type="checkbox"/> Testing procedure: WMT Tested by (name + signature).. Witnessed by (+ signature)	
Approved by (+ signature)	
Testing location/ address	
<input checked="" type="checkbox"/> Testing procedure: SMT Tested by (name + signature).. : Rodney Reyes Approved by (+ signature)	 
Supervised by (+ signature) : Michael J. Howell	
Testing location/ address	XP Power, 1241 E. Dyer Rd #150, Santa Ana, CA 92705, USA
<input type="checkbox"/> Testing procedure: RMT Tested by (name + signature).. Approved by (+ signature)	
Supervised by (+ signature) : Testing location/ address	

List of Attachments (including a total number of pages in each attachment):

National Differences (0 pages)

Enclosures (0 pages)

Summary of testing

No tests were conducted.

Summary of compliance with National Differences

List of countries addressed:

US, CAN

☒ The product fulfils the requirements of IEC 60601-1: 2005 + CORR. 1 (2006) + CORR. 2 (2007)

GENERAL INFORMATION	
Test item particulars (see also Clause 6):	
Classification of installation and use..... :	External Transportable
Device type (component/sub-assembly/ equipment/ system)..... :	Component, Power Supply
Intended use (Including type of patient, application location)..... :	To supply regulated power.
Mode of operation	Continuous
Supply connection	Appliance coupler
Accessories and detachable parts included	N/A
Other options include	N/A
Testing	
Date of receipt of test item(s)..... :	N/A
Dates tests performed	N/A
Possible test case verdicts:	
- test case does not apply to the test object	N/A
- test object does meet the requirement	Pass (P)
- test object was not evaluated for the requirement..... :	N/E
- test object does not meet the requirement	Fail (F)
Abbreviations used in the report:	
- normal condition	N.C.
- single fault condition..... :	S.F.C.
- means of Operator protection	MOOP
- means of Patient protection	MOPP
General remarks:	
<p>"(see Attachment #)" refers to additional information appended to the report.</p> <p>"(see appended table)" refers to a table appended to the report.</p> <p>The tests results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced except in full without the written approval of the testing laboratory.</p> <p>List of test equipment must be kept on file and available for review.</p> <p>Additional test data and/or information provided in the attachments to this report.</p>	
Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.	
Manufacturer's Declaration per sub-clause 6.2.5 of IEC60060-1:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Not applicable
When differences exist; they shall be identified in the General product information section.	

Name and address of factory (ies)	XP POWER LLC 990 BENECIA AVE SUNNYVALE CA 94085 UNITED STATES XP POWER (KUNSHAN) LTD 230 BIN JIANG NAN RD ZHANGPU TOWN KUNSHAN JIANGSU 215321 CHINA

Report Summary

The original report was modified on 2012-06-04 to include the following changes/additions:

Minor revisions to Critical Components List

Product Description

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

General product information:

Model Differences

All models in the Model AHM250PSXX-ZZ series are identical with exception to the Mains Transformer, T2, and minor secondary components that allow for different output voltage ratings. See Table below for Model Ratings at 40°C:

Model AHM250PS12: 12 Vdc, 17.5 A

Model AHM250PS15: 15 Vdc, 16.67 A

Model AHM250PS19: 19 Vdc, 13.16 A

Model AHM250PS24: 24 Vdc, 10.41 A

Model AHM250PS48: 48 Vdc, 5.21 A

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

Suffix -ZZ when provided denotes the following:

A - Optional Retention Clamp provided

6 - Optional C6 Type appliance inlet provided

6A - Both Optional Retention Clamp and C6 Type appliance inlet provided

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.

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.

Technical Considerations

- The product was investigated to the following additional standards: ANSI/AAMI ES60601-1:2005/C1:2009 (includes National Differences for USA); CAN/CSA-C22.2 No. 60601-1:08 (includes National Differences for Canada), EN 60601-1:2006
- Scope of Power Supply evaluation defers the following clauses to the be determined as part of the end product: Clause 7.5 (Safety Signs), Clause 7.9 (Accompanying Documents), Clause 9 (ME Hazard), Clause 10 (Radiation), Clause 14 (PEMS), Clause 16 (ME Systems)
- Supply connection: OVC II
- The product is evaluated only to the following hazards: Casualty, Fire, Shock
- 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
- Unit also complied with spacing requirements of UL60601-1 (1st), CSA C22.2 No. 60601-1 (2nd), and IEC 60601-1 (2nd) for Basic for 240 Vac from Primary to Ground, Double/Reinforced for 279 Vac from Primary to Secondary, and Supplementary for 240 Vac from Secondary to Earth.

Risk Controls/ Engineering Condition of Acceptability

- The component shall be installed in compliance with the Marking (clause 7) and Separation (clause 8) requirements of the end use application.
- 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)
- Repeating leakage current testing should be considered in the end product application.
- This power supply was evaluated with Two MOPP between Primary and Secondary; One MOPP primary and Earth; and One MOPP between Secondary and Earth.
- 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 end product should ensure that the requirements related to accompanying documents, clause 7.9, are met.
- 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): 430 Vpk, 240 Vrms; Primary-SEC: 591 Vpk, 279 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 and T1 are Class B (130°C).
- Cleaning test to be considered as part of end product evaluation.

- The need for Marking Durability and Marking Legibility 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.

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST
CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE
CERTIFICATS D'ESSAIS DES EQUIPEMENTS
ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

Product
Produit

Name and address of the applicant
Nom et adresse du demandeur

Name and address of the manufacturer
Nom et adresse du fabricant

Name and address of the factory
Nom et adresse de l'usine

Note: When more than one factory, please report on page 2
Note: Lorsque il y plus d'une usine, veuillez utiliser la 2^{ème} page

Ratings and principal characteristics
Valeurs nominales et caractéristiques principales

Trademark (if any)
Marque de fabrique (si elle existe)

Type of Manufacturer's Testing Laboratories used
Type de programme du laboratoire d'essais
constructeur

Model / Type Ref.
Ref. De type

Additional information (if necessary may also be
reported on page 2)
Les informations complémentaires (si nécessaire,,
peuvent être indiqués sur la 2^{ème} page

A sample of the product was tested and found
to be in conformity with
Un échantillon de ce produit a été essayé et a été
considéré conforme à la

As shown in the Test Report Ref. No. which forms
part of this Certificate
Comme indiqué dans le Rapport d'essais numéro de
référence qui constitue partie de ce Certificat

CERTIFICAT D'ESSAI OC

Switching Brick Power Supply

XP POWER L L C
SUITE 150
1241 E DYER RD
SANTA ANA, CA 92705 United States

XP POWER L L C
SUITE 150
1241 E DYER RD
SANTA ANA, CA 92705 United States

XP POWER (KUNSHAN) LTD
230 BIN JIANG NAN RD ZHANGPU TOWN KUNSHAN
JIANGSU 215321
CHINA

☒ Additional Information on page 2

Input Rated: 100-240 Vac, 50/60 Hz, 1.0 A
Output Rated: See Model Differences in CB Test Report for
details.



AHM85PSXXYY-ZZ
See Page 2

☒ Additional Information on page 2

IEC 60950-1(ed.2), IEC 60950-1(ed.2);am1

E139109-A57-CB-2 issued on 2013-06-20

This CB Test Certificate is issued by the National Certification Body

Ce Certificat d'essai OC est établi par l'Organisme **National de Certification**



UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA

UL (Denko), Borupvang 5A DK-2750 Ballerup, DENMARK

UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN

UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2013-06-20

Original Issue Date: 2013-02-15

Signature:

Jolanta M. Wroblewska



Ref. Certif. No.

US-20899-A2-UL

Model Details:

AHM85PSXXYY-ZZ (where XX is any number between 12-24 designating output voltage, YY can be blank or "C2" designating Class II configuration, and Z can be blank or "A", "6", "6A", "8", "8A")

Factories:

XP POWER L L C
990 BENECIA AVE SUNNYVALE CA 94085
UNITED STATES

Additional Information:

Additionally evaluated to EN 60950-1:2006/A11:2009/A1:2010/ A12:2011; National Differences specified in the CB Test Report.

The original report was modified to include the following changes/additions:

Report updated to include Taiwan national differences.

