Ref. Certif. No.

US-18340-A1-UL

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	Component 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 Note: *When more than one factory, please report on page 2* Note: *Lorsque il y plus d'une usine, veuillez utiliser la 2ème page*	XP POWER LLC 990 BENECIA AVE SUNNYVALE CA 94085 USA ☒ Additional Information on page 2
Ratings and principal characteristics Valeurs nominales et caractéristiques principales	Input: 100-240 V~, 50/60 Hz, 2.7 A See Model Differences for output configurations.
Trademark (if any) Marque de fabrique (si elle existe)	XP
Type of Manufacturer's Testing Laboratories used Type de programme du laboratoire d'essais constructeur	
Model / Type Ref. Ref. De type	RCL175PXY Series, Model 101372-xx, See Page 2
Additional information (if necessary may also be reported on page 2) Les informations complémentaires (si nécessaire,, peuvent être indiqués sur la 2ème 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	E146893-A37-CB-1 issued on 2012-06-06

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: 2012-01-10

Signature:

Jolanta M. Wroblewska

Model Details:

RCL175PXY Series (where X can be S, D, T or Q indicating single, dual, triple, or quad output configurations, Y can be 00 to 99, or AA-ZZ), may be provided with additional suffixes U, C, F, or blank and/or W. See Model Differences for nomenclature.

Model 101372-xx (where x can be any alphanumeric character or blank)

Factories:

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

Additional Information:

The original report was modified to update the applicant and factory name, the Critical Components Table and enclosures.

Additionally evaluated to EN 60601-1:2006; 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 (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: 2012-01-10

Signature:
Jolanta M. Wroblewska

Test Report issued under the responsibility of:

TEST REPORT
IEC 60601-1
Medical Electrical Equipment
Part 1:General requirements for basic safety and essential performance

Report Reference No ..... :	E146893-A37-CB-1
Date of issue ..... :	2012-01-10
Total number of pages ..... :	36
CB Testing Laboratory ..... :	UL Camas
Address ..... :	2600 N.W. Lake Road, Camas, WA, 98607, USA
Applicant's name ..... :	XP POWER LLC SUITE 150
Address ..... :	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

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 ..... :	Component Switching Power Supply
Trade Mark ..... :	
Manufacturer ..... :	XP POWER LLC SUITE 150 1241 E DYER RD SANTA ANA CA 92705 UNITED STATES
Model/Type reference ..... :	RCL175PXY series (where X can be S, D, T or Q indicating single, dual, triple, or quad output configurations, Y can be 00 to 99, or AA-ZZ), may be provided with additional suffixes U, C, F, or blank and/or W. See Model Differences for nomenclature. Model 101372-xx (where x can be any alphanumeric character or blank)
Ratings ..... :	Input: 100-240 V~, 50/60 Hz, 2.7 A See Model Differences for output configurations.

Testing procedure and testing location:			
[x]	**CB Testing Laboratory**		
	Testing location / address..... :	UL Camas 2600 N.W. Lake Road, Camas, WA, 98607, USA	
[ ]	**Associated CB Test Laboratory**		
	Testing location / address..... :		
	Tested by (name + signature) ..... :	Linus Park	
	Approved by (name + signature)... :	Michael J. Howell	
[ ]	**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 (2 pages)

Summary Of Testing

Unless otherwise indicated, all tests were conducted at UL Camas 2600 N.W. Lake Road, Camas, WA, 98607, USA.

	Tests performed (name of test and test clause)	**Testing location / Comments**
	Leakage Current Test (8.7)	

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, FI, FR, GB, HU, IL, IT, NL, NO, PL, SE, SG, SI, SK, TR, UA, US

The product fulfills the requirements of: ANSI/AAMI ES60601-1 (2005 + C1:09) (Medical Electrical Equipment - Part 1: General Requirements for Basic Safety and Essential Performance) (includes Deviations for United States), CAN/CSA-C22.2 No. 60601-1 (2008) (Medical Electrical Equipment - Part 1: General Requirements for Basic Safety and Essential Performance) (includes National Differences for Canada), EN 60601-1: 2006 (Medical electrical equipment Part 1: General requirements for basic safety and essential performance)

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 (see also Clause 6):	
Classification of installation and use .....:	Building-in
Device type (component/sub-assembly/ equipment/ system) .....:	Component
Intended use (Including type of patient, application location) .....:	To supply regulated power
Mode of operation .....:	Continuous
Supply connection .....:	To be determined in the end product
Accessories and detachable parts included .....:	Fan Cover, U Channel Chassis
Other options include .....:	None
Testing:	
Date of receipt of test item(s) .....:	2012-03-05
Dates tests performed .....:	2012-03-07
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 was not evaluated for the requirement :	N / E
- test object does not meet the requirement .....:	F(Fail)

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:

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

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.
List of test equipment must be kept on file and available for review.
Additional test data and/or information provided in the attachments to this report.