Additional information (if necessary)

Information complémentaire (si nécessaire)



☒ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA

☐ UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK

☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN

☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2013-06-20

Original Issue Date: 2013-02-15

Signature:

Jolanta M. Wroblewska



Test Report issued under
the responsibility of:



TEST REPORT
IEC 60950-1
Information technology equipment - Safety -
Part 1: General requirements

Report Reference No : E139109-A57-CB-2

Date of issue : 2013-02-15

Total number of pages : 8

CB Testing Laboratory : UL RTP

Address : 12 Laboratory Drive, Research Triangle Park , NC, 27709, USA

Applicant's name : XP POWER L L C
SUITE 150

Address : 1241 E DYER RD
SANTA ANA CA 92705
UNITED STATES

Test specification:

Standard : IEC 60950-1:2005 (2nd Edition); Am 1:2009

Test procedure : CB Scheme

Non-standard test method : N/A

Test Report Form No. : IEC60950_1B

Test Report Form originator : SGS Fimko Ltd


Master TRF : 2010-04

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This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description	Switching Brick Power Supply
Trade Mark	
Manufacturer	XP POWER L L C SUITE 150 1241 E DYER RD SANTA ANA CA 92705 UNITED STATES
Model/Type reference	AHM85PSXXYY-ZZ (where XX is any number between 12-24 designating output voltage, YY can be blank or "C2" designating Class II configuration, and Z can be blank or "A", "6", "6A", "8", "8A")
Ratings	Input Rated: 100-240 Vac, 50/60 Hz, 1.0 A Output Rated: See Model Differences in CB Test Report for details.

Testing procedure and testing location:

☒ **CB Testing Laboratory**

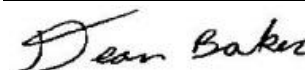
Testing location / address..... : UL RTP 12 Laboratory Drive, Research Triangle Park , NC,
27709, USA

☐ **Associated CB Test Laboratory**

Testing location / address..... :

Tested by (name + signature) : Michael Lockhart

Approved by (name + signature) ... : Dean Baker



☐ **Testing Procedure: TMP**

Tested by (name + signature) :

Approved by (+ signature) :

Testing location / address..... :

☐ **Testing Procedure: WMT**

Tested by (name + signature) :

Witnessed by (+ signature)..... :

Approved by (+ signature) :

Testing location / address..... :

☐ **Testing Procedure: SMT**

Tested by (name + signature) :

Approved by (+ signature) :

Supervised by (+ signature) :

Testing location / address..... :

☐ **Testing Procedure: RMT**

Tested by (name + signature) :

Approved by (+ signature) :

Supervised by (+ signature) :

Testing location / address..... :

List of Attachments

National Differences (0 pages)

Enclosures (5 pages)

Summary of Testing:

No tests were conducted

Summary of Compliance with National Differences:

Countries outside the CB Scheme membership may also accept this report.

List of countries addressed: AT, BE, CA, CH, CN, CZ, DE, DK, ES, EU, FI, FR, GB, GR, HU, IE, IT, JP, KR, NL, PL, PT, SE, SG, SI, SK, US

Issue Date: 2013-02-15
Amendment 2 2013-06-20

Page 4 of 8

Report Reference #

E139109-A57-CB-2

The product fulfills the requirements of: CSA C22.2 No. 60950-1-07 + A1:2011, EN 60950-1:2006 + A1:2010 + A11:2009 + A12:2011, IEC 60950-1:2005 + A1:2009, UL 60950-1 2nd Ed. Revised 2011-12-19

Copy of Marking Plate - Refer to Enclosure titled Marking Plate for copy.

Test item particulars :

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) 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

Possible test case verdicts:

- test case does not apply to the test object: N / A
 - test object does meet the requirement: P(Pass)
 - test object does not meet the requirement: F(Fail)

Testing:

Date(s) of receipt of test item: N/A
 Date(s) of Performance of tests: N/A

General remarks:

The test results presented in this report relate only to the object tested.
 This report shall not be reproduced, except in full, without the written approval of the testing laboratory.

"(see Enclosure #)" refers to additional information appended to the report.
 "(see appended table)" refers to a table appended to the report.

Throughout this report a point is used as the decimal separator.

Manufacturer's Declaration per Sub Clause 6.25 of IEC60950:

Yes

The application for obtaining a CB Test Certificate includes more than one factory and a declaration form the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided

When differences exist, they shall be identified in the General Product Information section.

Name and address of Factory(ies): XP POWER (KUNSHAN) LTD
 230 BIN JIANG NAN RD
 ZHANGPU TOWN

KUNSHAN
JIANGSU 215321 CHINA

XP POWER L L C
990 BENECIA AVE
SUNNYVALE CA 94085
UNITED STATES

GENERAL PRODUCT INFORMATION:

Report Summary

The original report was modified on 2013-06-20 to include the following changes/additions:
Report updated to include Taiwan national differences.

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 to power transformer (T1) winding and other minor changes to secondary circuit to accommodate different output voltages and current ratings.

Models may have an additional YY identifier which can be blank or "C2" to designate a Class II configuration.

Models may have an additional ZZ identifier which can be blank or "A", "6", "6A", "8", "8A" to designate the type of input connector:

- blank designates a C14 input connector (Class I construction) or C18 input connector (Class II construction);
- "A" designates a C14 input connector with optional IEC cable retention;
- "6" designates a C6 input connector;
- "6A" designates a C6 input connector with optional IEC cable retention;
- "8" designates a C8 input connector;
- "8A" designates a C8 input connector with optional IEC cable retention.

Output Ratings:

Model AHM85PS12: 12 Vdc, 7.08 A
Model AHM85PS15: 15 Vdc, 5.67 A
Model AHM85PS19: 19 Vdc, 4.47 A
Model AHM85PS24: 24 Vdc, 3.54 A

Additional Information

This report is a reissue of CBTR Ref. No. E139109-A57-CB-1, CB Test Certificate Ref. No. US/15675/UL and US/15675/A1/UL. Based on the previously conducted testing and the review of product technical documentation including photos, schematics, wiring diagrams and similar, has been determined that the product complies with the upgrade of the Second Edition of the Standard to Amendment 1.

No tests were conducted under this investigation due to reissue of CB Test Report Ref. No. E139109-A57-

CB-1. All required tests were carried out under the original investigation

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.

Technical Considerations

- 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% 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
- The equipment disconnect device is considered to be: Appliance inlet
- The product was investigated to the following additional standards: EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 (which includes all European national differences, including those specified in this test report).
- 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),
- The Clearances and Creepage Distances have additionally been assessed for suitability up to 5000m elevation. --

Abbreviations used in the report:

- normal condition	N.C.	- single fault condition	S.F.C
- operational insulation	OP	- basic insulation	BI
- basic insulation between parts of opposite polarity:	BOP	- supplementary insulation	SI
- double insulation	DI	- reinforced insulation	RI

Indicate used abbreviations (if any)

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST
CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE
CERTIFICATS D'ESSAIS DES EQUIPEMENTS
ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE CERTIFICAT D'ESSAI OC

Product
Produit

Switching Brick Power Supply

Name and address of the applicant
Nom et adresse du demandeur

XP POWER LLC
SUITE 150
1241 E DYER RD
SANTA ANA CA 92705 USA

Name and address of the manufacturer
Nom et adresse du fabricant

XP POWER LLC
SUITE 150
1241 E DYER RD
SANTA ANA CA 92705 USA

Name and address of the factory
Nom et adresse de l'usine

XP POWER (KUNSHAN) LTD
230 BIN JIANG NAN RD ZHANGPU TOWN
KUNSHAN JIANGSU 215300
CHINA

Note: When more than one factory, please report on page 2
Note: Lorsque il y plus d'une usine, veuillez utiliser la 2^{ème} page

Ratings and principal characteristics
Valeurs nominales et caractéristiques principales

☒ Additional Information on page 2
Input Rated: 100-240 Vac; 50/60 Hz; 1.2 A
Output Rated: See Test Report for details

Trademark (if any)
Marque de fabrique (si elle existe)



Type of Manufacturer's Testing Laboratories used
Type de programme du laboratoire d'essais constructeur

Model / Type Ref.
Ref. De type

AHM100PS24 -XD0112A, AHM100PSXXYY-ZZ
See Page 2

Additional information (if necessary may also be reported on page 2)
Les informations complémentaires (si nécessaire,, peuvent être indiqués sur la 2^{ème} page

Additionally evaluated to EN 60950-1:2006/ A11:2009/ A1:2010/ A12:2011; National Differences specified in the CB Test Report.
☐ Additional Information on page 2

A sample of the product was tested and found to be in conformity with
Un échantillon de ce produit a été essayé et a été considéré conforme à la

IEC 60950-1(ed.2), IEC 60950-1(ed.2);am1

As shown in the Test Report Ref. No. which forms part of this Certificate
Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat

E139109-A45-CB-2 issued on 2013-04-04

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme **National de Certification**



- ☒ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA
- ☐ UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK
- ☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN
- ☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2013-04-05

Signature:

Jolanta M. Wroblewska



Ref. Certif. No.

US-21324-UL

Model Details:

AHM100PSXXYY-ZZ (where XX is any number between 12-48 designating output voltage and YY can be blank or "C2" designating Class II configuration, and -ZZ can be blank or "-A", "-6", "-6A", "-8", "-8A")

Factories:

XP POWER LLC
990 BENECIA AVE SUNNYVALE CA 94085
USA

Additional information (if necessary)

Information complémentaire (si nécessaire)



☒ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA

☐ UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK

☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN

☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2013-04-05

Signature:

Jolanta M. Wroblewska

Test Report issued under
the responsibility of:

TEST REPORT
IEC 60950-1
Information technology equipment - Safety -
Part 1: General requirements

Report Reference No : E139109-A45-CB-2

Date of issue : 2013-04-04

Total number of pages : 67

CB Testing Laboratory : UL San Jose

Address : 455 E. Trimble Rd., San Jose, CA, 95131-1230, USA

Applicant's name : XP POWER LLCAddress : SUITE 150
1241 E DYER RD
SANTA ANA CA 92705
UNITED STATES**Test specification:**

Standard : IEC 60950-1:2005 (2nd Edition); Am 1:2009

Test procedure : CB Scheme

Non-standard test method : N/A

Test Report Form No. : IEC60950_1B

Test Report Form originator : SGS Fimko Ltd


Master TRF : 2010-04

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If this test Report is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description	Switching Brick Power Supply
Trade Mark	
Manufacturer	XP POWER LLC SUITE 150 1241 E DYER RD SANTA ANA CA 92705 UNITED STATES
Model/Type reference	AHM100PSXXYY-ZZ (where XX is any number between 12-48 designating output voltage and YY can be blank or "C2" designating Class II configuration, and -ZZ can be blank or "-A", "-6", "-6A", "-8", "-8A") AHM100PS24 -XD0112A
Ratings	Input Rated: 100-240 Vac, 50/60 Hz, 1.2 A Output Rated: See Model Differences in CB Test Report for details.

Testing procedure and testing location:	
<input type="checkbox"/> CB Testing Laboratory	Testing location / address..... :
<input checked="" type="checkbox"/> Associated CB Test Laboratory	Testing location / address..... : UL Brea 2929 Imperial Hwy, Ste 100, Brea, CA, 92821, USA
	Tested by (name + signature) : Sal Oseguera
	Approved by (name + signature) ... : Dean Baker
<input type="checkbox"/> Testing Procedure: TMP	Tested by (name + signature) : _____
	Approved by (+ signature) : _____
	Testing location / address..... : _____
<input type="checkbox"/> Testing Procedure: WMT	Tested by (name + signature) : _____
	Witnessed by (+ signature)..... : _____
	Approved by (+ signature) : _____
	Testing location / address..... : _____
<input type="checkbox"/> Testing Procedure: SMT	Tested by (name + signature) : _____
	Approved by (+ signature) : _____
	Supervised by (+ signature) : _____
	Testing location / address..... : _____
<input type="checkbox"/> Testing Procedure: RMT	Tested by (name + signature) : _____
	Approved by (+ signature) : _____
	Supervised by (+ signature) : _____
	Testing location / address..... : _____

List of Attachments

National Differences (35 pages)

Enclosures (143 pages)

Summary Of Testing

Unless otherwise indicated, all tests were conducted at UL Brea 2929 Imperial Hwy, Ste 100, Brea, CA, 92821, USA.

Tests performed (name of test and test clause)	Testing location / Comments
Guide Information Page - Maximum Output Voltage, Current, and Volt Ampere Measurement (1.2.2.1)	Evaluated under original CB Scheme investigation.
Input: Single-Phase (1.6.2)	Evaluated under original CB Scheme

	investigation.
Durability of Marking (1.7.11)	Evaluated under original CB Scheme investigation.
Energy Hazard Measurements (2.1.1.5, 2.1.2, 1.2.8.10)	Evaluated under original CB Scheme investigation.
Capacitance Discharge (2.1.1.7)	Evaluated under original CB Scheme investigation.
SELV Reliability Test Including Hazardous Voltage Measurements (2.2.2, 2.2.3, 2.2.4, Part 22 6.1)	Evaluated under original CB Scheme investigation.
Limited Current Circuit Measurement (2.4.1, 2.4.2)	Evaluated under original CB Scheme investigation.
Limited Power Source Measurements (2.5)	Evaluated under original CB Scheme investigation.
Protective Bonding II (2.6.3.4, 2.6.1)	Evaluated under original CB Scheme investigation.
Humidity (2.9.1, 2.9.2, 5.2.2)	Evaluated under original CB Scheme investigation.
Determination of Working Voltage; Working Voltage Measurement (2.10.2)	Evaluated under original CB Scheme investigation.
Thin Sheet Material (2.10.5.9, 2.10.5.10, 2.10.5.6)	Evaluated under original CB Scheme investigation.
Transformer and Wire /Insulation Electric Strength (2.10.5.13)	Evaluated under original CB Scheme investigation.
Strain Relief (3.2.6, 4.2.1, 4.2.7)	Evaluated under original CB Scheme investigation.
Steady Force (4.2.1 - 4.2.4)	Evaluated under original CB Scheme investigation.
Impact (4.2.5, 4.2.1, Part 22 10.2)	Evaluated under original CB Scheme investigation.
Drop (4.2.6, 4.2.1)	Evaluated under original CB Scheme investigation.
Stress Relief (4.2.7, 4.2.1)	Evaluated under original CB Scheme investigation.
Heating (4.5.1, 1.4.12, 1.4.13)	Evaluated under original CB Scheme investigation.
Ball Pressure (4.5.5, 4.5)	Evaluated under original CB Scheme investigation.
Touch Current (Single-Phase; TN/TT System) (5.1, Annex D)	Evaluated under original CB Scheme investigation.
Electric Strength (5.2.2)	Evaluated under original CB Scheme investigation.
Component Failure (5.3.1, 5.3.4, 5.3.7)	Evaluated under original CB Scheme investigation.
Abnormal Operation (5.3.1 - 5.3.9)	Evaluated under original CB Scheme investigation.

Transformer Abnormal Operation (5.3.3, 5.3.7b, Annex C.1)

Evaluated under original CB Scheme investigation.

Power Supply Output Short-Circuit/Overload (5.3.7)

Evaluated under original CB Scheme investigation.

Summary of Compliance with National Differences:

Countries outside the CB Scheme membership may also accept this report.

List of countries addressed: AT, BE, CA, CH, CZ, DE, DK, ES, EU, FI, FR, GB, GR, HU, IE, IT, JP, KR, NL, PL, PT, SE, SI, SK, US

The product fulfills the requirements of: CSA C22.2 No. 60950-1-07 + A1:2011, EN 60950-1:2006 + A1:2010 + A11:2009 + A12:2011, IEC 60950-1:2005 + A1:2009, UL 60950-1 2nd Ed. Revised 2011-12-19

Copy of Marking Plate - Refer to Enclosure titled Marking Plate for copy.