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

Manufacturer's Declaration per Sub Clause 6.25 of IECEE 02:

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 ..... Yes

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

GENERAL PRODUCT INFORMATION:

Report Summary

The original report was modified on 2012-06-06 to include the following changes/additions:
1. Optional capacitor configuration for Capacitor (C6, C7)
2. Administrative Critical Components changes (i.e. X- and Y-Capacitor descriptions updated to indicate Marked "X1","X2", or "Y1" when appropriate)
3. Updated the applicant and factory from XP Power Inc. to XP Power LLC
4. Insulation Diagram was reformatted for better clarification.

Product Description

The products covered in this report are component power supplies intended for use in Medical Electrical Equipment.

Model Differences

Model numbers are as follows: RCL175PXY, where X can be S, D, T, or Q, indicating single, double, triple or quad (4) output configurations respectively, where Y can be 0 to 99 or AA thru ZZ. The 0 to 99 representing output voltages from 3.3 to 60 Vdc for Models where X is S, and AA to ZZ represents the no. of output and configurations. Individual Outputs V1-V4 have the following limitations; V1: 3.3-60 Vdc, 204 W max; V2: 3.3-60 Vdc, 120 W max; V3: 3.3-60 Vdc, 120 W max; V4: 3.3-60 Vdc, 30 W max. Total maximum combined input power is 204 Watts when provided with fan cover. TMRA is 50 degrees Celsius. See models and ratings and Enclosure Diagram 4-01 for specific ratings.

The power supply chassis can be provided in 4 configurations - No suffix = open frame with heatsinks; Suffix -U provided with U channel chassis; Suffix -C provided with Cover; Suffix -F provided with fan cover kit. See enclosure Enclosures Diagram 4-02 for further details.

Models followed with the suffix W are provided with two Y1 bridging capacitors (C41 and C41A) and provide two MOPP between primary and secondary and Models without the suffix W are provided with one Y1 bridging capacitor (C41) and provide one MOPP between primary and secondary. When configured for Class II construction, with the suffix W, Capacitors C6A, C7A and C10A are also provided.

Model 101372-xx (where x can be any alphanumeric character or blank) is identical to Model RCL175PSAA provided with optional open frame fan assembly with exception to the model designation. "xx" suffix is a revision indicator.

Additional Information

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.

Manufacturer to provide up to date IEC Licensed for component licenses greater than 3 years upon request.

Only one marking plate is provided which is representative of the other models in the series except for the output ratings.

The Heating Test data and peak working voltage measurements were derived from CB Report issue to IEC 60950-1:2005 covered in Test Report Reference E139109-A11-CB-1 issued 2010-12-14 with CB Test Certificate US/16253/UL issued 2010-12-14.

Technical Considerations

- The product was investigated to the following additional standards: ANSI/AAMI ES60601-1 (2005 + C1:09) (Medical Electrical Equipment - Part 1: General Requirements for Basic Safety and Essential Performance) (includes Deviations for United States), CAN/CSA-C22.2 No. 60601-1 (2008) (Medical Electrical Equipment - Part 1: General Requirements for Basic Safety and Essential Performance) (includes National Differences for Canada), EN 60601-1: 2006 (Medical electrical equipment Part 1: General requirements for basic safety and essential performance)

- The product was not investigated to the following standards or clauses: Electromagnetic Compatibility (IEC 60601-1-2), Clause 14, Programmable Electronic Systems, Biocompatibility (ISO 10993-1)

- The degree of protection against harmful ingress of water is: Ordinary

- The following accessories were investigated for use with the product: Fan Cover, U Channel Chassis

- The mode of operation is: Continuous

- The product is suitable for use in the presence of a flammable anesthetics mixture with air or oxygen or with nitrous oxide: No

- 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 --

- Supply connection: Overvoltage Category II --

- Software is relied upon for meeting safety requirements related to mechanical, fire and shock: No --

Engineering Conditions of Acceptability

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

- The component shall be considered for compliance with the Marking (clause 7) and Separation (clause 8) requirements as part of the end use application evaluation. --