Test item particulars :

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)	up to 3048
Altitude of test laboratory (m)	less than 2000 meters
Mass of equipment (kg)	0.45

Possible test case verdicts:

- test case does not apply to the test object : N / A
- test object does meet the requirement : P(Pass)
- test object does not meet the requirement : F(Fail)

Testing:

Date(s) of receipt of test item	2010-02-03
Date(s) of Performance of tests	2010-03-08, 2010-03-22

General remarks:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the testing laboratory.

"(see Enclosure #)" refers to additional information appended to the report.
"(see appended table)" refers to a table appended to the report.

Throughout this report a point is used as the decimal separator.

Manufacturer's Declaration per Sub Clause 6.25 of IEC 60950-1:

Yes

The application for obtaining a CB Test Certificate includes more than one factory and a declaration form the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided

When differences exist, they shall be identified in the General Product Information section.

Name and address of Factory(ies): XP POWER (KUNSHAN) LTD
230 BIN JIANG NAN RD
ZHANGPU TOWN

KUNSHAN
JIANGSU 215300 CHINA

XP POWER LLC
990 BENECIA AVE
SUNNYVALE CA 94085
UNITED STATES

GENERAL PRODUCT INFORMATION:

Report Summary

All applicable tests according to the referenced standard(s) have been carried out.

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 to power transformer (T2) winding and other minor changes to secondary circuit to accommodate different output voltages and current ratings.

Models may have an additional YY identifier which can be blank or "C2" to designate a Class II configuration.

Models may have an additional ZZ identifier which can be blank or "A", "6", "6A", "8", "8A" to designate the type of input connector:

- blank designates a C14 input connector (Class I construction) or C18 input connector (Class II construction);
- "A" designates a C14 input connector with optional IEC cable retention;
- "6" designates a C6 input connector (Class I or Class II construction);
- "6A" designates a C6 input connector with optional IEC cable retention;
- "8" designates a C8 input connector (Class I or Class II construction)
- "8A" designates a C8 input connector with optional IEC cable retention.

Output Ratings:

Model AHM100PS12: 12 Vdc, 8.33 A
Model AHM100PS15: 15 Vdc, 6.67 A
Model AHM100PS19: 19 Vdc, 5.26 A
Model AHM100PS24: 24 Vdc, 4.16 A
Model AHM100PS48: 48 Vdc, 2.08 A

Model AHM100PS24- XD0112A is the same as previously Recognized Model AHM100PS24 except for model designation.

Additional Information

This report is a reissue of CBTR Ref. No. E139109-A45-CB-1, CB Test Certificate Ref. No. US/15053/UL, US/15053A/UL, US/15053B/UL and US-15053-A3-UL. Based on the previously conducted testing and the review of product technical documentation including photos, schematics, wiring diagrams and similar, it has been determined that the product complies with the upgrade of the Second Edition of the Standard to

Amendment 1.

No tests were conducted under this investigation due to reissue of CB Test Report Ref. No. E139109-A45-CB-1. All required tests were carried out under the original investigation.

Required values for clearance are adjusted for 3048 m (1.15 correction factor as per IEC 60664-1, Table A2).

The following alternate components with equivalent ratings and certification were added as part of reissue:

- X Capacitor - Panasonic, Type ECQUA, ECQUG and ECQUL Series.
- X Capacitor - Epcos/Siemen, Type B32921, B32922, B32923 E, B32924 E/F, B32926 E/F Series.
- Y Capacitor - Kemet, Type ERP610 Series.
- Y Capacitor - TDK, Type CD Series.
- Y Capacitor - Vishay, Type VY1 Series.

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.

The attached Licenses for the Critical Components effective for three years from the date of issue noted on the License. A Recognizing National Certification Body (NCB) may challenge the CB Test Certificate when it is more than three years old.

Technical Considerations

- 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
- The equipment disconnect device is considered to be: Appliance inlet
- The product was investigated to the following additional standards: EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 (which includes all European national differences, including those specified in this test report).
- The following accessible locations (with circuit/schematic designation) are within a limited current circuit: Load side of CY3 (Pri to Sec bridging capacitor)
- 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),

Abbreviations used in the report:

- normal condition	N.C.	- single fault condition	S.F.C
- operational insulation	OP	- basic insulation	BI
- basic insulation between parts of opposite polarity:	BOP	- supplementary insulation	SI

- double insulation DI - reinforced insulation RI

Indicate used abbreviations (if any)

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST
CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE
CERTIFICATS D'ESSAIS DES EQUIPEMENTS
ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE CERTIFICAT D'ESSAI OC

Product
Produit

AC/DC Power Adapter

Name and address of the applicant
Nom et adresse du demandeur

XP POWER L L C
SUITE 150 1241 E DYER RD
SANTA ANA CA 92705, USA

Name and address of the manufacturer
Nom et adresse du fabricant

XP POWER L L C
SUITE 150 1241 E DYER RD
SANTA ANA CA 92705, USA

Name and address of the factory
Nom et adresse de l'usine

XP POWER (KUNSHAN) LTD
230 BIN JIANG NAN RD
ZHANGPU TOWN KUNSHAN JIANGSU 215300
CHINA

Note: When more than one factory, please report on page 2
Note: Lorsque il y a plus d'une usine, veuillez utiliser la 2^{ème} page

Ratings and principal characteristics
Valeurs nominales et caractéristiques principales

☒ Additional Information on page 2
Input: 100-240 Vac, 50/60 Hz, 1.8 A
Output: See Model Differences section

Trademark (if any)
Marque de fabrique (si elle existe)



Type of Manufacturer's Testing Laboratories used
Type de programme du laboratoire d'essais
constructeur

Model / Type Ref.
Ref. De type

AHM150PSXXYY-ZZ
See Page 2

Additional information (if necessary may also be
reported on page 2)
Les informations complémentaires (si nécessaire,,
peuvent être indiqués sur la 2^{ème} page

Additionally evaluated to EN 60950-1:2006/A11:2009/A1:2010/
A12:2011; National Differences specified in the CB Test Report.
☐ Additional Information on page 2

A sample of the product was tested and found
to be in conformity with
Un échantillon de ce produit a été essayé et a été
considéré conforme à la

IEC 60950-1(ed.2), IEC 60950-1(ed.2);am1

As shown in the Test Report Ref. No. which forms part
of this Certificate
Comme indiqué dans le Rapport d'essais numéro de
référence qui constitue partie de ce Certificat

E139109-A62-CB-2 issued on 2013-04-05

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme **National de Certification**



- ☒ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA
- ☐ UL (Denko), Borupvang 5A DK-2750 Ballerup, DENMARK
- ☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN
- ☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2013-04-05

Signature:

Jolanta M. Wroblewska



Ref. Certif. No.

US-21343-UL

Model Details:

AHM150PSXXYY-ZZ (where XX is any number between 12-48 designating output voltage, where YY can be "C2" or blank, and ZZ can be blank or "A", "6", "8", "6A", or "8A", may be provided with or without "-")

Factories:

XP POWER LLC
990 BENECIA AVE
SUNNYVALE CA 94085
USA

Additional information (if necessary)

Information complémentaire (si nécessaire)



☒ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA

☐ UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK

☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN

☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2013-04-05

Signature:

Jolanta M. Wroblewska



Test Report issued under
the responsibility of:



TEST REPORT
IEC 60950-1
Information technology equipment - Safety -
Part 1: General requirements

Report Reference No : E139109-A62-CB-2

Date of issue : 2013-04-05

Total number of pages : 73

CB Testing Laboratory : UL San Jose

Address : 455 E. Trimble Rd., San Jose, CA, 95131-1230, USA

Applicant's name : XP POWER L L C
SUITE 150

Address : 1241 E DYER RD
SANTA ANA CA 92705
UNITED STATES

Test specification:

Standard : IEC 60950-1:2005 (2nd Edition); Am 1:2009

Test procedure : CB Scheme

Non-standard test method : N/A

Test Report Form No. : IEC60950_1B

Test Report Form originator : SGS Fimko Ltd


Master TRF : 2010-04

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If this test Report is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description	AC/DC Power Adapter
Trade Mark	
Manufacturer	XP POWER L L C SUITE 150 1241 E DYER RD SANTA ANA CA 92705 UNITED STATES
Model/Type reference	AHM150PSXXYY-ZZ (where XX is any number between 12-48 designating output voltage, where YY can be "C2" or blank, and ZZ can be blank or "A", "6", "8", "6A", or "8A", may be provided with or without "-")
Ratings	Input: 100-240 Vac, 50/60 Hz, 1.8 A Output: See Model Differences section

Testing procedure and testing location:	
<input type="checkbox"/> CB Testing Laboratory	Testing location / address..... :
<input checked="" type="checkbox"/> Associated CB Test Laboratory	Testing location / address..... : UL Brea 2929 Imperial Hwy, Ste 100, Brea, CA, 92821, USA
	Tested by (name + signature) : Sal Oseguera
	Approved by (name + signature) ... : Kevin Tang
<input type="checkbox"/> Testing Procedure: TMP	Tested by (name + signature) : _____
	Approved by (+ signature) : _____
	Testing location / address..... : _____
<input type="checkbox"/> Testing Procedure: WMT	Tested by (name + signature) : _____
	Witnessed by (+ signature)..... : _____
	Approved by (+ signature) : _____
	Testing location / address..... : _____
<input type="checkbox"/> Testing Procedure: SMT	Tested by (name + signature) : _____
	Approved by (+ signature) : _____
	Supervised by (+ signature) : _____
	Testing location / address..... : _____
<input type="checkbox"/> Testing Procedure: RMT	Tested by (name + signature) : _____
	Approved by (+ signature) : _____
	Supervised by (+ signature) : _____
	Testing location / address..... : _____

List of Attachments

National Differences (37 pages)

Enclosures (55 pages)

Summary Of Testing

Unless otherwise indicated, all tests were conducted at UL Brea 2929 Imperial Hwy, Ste 100, Brea, CA, 92821, USA.

Tests performed (name of test and test clause)	Testing location / Comments
Guide Information Page - Maximum Output Voltage, Current, and Volt Ampere Measurement (1.2.2.1)	Evaluated under original CB Scheme investigation.
Input: Single-Phase (1.6.2)	Evaluated under original CB Scheme

	investigation.
Durability of Marking (1.7.11)	Evaluated under original CB Scheme investigation.
Energy Hazard Measurements (2.1.1.5, 2.1.2, 1.2.8.10)	Evaluated under original CB Scheme investigation.
Capacitance Discharge (2.1.1.7)	Evaluated under original CB Scheme investigation.
SELV Reliability Test Including Hazardous Voltage Measurements (2.2.2, 2.2.3, 2.2.4, Part 22 6.1)	Evaluated under original CB Scheme investigation.
Limited Current Circuit Measurement (2.4.1, 2.4.2)	Evaluated under original CB Scheme investigation.
Protective Bonding II (2.6.3.4, 2.6.1)	Evaluated under original CB Scheme investigation.
Humidity (2.9.1, 2.9.2, 5.2.2)	Evaluated under original CB Scheme investigation.
Determination of Working Voltage; Working Voltage Measurement (2.10.2)	Evaluated under original CB Scheme investigation.
Thin Sheet Material (2.10.5.9, 2.10.5.10, 2.10.5.6)	Evaluated under original CB Scheme investigation.
Transformer and Wire /Insulation Electric Strength (2.10.5.13)	Evaluated under original CB Scheme investigation.
Strain Relief (3.2.6, 4.2.1, 4.2.7)	Evaluated under original CB Scheme investigation.
Steady Force (4.2.1 - 4.2.4)	Evaluated under original CB Scheme investigation.
Impact (4.2.5, 4.2.1, Part 22 10.2)	Evaluated under original CB Scheme investigation.
Drop (4.2.6, 4.2.1)	Evaluated under original CB Scheme investigation.
Stress Relief (4.2.7, 4.2.1)	Evaluated under original CB Scheme investigation.
Heating (4.5.1, 1.4.12, 1.4.13)	Evaluated under original CB Scheme investigation.
Touch Current (Single-Phase; TN/TT System) (5.1, Annex D)	Evaluated under original CB Scheme investigation.
Electric Strength (5.2.2)	Evaluated under original CB Scheme investigation.
Component Failure (5.3.1, 5.3.4, 5.3.7)	Evaluated under original CB Scheme investigation.
Transformer Abnormal Operation (5.3.3, 5.3.7b, Annex C.1)	Evaluated under original CB Scheme investigation.
Power Supply Output Short-Circuit/Overload (5.3.7)	Evaluated under original CB Scheme investigation.

Summary of Compliance with National Differences:

Countries outside the CB Scheme membership may also accept this report.

List of countries addressed: AT, BE, BG, CA, CH, CZ, DE, DK, ES, EU, FI, FR, GB, GR, HU, IE, IL, IT, JP, KR, NL, PL, PT, RO, SE, SI, SK, UA, US

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

Copy of Marking Plate - Refer to Enclosure titled Marking Plate for copy.

Test item particulars :

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	No
IT testing, phase-phase voltage (V)	N/A
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)	3048m
Altitude of test laboratory (m)	less than 2000 meters
Mass of equipment (kg)	0.62

Possible test case verdicts:

- test case does not apply to the test object : N / A
- test object does meet the requirement : P(Pass)
- test object does not meet the requirement : F(Fail)

Testing:

Date(s) of receipt of test item	2010-05-28
Date(s) of Performance of tests	2010-11-01 to 2010-12-28

General remarks:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the testing laboratory.

"(see Enclosure #)" refers to additional information appended to the report.

"(see appended table)" refers to a table appended to the report.

Throughout this report a point is used as the decimal separator.

Manufacturer's Declaration per Sub Clause 6.25 of IEC60950-1:

Yes

The application for obtaining a CB Test Certificate includes more than one factory and a declaration form the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided

When differences exist, they shall be identified in the General Product Information section.

Name and address of Factory(ies): XP POWER (KUNSHAN) LTD
230 BIN JIANG NAN RD
ZHANGPU TOWN

KUNSHAN
JIANGSU 215300 CHINA

XP POWER LLC
990 BENECIA AVE
SUNNYVALE CA 94085
UNITED STATES

GENERAL PRODUCT INFORMATION:

Report Summary

All applicable tests according to the referenced standard(s) have been carried out.

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 power transformer (T1) winding and other minor changes to secondary circuit to accommodate different output voltages and current ratings.

Output Ratings for 40°C:

Model AHM150PS12: 12 Vdc, 12.5 A
Model AHM150PS15: 15 Vdc, 10.0 A
Model AHM150PS19: 19 Vdc, 7.89 A
Model AHM150PS24: 24 Vdc, 6.25 A
Model AHM150PS48: 48 Vdc, 3.13 A

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)

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

Additional Information

This report is a reissue of CBTR Ref. No. E139109-A62-CB-1, CB Test Certificate Ref. Nos. US/16498/UL and US-16498-A1-UL. Based on the previously conducted testing and the review of product technical documentation including photos, schematics, wiring diagrams and similar, has been determined that the product complies with the upgrade of the Second Edition of the Standard to Amendment 1.

No tests were conducted under this investigation due to reissue of CB Test Report Ref. No. E139109-A62-CB-1. All required tests were carried out under the original investigation.

The following alternate components with equivalent ratings and certification were added as part of reissue:

- X Capacitor - Panasonic, Type ECQUA, ECQUG and ECQUL Series.
- X Capacitor - Epcos/Siemens, Type B32921, B32922, B32923 E, B32924 E/F, B32926 E/F Series.
- Y Capacitor - Kemet, Type ERP610 Series.
- Y Capacitor - TDK, Type CD Series.
- Y Capacitor - Vishay, Type VY1 Series

Required values for clearance are adjusted for 3048 m (1.15 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.

The attached Licenses for the Critical Components effective for three years from the date of issue noted on the License. A Recognizing National Certification Body (NCB) may challenge the CB Test Certificate when it is more than three years old.