- Temperature, leakage and Dielectric Tests should be considered in the end product. --
- Touch current test to be conducted as part of the end product. --
- Power supply Models with the suffix W are provided with two Y1 bridging capacitor (C41and C41A) and evaluated with Two MOPP between Primary and Secondary; One MOPP primary and Earth and Models without the suffix W are provided with one Y1 bridging capacitor (C41) and evaluated for 1 MOPP between primary and secondary and 1 MOPP between primary 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 shall 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 input/output connectors are suitable for factory wiring only. --
- The maximum investigated branch circuit rating is: 20 A. If used on a branch circuit greater than this, additional testing may be necessary. --
- The Electric Strength Test conducted on this power supply was based upon a maximum working voltage of: Primary-Earthed Dead Metal (Class I units): 240Vrms, 466 Vpk; Primary-SEC: 466 Vpk, 240Vrms. --
- When installed in a Class I end product, the power supply shall be mounted in a manner that provides, at a minimum, 2.5 mm Clearance/4 mm Creepage between the primary sides of power supply and protectively earthed accessible conductive parts. In addition, when installed in a Class I end product, the protective bonding terminal of the power supply shall be reliably connected to the main protective earthing terminal of the end product. --
- When installed in a Class II end product, the power supply shall be mounted, on insulating posts, in a manner that provides, at a min. 5 mm Clearance/8 mm Creepage between the power supply and any accessible conductive parts. Capacitors C6A, C7A and C10A shall be provided when two MOPP is required. --
- An investigation of the protective bonding terminal has: Not been conducted. --
- For Class I application: Protective bonding testing shall be considered in the end product application. --

- Proper bonding to the Class I end-product main protective earthing termination is required (via mounting holes on the PCB), unless for Class II applications. For Class II applications the primary side mounting pads are isolated from accessible conductive chassis by Reinforced Insulation --

- The equipment has been evaluated for use in a Pollution Degree 2 environment. --

- Residual Voltage in Attachment Plug should be conducted in the end product with the final configuration/values of Y and bridging capacitors. --

- Consideration should be given to the measuring the temperature on the ferromagnetic components when installed in the end product. Primary components T1, T2, T3, L1, L2, L3 and L4 are provided with Class F insulation systems. Secondary components L5, L6 and L9 are provided with Class F insulation systems. --

- The PWB is rated 130°C. --

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

- The need for Marking Durability and Marking Legibility Testing shall be considered as part of the end product installation. --

- Fire/ Mechanical/ Electrical Enclosure to be provided as part of the end product. --

- Models RCL175PXY is rated for use in an ambient of 50°C. --

- The total maximum combined output power shall not exceed 175 Watts. --

- For Class II applications, the power supply must be configured as an open frame and must not be used with the U-channel chassis or fan cover options. Capacitor connected between primary and earth terminal is type Y1. --

- For Class I operation, consideration for conducting the grounding impedance test, from heatsink 1 and heatsink 2 to the protective earth terminal in the end product, should be given. --

- The need to measure the leakage current with a non-frequency weighted device per Clause 8.7.3 (e) shall be considered in the end-product. --

Ref. Certif. No.

US-21245-UL

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	Switch Mode Power Supply
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 Note: *When more than one factory, please report on page 2* Note: *Lorsque il y plus d'une usine, veuillez utiliser la 2ème page*	XP POWER L L C 990 BENECIA AVE US SUNNYVALE CA 94085 UNITED STATES ☒ Additional Information on page 2
Ratings and principal characteristics Valeurs nominales et caractéristiques principales	See Page 2
Trademark (if any) Marque de fabrique (si elle existe)	XP
Type of Manufacturer's Testing Laboratories used Type de programme du laboratoire d'essais constructeur	SMT
Model / Type Ref. Ref. De type	RCL175PXY Series See Page 2
Additional information (if necessary may also be reported on page 2) Les informations complémentaires (si nécessaire,, peuvent être indiqués sur la 2ème 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-A11-CB-2 issued on 2013-03-26

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: 2013-03-27

Signature:

Jolanta M. Wroblewska

Ref. Certif. No.

US-21245-UL

Model Details:
RCL175PXY Series (where X can be S, D, T or Q indicating single, dual, triple, or quad output configurations, Y can be 00 to 99, or AA-ZZ), may be provided with additional suffixes U, C, F, or blank.