Technical Considerations

- 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% rated load); 60°C (at 60% rated 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: TN
- The equipment disconnect device is considered to be: Appliance inlet
- The product was investigated to the following additional standards: EN 60950-1:2006 + A11:2009 + A12:2010 + A12:2011 (which includes all European national differences, including those specified in this test report).
- The following accessible locations (with circuit/schematic designation) are within a limited current circuit: Load side of Capacitor CY3 and CY4,
- 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

Abbreviations used in the report:

- normal condition	N.C.	- single fault condition	S.F.C
- operational insulation	OP	- basic insulation	BI
- basic insulation between parts of opposite polarity:	BOP	- supplementary insulation	SI
- double insulation	DI	- reinforced insulation	RI
Indicate used abbreviations (if any)			

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST
CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE
CERTIFICATS D'ESSAIS DES EQUIPEMENTS
ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

Product
Produit

Name and address of the applicant
Nom et adresse du demandeur

Name and address of the manufacturer
Nom et adresse du fabricant

Name and address of the factory
Nom et adresse de l'usine

Note: When more than one factory, please report on page 2
Note: Lorsque il y plus d'une usine, veuillez utiliser la 2^{ème} page

Ratings and principal characteristics
Valeurs nominales et caractéristiques principales

Trademark (if any)
Marque de fabrique (si elle existe)

Type of Manufacturer's Testing Laboratories used
Type de programme du laboratoire d'essais
constructeur

Model / Type Ref.
Ref. De type

Additional information (if necessary may also be
reported on page 2)
Les informations complémentaires (si nécessaire,,
peuvent être indiqués sur la 2^{ème} page

A sample of the product was tested and found
to be in conformity with
Un échantillon de ce produit a été essayé et a été
considéré conforme à la

As shown in the Test Report Ref. No. which forms
part of this Certificate
Comme indiqué dans le Rapport d'essais numéro de
référence qui constitue partie de ce Certificat

CERTIFICAT D'ESSAI OC

Power supply, switch mode type

XP POWER L L C
SUITE 150
1241 E DYER RD
SANTA ANA CA 92705
UNITED STATES

XP POWER L L C
SUITE 150
1241 E DYER RD
SANTA ANA CA 92705
UNITED STATES

XP POWER LLC
990 BENECIA AVE
SUNNYVALE CA 94085
UNITED STATES

☒ Additional Information on page 2

Input: 100-240 Vac, 2.2 A, 50/60 Hz;

Output: See Enclosure - Miscellaneous Ratings Table for details.



WMT

AHM180PSXXYY-ZZ
See Page 2

Additionally evaluated to EN 60950-1:2006/A11:2009/ A1:2010/
A12:2011; National Differences specified in the CB Test Report.

☐ Additional Information on page 2

IEC 60950-1(ed.2), IEC 60950-1(ed.2);am1

E139109-A48-CB-2 issued on 2013-04-16

This CB Test Certificate is issued by the National Certification Body

Ce Certificat d'essai OC est établi par l'Organisme **National de Certification**



UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA

UL (Denko), Borupvang 5A DK-2750 Ballerup, DENMARK

UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN

UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2013-04-16

Signature:

Jolanta M. Wroblewska



Ref. Certif. No.

US-21391-UL

Model Details:

AHM180PSXXYY-ZZ where XX is any number between 12-48 designating output voltage, where YY can be "C2" or blank, and ZZ can be blank or "A" designating optional clamp retention, or "6" or "6A" designating optional type C6 appliance inlet and clamp retention.

Factories:

XP POWER (KUNSHAN) LIMITED
230, BIN JIANG NAN ROAD
ZHANG PU TOWN
KUNSHAN, JIANGSU 215300
CHINA

Additional information (if necessary)

Information complémentaire (si nécessaire)



☒ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA

☐ UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK

☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN

☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2013-04-16

Signature:

Jolanta M. Wroblewska



Test Report issued under
the responsibility of:



TEST REPORT
IEC 60950-1
Information technology equipment - Safety -
Part 1: General requirements

Report Reference No : E139109-A48-CB-2

Date of issue : 2013-04-16

Total number of pages : 78

CB Testing Laboratory : UL San Jose

Address : 455 E. Trimble Rd., San Jose, CA, 95131-1230, USA

Applicant's name : XP POWER LLC
SUITE 150

Address : 1241 E DYER RD
SANTA ANA CA 92705
UNITED STATES

Test specification:

Standard : IEC 60950-1:2005 (2nd Edition); Am 1:2009

Test procedure : CB Scheme

Non-standard test method : N/A

Test Report Form No. : IEC60950_1B

Test Report Form originator : SGS Fimko Ltd


Master TRF : 2010-04

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If this test Report is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description	Power supply, switch mode type
Trade Mark	
Manufacturer	XP POWER LLC SUITE 150 1241 E DYER RD SANTA ANA CA 92705 UNITED STATES
Model/Type reference	AHM180PSXXYY-ZZ (where XX is any number between 12-48 designating output voltage, where YY can be "C2" or blank, and ZZ can be blank or "A" designating optional clamp retention, or "6" or "6A" designating optional type C6 appliance inlet and clamp retention)
Ratings	Input: 100-240 Vac, 2.2 A, 50/60 Hz Output: See Enclosure - Miscellaneous Ratings Table for details.

Testing procedure and testing location:	
<input type="checkbox"/> CB Testing Laboratory	Testing location / address..... :
<input type="checkbox"/> Associated CB Test Laboratory	Testing location / address..... :
	Tested by (name + signature) :
	Approved by (name + signature) ... :
<input type="checkbox"/> Testing Procedure: TMP	Testing location / address..... :
	Tested by (name + signature) :
	Approved by (+ signature) :
<input checked="" type="checkbox"/> Testing Procedure: WMT	Testing location / address..... :
	Tested by (name + signature) : Rodney Reyes
	Witnessed by (+ signature)..... : Sal Oseguera
	Approved by (+ signature) : Benjamin Mapes
	Testing location / address..... : XP Power LLC, Suite 150, 1241 E Dyer Rd, Santa Ana, 92705 USA
<input type="checkbox"/> Testing Procedure: SMT	Testing location / address..... :
	Tested by (name + signature) :
	Approved by (+ signature) :
	Supervised by (+ signature) :
<input type="checkbox"/> Testing Procedure: RMT	Testing location / address..... :
	Tested by (name + signature) :
	Approved by (+ signature) :
	Supervised by (+ signature) :

List of Attachments

National Differences (35 pages)

Enclosures (149 pages)

Summary Of Testing

Unless otherwise indicated, all tests were conducted at XP Power LLC, Suite 150, 1241 E Dyer Rd, Santa Ana, 92705 USA.

Tests performed (name of test and test clause)	Testing location / Comments
Guide Information Page - Maximum Output Voltage,	Evaluated under original CB Scheme

Current, and Volt Ampere Measurement (1.2.2.1)	investigation.
Input: Single-Phase (1.6.2)	Evaluated under original CB Scheme investigation.
Energy Hazard Measurements (2.1.1.5, 2.1.2, 1.2.8.10)	XP Power LLC, Suite 150, 1241 E Dyer Rd, Santa Ana, 92705 USA - WMT/WTDP
Capacitance Discharge (2.1.1.7)	Evaluated under original CB Scheme investigation.
SELV Reliability Test Including Hazardous Voltage Measurements (2.2.2, 2.2.3, 2.2.4, Part 22 6.1)	Evaluated under original CB Scheme investigation.
Limited Current Circuit Measurement (2.4.1, 2.4.2)	Evaluated under original CB Scheme investigation.
Protective Bonding II (2.6.3.4, 2.6.1)	Evaluated under original CB Scheme investigation.
Humidity (2.9.1, 2.9.2, 5.2.2)	Evaluated under original CB Scheme investigation.
Determination of Working Voltage; Working Voltage Measurement (2.10.2)	Evaluated under original CB Scheme investigation.
Thin Sheet Material (2.10.5.9, 2.10.5.10, 2.10.5.6)	Evaluated under original CB Scheme investigation.
Transformer and Wire /Insulation Electric Strength (2.10.5.13)	Evaluated under original CB Scheme investigation.
Strain Relief (3.2.6, 4.2.1, 4.2.7)	Evaluated under original CB Scheme investigation.
Steady Force (4.2.1 - 4.2.4)	Evaluated under original CB Scheme investigation.
Impact (4.2.5, 4.2.1, Part 22 10.2)	Evaluated under original CB Scheme investigation.
Drop (4.2.6, 4.2.1)	Evaluated under original CB Scheme investigation.
Stress Relief (4.2.7, 4.2.1)	Evaluated under original CB Scheme investigation.
Heating (4.5.1, 1.4.12, 1.4.13)	Evaluated under original CB Scheme investigation.
Ball Pressure (4.5.5, 4.5)	Evaluated under original CB Scheme investigation.
IT Touch Current (Single-Phase) (5.1, Annex D)	Evaluated under original CB Scheme investigation.
Electric Strength (5.2.2)	Evaluated under original CB Scheme investigation.
Component Failure (5.3.1, 5.3.4, 5.3.7)	Evaluated under original CB Scheme investigation.
Transformer Abnormal Operation (5.3.3, 5.3.7b, Annex C.1)	Evaluated under original CB Scheme investigation.
Power Supply Output Short-Circuit/Overload (5.3.7)	Evaluated under original CB Scheme

investigation.

Summary of Compliance with National Differences:

Countries outside the CB Scheme membership may also accept this report.

List of countries addressed: AT, BE, BG, CA, CH, CZ, DE, DK, ES, EU, FI, FR, GB, GR, HU, IE, IT, JP, KR, NL, PL, PT, RO, SE, SI, SK, UA, US

The product fulfills the requirements of: CSA C22.2 No. 60950-1-07 + A1:2011, EN 60950-1:2006 + A1:2010 + A11:2009 + A12:2011, IEC 60950-1:2005 + A1:2009, UL 60950-1 2nd Ed. Revised 2011-12-19

Copy of Marking Plate - Refer to Enclosure titled Marking Plate for copy.

Test item particulars :

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	No
IT testing, phase-phase voltage (V)	N/A
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
Pollution degree (PD)	PD 2
IP protection class	IPX0
Altitude of operation (m)	3048
Altitude of test laboratory (m)	107
Mass of equipment (kg)	0.62

Possible test case verdicts:

- test case does not apply to the test object : N / A
- test object does meet the requirement : P(Pass)
- test object does not meet the requirement : F(Fail)

Testing:

Date(s) of receipt of test item	2013-04-12, 2010-02-08, 2010-04-26, 2010-10-10
Date(s) of Performance of tests	2013-04-12, 2010-03-23 to 2010-05-27, 2010-11-01 to 2010-11-25

General remarks:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the testing laboratory.

"(see Enclosure #)" refers to additional information appended to the report.

"(see appended table)" refers to a table appended to the report.

Throughout this report a point is used as the decimal separator.

Manufacturer's Declaration per Sub Clause 6.25 of IEC60950-1:

Yes

The application for obtaining a CB Test Certificate includes more than one factory and a declaration form the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided

When differences exist, they shall be identified in the General Product Information section.

Name and address of Factory(ies): XP POWER LLC
990 BENECIA AVE

SUNNYVALE CA 94085
UNITED STATES

XP POWER (KUNSHAN) LIMITED
230, BIN JIANG NAN ROAD,
ZHANG PU TOWN
KUNSHAN,
JIANGSU 215300 CHINA

GENERAL PRODUCT INFORMATION:

Report Summary

All applicable tests according to the referenced standard(s) have been carried out.

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 in the Model AHM180PSXXYY-ZZ Series are identical with exception of the Main Transformer, T1, and minor secondary components changes that allow for different output voltage ratings. See below for Models and Ratings for 40°C ambient.

Model AHM180PS12: Output Rated: 12 Vdc, 13.75 A

Model AHM180PS15: Output Rated: 15 Vdc, 12 A

Model AHM180PS19: Output Rated: 19 Vdc, 9.47 A

Model AHM180PS24: Output Rated: 24 Vdc, 7.5 A

Model AHM180PS48: Output Rated: 48 Vdc, 3.75 A

See Enclosure 7-01 for details.

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)

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

Additional Information

This report is a reissue of CBTR Ref. No. E139109-A48-CB-1, CB Test Certificate Ref. No. US/16502/UL and US-16502-A1-UL. Based on the previously conducted testing and the review of product construction, only

limited testing was deemed necessary for the upgrade of the Second Edition of the Standard to Amendment 1.

Required values for clearance are adjusted for 3048 m (1.15 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.

The attached Licenses for the Critical Components effective for three years from the date of issue noted on the License. A Recognizing National Certification Body (NCB) may challenge the CB Test Certificate when it is more than three years old.

Technical Considerations

- The product was submitted and evaluated for use at the maximum ambient temperature (T_{ma}) permitted by the manufacturer's specification of: 40°C full load. De-rated to 60% load at 60°C ,
- 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
- The equipment disconnect device is considered to be: Appliance inlet
- The product was investigated to the following additional standards: EN 60950-1:2006 + A11:2009 + A12:2010 + A12:2011 (which includes all European national differences, including those specified in this test report).
- The following accessible locations (with circuit/schematic designation) are within a limited current circuit: Load side of CY3 (Pri to Sec bridging capacitor),
- 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)
- LEDs provided in the product are considered low power devices: Yes

Abbreviations used in the report:

- normal condition	N.C.	- single fault condition	S.F.C
- operational insulation	OP	- basic insulation	BI
- basic insulation between parts of opposite polarity:	BOP	- supplementary insulation	SI
- double insulation	DI	- reinforced insulation	RI

Indicate used abbreviations (if any)

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST
CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE
CERTIFICATS D'ESSAIS DES EQUIPEMENTS
ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

CERTIFICAT D'ESSAI OC

Product
Produit

AC/DC Power Adapter

Name and address of the applicant
Nom et adresse du demandeur

XP POWER L L C
SUITE 150
1241 E DYER RD
SANTA ANA CA 92705
UNITED STATES

Name and address of the manufacturer
Nom et adresse du fabricant

XP POWER L L C
SUITE 150
1241 E DYER RD
SANTA ANA CA 92705
UNITED STATES

Name and address of the factory
Nom et adresse de l'usine

XP POWER (KUNSHAN) LTD
230 BIN JIANG NAN RD
ZHANGPU TOWN
KUNSHAN JIANGSU 215321
CHINA

Note: When more than one factory, please report on page 2
Note: Lorsque il y a plus d'une usine, veuillez utiliser la 2^{ème} page

Ratings and principal characteristics
Valeurs nominales et caractéristiques principales

☒ Additional Information on page 2
Input: 100-240Vac, 50/60 Hz, 3.0A
Output: See test report for details.

Trademark (if any)
Marque de fabrique (si elle existe)



WMT

Type of Manufacturer's Testing Laboratories used
Type de programme du laboratoire d'essais
constructeur

AHM250PSXX-T-ZZ
See Page 2

Model / Type Ref.
Ref. De type

Additional information (if necessary may also be
reported on page 2)
Les informations complémentaires (si nécessaire,,
peuvent être indiqués sur la 2^{ème} page

☒ Additional Information on page 2

A sample of the product was tested and found
to be in conformity with
Un échantillon de ce produit a été essayé et a été
considéré conforme à la

IEC 60950-1(ed.2), IEC 60950-1(ed.2);am1

As shown in the Test Report Ref. No. which forms
part of this Certificate
Comme indiqué dans le Rapport d'essais numéro de
référence qui constitue partie de ce Certificat

E139109-A53-CB-2 issued on 2013-12-13

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme **National de Certification**



UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA
UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK
UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN
UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2013-12-13
Original Issue Date: 2013-01-17

Signature:

Jolanta M. Wroblewska



Ref. Certif. No.

US-20647-A1-UL

Model Details:

AHM250PSXX-T-ZZ (where XX is any number between 12-48 designating output voltage, ZZ can be blank, "A", "6", or "6A" designating the type of input connector)

Factories:

XP POWER LLC
990 BENECIA AVE
SUNNYVALE CA 94085
UNITED STATES

Additional Information:

Additionally evaluated to EN 60950-1:2006/A11:2009/A1:2010/A12:2011;
National Differences specified in the CB Test Report.

The original report was modified to include the following changes/additions:

1. Added suffix "-T" to indicate ITE version. (PCD UPDATED)
2. Add alternate output connector description.
3. Revised output ratings.