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

Ratings:
Input Rated:
100-240 Vac, 50/60 Hz, 2.7 A Max
Outputs Rated:
1 to 4 outputs provided, Max 175 W with Fan option and 120 W convection cooling.
V1: 3.3-60 Vdc
V2: 3.3-60 Vdc
V3: 3.3-60 Vdc
V4: 3.3-60 Vdc
See Miscellaneous enclosure in test report for specific output ratings.

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

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

- [x] 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: 2013-03-27

Signature:

Jolanta M. Wroblewska

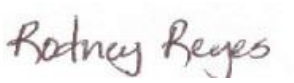
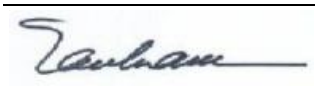
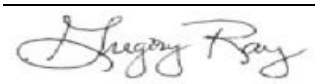
Test Report issued under the responsibility of:

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

Report Reference No ..... :	E139109-A11-CB-2
Date of issue ..... :	2013-03-26
Total number of pages ..... :	85
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 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

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 ..... :	Switch Mode 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 ..... :	RCL175PXY Series (where X can be S, D, T or Q indicating single, dual, triple, or quad output configurations, Y can be 00 to 99, or AA-ZZ), may be provided with additional suffixes U, C, F, or blank.
Ratings ..... :	Input Rated: 100-240 Vac, 50/60 Hz, 2.7 A Max Outputs Rated: 1 to 4 outputs provided, Max 175 W with Fan option and 120 W convection cooling. V1: 3.3-60 Vdc V2: 3.3-60 Vdc V3: 3.3-60 Vdc V4: 3.3-60 Vdc See Miscellaneous enclosure for specific output ratings.

Testing procedure and testing location:			
[ ]	**CB Testing Laboratory**		
	Testing location / address..... :		
[ ]	**Associated CB Test Laboratory**		
	Testing location / address..... :		
	Tested by (name + signature) ..... :		
	Approved by (name + signature) ... :		
[ ]	**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..... :		
[x]	**Testing Procedure: SMT**		
	Tested by (name + signature) ..... :	Rodney Reyes	
	Approved by (+ signature) ..... :	Tac Pham	
	Supervised by (+ signature) ..... :	Gregory Ray	
	Testing location / address..... :	XP Power, 1241 E. Dyer Rd, Suite 150, Santa Ana, CA 92705 USA/XP Power, 1590 S. Sinclair St, Anaheim, CA 92806 USA	
[ ]	**Testing Procedure: RMT**		
	Tested by (name + signature) ..... :		
	Approved by (+ signature) ..... :		
	Supervised by (+ signature) ..... :		
	Testing location / address..... :		

List of Attachments

National Differences (37 pages)

Enclosures (50 pages)

Summary Of Testing

Unless otherwise indicated, all tests were conducted at XP Power, 1241 E. Dyer Rd, Suite 150, Santa Ana, CA 92705 USA/XP Power, 1590 S. Sinclair St, Anaheim, CA 92806 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.
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.
Transformer and Wire /Insulation Electric Strength (2.10.5.13)	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.
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, 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 + A1:2010 + A11:2009 + 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 ..... :	for building-in
Connection to the mains ..... :	for building-in
Operating condition ..... :	continuous
Access location ..... :	for building-in
Over voltage category (OVC) ..... :	OVC II
Mains supply tolerance (%) or absolute mains supply values ..... :	+6%, -10%
Tested for IT power systems ..... :	No
IT testing, phase-phase voltage (V) ..... :	N/A
Class of equipment ..... :	Class I (earthed)
Considered current rating of protective device as part of the building installation (A) ..... :	2.7 A
Pollution degree (PD) ..... :	PD 2
IP protection class ..... :	IP X0
Altitude of operation (m) ..... :	3048
Altitude of test laboratory (m) ..... :	less than 2000 meters
Mass of equipment (kg) ..... :	0.8
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 ..... :	2010-12-08, 2006-03-02
Date(s) of Performance of tests ..... :	2010-12-08, 2006-03-02 to 2006-07-19

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 IECEE 02: 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 L L C
990 BENECIA AVE
US

SUNNYVALE CA 94085
UNITED STATES

XP POWER (KUNSHAN) LTD
230 BIN JIANG NAN RD
ZHANGPU 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 power supplies covered under this report are component open frame switch mode power supplies for building-in.