Additional information (if necessary)

Information complémentaire (si nécessaire)



☒ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA

☐ UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK

☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN

☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2013-12-13

Original Issue Date: 2013-01-17

Signature:

Jolanta M. Wroblewska



Test Report issued under
the responsibility of:



TEST REPORT
IEC 60950-1
Information technology equipment - Safety -
Part 1: General requirements

Report Reference No : E139109-A53-CB-2

Date of issue : 2013-01-17

Total number of pages : 17

CB Testing Laboratory : UL San Jose

Address : 455 E. Trimble Rd., San Jose, CA, 95131-1230, USA

Applicant's name : XP POWER L L C
SUITE 150

Address : 1241 E DYER RD
SANTA ANA CA 92705
UNITED STATES

Test specification:

Standard : IEC 60950-1:2005 (2nd Edition); Am 1:2009

Test procedure : CB Scheme

Non-standard test method : N/A

Test Report Form No. : IEC60950_1C

Test Report Form originator : SGS Fimko Ltd


Master TRF : 2012-08

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This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description	AC/DC Power Adapter
Trade Mark	
Manufacturer	XP POWER L L C SUITE 150 1241 E DYER RD SANTA ANA CA 92705 UNITED STATES
Model/Type reference	AHM250PSXX-T-ZZ (where XX is any number between 12-48 designating output voltage, ZZ can be blank, "A", "6", or "6A" designating the type of input connector)
Ratings	Input: 100-240Vac, 50/60 Hz, 3.0A Output: See Model Differences section

Testing procedure and testing location:	
<input type="checkbox"/> CB Testing Laboratory	Testing location / address..... :
<input type="checkbox"/> Associated CB Test Laboratory	Testing location / address..... :
	Tested by (name + signature) :
	Approved by (name + signature) ... :
<input type="checkbox"/> Testing Procedure: TMP	Testing location / address..... :
	Tested by (name + signature) :
	Approved by (+ signature) :
<input checked="" type="checkbox"/> Testing Procedure: WMT	Testing location / address..... :
	Tested by (name + signature) : Chin Chee Siang
	Witnessed by (+ signature)..... : Nathan Escalante
	Approved by (+ signature) : David E. Drewes
	Testing location / address..... : XP Power Ltd / 401 Commonwealth Drive, Haw Par Technocentre, Lobby B, #02-02, Singapore 149598
<input type="checkbox"/> Testing Procedure: SMT	Testing location / address..... :
	Tested by (name + signature) :
	Approved by (+ signature) :
	Supervised by (+ signature) :
<input type="checkbox"/> Testing Procedure: RMT	Testing location / address..... :
	Tested by (name + signature) :
	Approved by (+ signature) :
	Supervised by (+ signature) :

List of Attachments
National Differences (2 pages)
Enclosures (3 pages)
Summary of Testing:
No tests were conducted
Summary of Compliance with National Differences:
Countries outside the CB Scheme membership may also accept this report.
List of countries addressed: AT, BE, BG, BY, CA, CH, CN, CZ, DE, DK, ES, EU, FI, FR, GB, GR, HU, IE, IL,

Issue Date: 2013-01-17
Amendment 1 2013-12-12

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Report Reference #

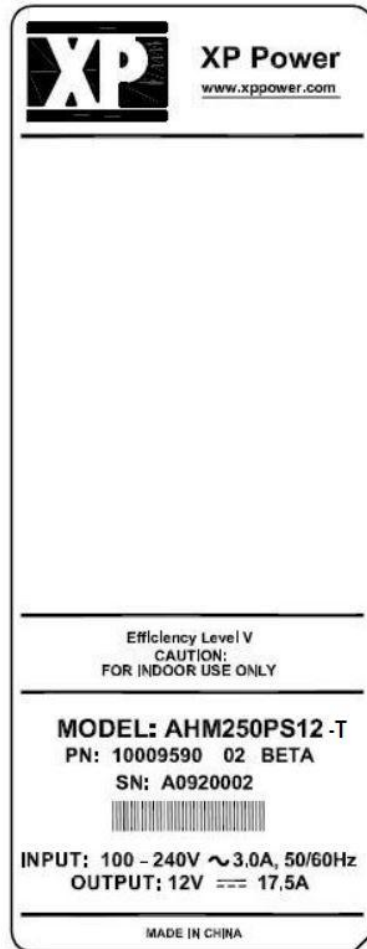
E139109-A53-CB-2

IT, JP, KR, NL, NO, PL, PT, RO, SE, SG, SI, SK, UA, US

The product fulfills the requirements of: EN 60950-1:2006 + A1:2010 + A11:2009 + A12:2011

Copy of Marking Plate

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.



Test item particulars :

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)
 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): Up to 5000 m
 Altitude of test laboratory (m): Less than 2000 m
 Mass of equipment (kg): 0.97

Possible test case verdicts:

- test case does not apply to the test object: N / A
 - test object does meet the requirement: P(Pass)
 - test object does not meet the requirement: F(Fail)

Testing:

Date(s) of receipt of test item: 2010-02-19, 2013-01-13
 Date(s) of Performance of tests: 2010-05-10, 2010-07-09, 2013-01-09 to 2013-01-14

General remarks:

The test results presented in this report relate only to the object tested.
 This report shall not be reproduced, except in full, without the written approval of the testing laboratory.

"(see Enclosure #)" refers to additional information appended to the report.
 "(see appended table)" refers to a table appended to the report.

Throughout this report a point is used as the decimal separator.

Manufacturer's Declaration per Sub Clause 4.2.5 of IEC 60950-1:

Yes

The application for obtaining a CB Test Certificate includes more than one factory and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided

When differences exist, they shall be identified in the General Product Information section.

Name and address of Factory(ies): XP POWER (KUNSHAN) LTD
 230 BIN JIANG NAN RD
 ZHANGPU TOWN

KUNSHAN
JIANGSU 215321 CHINA

XP POWER LLC
990 BENECIA AVE
SUNNYVALE CA 94085
UNITED STATES

GENERAL PRODUCT INFORMATION:

Report Summary

The original report was modified on 2013-12-12 to include the following changes/additions:

1. Add suffix "-T" to indicate ITE version.
2. Add alternate output connector description.
3. Add alternate tape, 3M, 1350 to Transformer T1.
4. Revise output ratings in model differences to include output voltage ranges.

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 to power transformer (T1) winding and other minor changes to secondary circuit to accommodate different output voltages and current ratings.

Models may have an additional ZZ identifier which can be blank or "A", "6", "6A", "8", "8A" to designate the type of input connector:

- "A" designates a C14 input connector with optional IEC cable retention;
- "6" designates a C6 input connector;
- "6A" designates a C6 input connector with optional IEC cable retention;
- "8" designates a C8 input connector;
- "8A" designates a C8 input connector with optional IEC cable retention.

Output Ratings:

Model AHM250PS12: 10.1-13.5 Vdc, 17.5 A max, 250 W max.

Model AHM250PS15: 13.6-17 Vdc, 14.66 A max, 250 W max.

Model AHM250PS19: 17.1-21 Vdc, 12.63 A max, 250 W max.

Model AHM250PS24: 21.1-26 Vdc, 10.41 A max, 250 W max.

Model AHM250PS48: 42.1-54 Vdc, 5.21 A max, 250 W max.

Additional Information

No tests conducted under this investigation due to ammendment of CB Test Report Ref. No. E139109-A53-CB-2. All required tests were carried out under the original investigation.

This report is a reissue of CBTR Ref. No.: E139109-A53-CB-1, CB Test Certificate Ref. No. US-15420-A1-UL. Based on the previously conducted testing and the review of product technical documentation including photos, schematics, wiring diagrams and similar, has been determined that the product continues to comply

with the standard.

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.

Technical Considerations

- 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% rated load); 60°C (at 60% rated 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: TN
- The equipment disconnect device is considered to be: Appliance inlet
- The product was investigated to the following additional standards: EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 (which includes all European national differences, including those specified in this test report).
- 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 (configurations with a ground pin in the appliance inlet)

Abbreviations used in the report:

- normal condition	N.C.	- single fault condition	S.F.C
- operational insulation	OP	- basic insulation	BI
- basic insulation between parts of opposite polarity:	BOP	- supplementary insulation	SI
- double insulation	DI	- reinforced insulation	RI

Indicate used abbreviations (if any)