The RCL175 series power supply is rated at up to 120 Watts with convection cooling and maximum 175 Watts when provided with the optional 12 cfm fan. The RCL175 is available with one to four outputs: 3V to 60V on output one, 5V to 60V on output two, and 5V to 30V on outputs three and four. Mechanical options include open frame, U-channel, U-channel with cover and U-channel with fan cover.

Model Differences

All models are similar, except designation, chassis options, PWB population, number of outputs and output electrical ratings. See Miscellaneous enclosure for specific output ratings.

Model RCL175PXY Series

Where X can be S, D, T or Q indicating single, dual, triple, or quad output, respectively

Where Y can be 00 to 99, or AA-ZZ indicating the output voltage

Additional suffixes U, C, F, or blank indicating various mechanical chassis options, indicated below:
1) Open frame with heat sinks (no suffix)
2) U-Channel with heat sinks (suffix U)
3) U-Channel with cover (suffix C)
4) U-Channel with fan cover (suffix F)

Model RCL175PSAJ is identical to RCL175PS24 except for secondary connector, thermistor, and trace layout modified for accommodating the secondary connector.

Additional Information

This report is a reissue of CBTR Ref. No. E139109-A11-CB-1, CB Test Certificate Ref. No. US/16253/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-A11-CB-1. All required tests were carried out under the original investigation.

The required clearance values have been assessed for suitability up to 3048 m elevation (1.15 correction factor as per IEC 60664-1, Table A2).

The need for the additional testing and evaluation shall be determined in the end product investigation.

The nameplate markings provided as an Enclosure - Marking Plate are considered representative of the entire series and only the output ratings may vary.

Technical Considerations

- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 50°C at full load and 70°C at 50% load (See Enclosure 7-02 for de-rating curve)
- The means of connection to the mains supply is: for building-in, to be determined in the end-product.
- The product is intended for use on the following power systems: TN
- The equipment disconnect device is considered to be: for building-in, to be determined in the end-product.
- 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).

Engineering Conditions of Acceptability

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

- The following Production-Line tests are conducted for this product: Electric Strength, Earthing Continuity
- The end-product Electric Strength Test is to be based upon a maximum working voltage of: Primary-Earthed Dead Metal: 281Vrms, 466 Vpk, Primary-SELV: 281 Vrms, 466 Vpk,
- The following secondary output circuits are SELV: All outputs
- The following secondary output circuits are at hazardous energy levels: Model RCL175PS12: V1 Output; Model RCL175PS24: V1 Output; Model RCL175PS60: V1 Output; Model RCL175PD22: V1, V2 Outputs; Model RCL175PQ42: V1 Output; Model RCL175PQ43: V1 Output; Model RCL175PQ45: V1, V2 Output; RCL175PQ47: V1, V2 Output; RCL175PQ60: V1, V2, V4 Output.
- The following secondary output circuits are at non-hazardous energy levels: Model RCL175PS05: V1 Output; Model RCL175PS48: V1 Output; Model RCL175PQ42: V2, V3, V4 Output; Model RCL175PQ43: V2, V3, V4 Output; Model RCL175PQ45: V3, V4 Output; Model RCL175PQ47: V3, V4 Output; Model RCL175PQ60: V3 Output.,
- The following secondary output circuits are Limited Current Circuits: Load side of Bridging Capacitor C41,
- The power supply terminals and/or connectors are: Suitable for factory wiring only
- The maximum investigated branch circuit rating is: 20 A
- The investigated Pollution Degree is: 2
- Proper bonding to the end-product main protective earthing termination is: Required

- An investigation of the protective bonding terminals has: Not been conducted
- 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): T1, T2, L1, L2 and L4 (Class F),
- The following end-product enclosures are required: Mechanical, Fire, Electrical
- Fans: The fan provided in this sub-assembly is not intended for operator access, to be evaluated in the end product.
- Printed Wiring Boards are rated minimum 130°C. Electrolytic capacitors are rated minimum 105°C. --
- Equipment considered Class I. Additional evaluation required for Class II applications. --
- Fuses provided with unambiguous cross-reference to servicing instructions (FS1, FS2). End product servicing instructions to contain fuse type and ratings; 3.15 A, 250 V, Type T. --
- Maximum 10 A on V1 and V2 with convection cooling. 12 cfm fan (optionally provided) required for maximum output power of 175 W. Output current de-rated 50% for Tmra of 70°C. --
- Equipment employs double pole/neutral fusing. Cautionary markings for service persons to be consider during end product evaluation. --
- The need for additional Protective Earthing Test to 40A to be considered as part of the end-product installation. --

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)