

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

DC-DC Switch Mode Power Supply for building-in

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 L L C  
990 BENEZIA AVE SUNNYVALE CA 94085  
UNITED STATES

Note: When more than one factory, please report on page 2  
Note: Lorsque il y plus d'une usine, veuillez utiliser la 2<sup>ème</sup> page

Additional Information on page 2

Ratings and principal characteristics  
Valeurs nominales et caractéristiques principales

For DCM6048S12  
Input: 42 - 63 Vdc; 2.0 A  
Output: 12 Vdc; 5.0 A

For DCM10048S12  
Input: 42 - 63 Vdc; 3.2 A  
Output: 12 Vdc; 8.3 A

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



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

DCM10048S12, DCM6048S12

Model / Type Ref.  
Ref. De type

Additional Information on page 2

Additional information (if necessary may also be  
reported on page 2)  
Les informations complémentaires (si nécessaire,,  
peuvent être indiqués sur la 2<sup>ème</sup> 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

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-A74-CB-1 issued on 2013-05-03

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](http://www.ul.com/ncbnames)

Date: 2013-05-03  
Original Issue Date: 2011-05-16

Signature:

Jolanta M. Wroblewska



Ref. Certif. No.

**US-17083-A1-UL**

**Factories:**

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

**Additional Information:**

for building-in. Also investigated 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. Evaluate to EN 60950-1: A12:2011.
2. Add USA/Canada National Differences.
3. Required clearance values adjusted for 3048 m (1.15 correction factor per IEC 60664-1, Table A2).
4. Critical Component List description "Various" revised to "Interchangeable" per IEC request.
5. Change company name from XP Power Inc. to XP Power LLC.
6. Factory Address Correction: XP POWER (KUNSHAN) LTD zip code revised from "215321" to "215300".

**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

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Date: 2013-05-03

Original Issue Date: 2011-05-16

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-A74-CB-1  
**Date of issue** .....: 2011-05-16  
**Total number of pages** .....: 18

**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.**

<b>Test item description</b> .....	DC-DC Switch Mode Power Supply for building-in
Trade Mark .....	
Manufacturer .....	XP POWER L L C SUITE 150 1241 E DYER RD SANTA ANA CA 92705 UNITED STATES
Model/Type reference .....	DCM6048S12, DCM10048S12
Ratings .....	For DCM6048S12 Input: 42 - 63 Vdc; 2.0 A Output: 12 Vdc; 5.0 A  For DCM10048S12 Input: 42 - 63 Vdc; 3.2 A Output: 12 Vdc; 8.3 A

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

<b>List of Attachments</b>
National Differences (23 pages)
Enclosures (0 pages)
<b>Summary of Testing:</b>
No tests were conducted
<b>Summary of Compliance with National Differences:</b>
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, NO, PL, PT, RO, SE, SG, SI, SK, US
The product fulfills the requirements of: CSA C22.2 No. 60950-1-07 + A1:2011, EN 60950-1:2006 +

Issue Date: 2011-05-16  
Amendment 1 2013-05-03

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Report Reference #

E139109-A74-CB-1

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.

<b>Test item particulars :</b>	
Equipment mobility .....	for building-in
Connection to the mains .....	for building in, to be determined by the end product.
Operating condition .....	continuous
Access location .....	N/A, for building in
Over voltage category (OVC) .....	OVC II
Mains supply tolerance (%) or absolute mains supply values .....	DC Mains: +20%, -15%
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) .....	20
Pollution degree (PD) .....	PD 2
IP protection class .....	IP X0
Altitude of operation (m) .....	3048
Altitude of test laboratory (m) .....	Less than 2000
Mass of equipment (kg) .....	0.3
<b>Possible test case verdicts:</b>	
- 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)
<b>Testing:</b>	
Date(s) of receipt of test item .....	N/A
Date(s) of Performance of tests .....	N/A
<b>General remarks:</b>	
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.	
<b>Manufacturer's Declaration per Sub Clause 6.25 of IEC60950-1:</b>	
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.	
<b>Name and address of Factory(ies):</b>	XP POWER L L C 990 BENECIA AVE 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

The original report was modified on 2013-05-03 to include the following changes/additions:

1. Evaluate to EN 60950-1: A12:2011.
2. Add USA/Canada National Differences.
3. Required clearance values adjusted for 3048 m (1.15 correction factor per IEC 60664-1, Table A2).
4. Critical Component List description "Various" revised to "Interchangeable" per IEC request.
5. XP Power Inc. corrected to be XP Power LLC
6. Factory Address Correction: XP POWER (KUNSHAN) LTD zip code revised from "215321" to "215300".

### Product Description

The equipment is a component open frame DC-DC switch mode power supply for building-in. The power supply consists of a single output.

### Model Differences

Models are similar, except size, output voltage and current rating, T1 windings, and output connector.

### Additional Information

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

### Technical Considerations

- The product was submitted and evaluated for use at the maximum ambient temperature (T<sub>ma</sub>) permitted by the manufacturer's specification of: 50 °C at full load (60W) convection cooled and for a maximum ambient temperature of 60 °C at full load (60W) with 5CFM forced air cooled for model DCM6048S12. For model DCM10048S12: 50 °C at 90% load (90W) convection cooled and for a maximum ambient temperature of 60 °C at full load (100W) with 5CFM forced air cooled.
- The means of connection to the mains supply is: For building in, Connector (J1)
- The product is intended for use on the following power systems: DC mains supply
- 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 end-product Electric Strength Test is to be based upon a maximum working voltage of: Primary



to GND: 77 Vpk, 46 V rms, Primary to SEC: 47 Vpk, 68 Vrms

- 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 conducted, to be evaluated as part of the end product.
- The following end-product enclosures are required: Mechanical, Fire, Electrical
- The following components require special consideration during end-product Thermal (Heating) tests due to the indicated maximum temperature measurements during component-level testing: T1, T2, L1, L2, , Q1, Q9, CR2
- The equipment is suitable for direct connection to: DC mains supply
- CF2.0 - The secondary output circuit is SELV. The SELV at output has been evaluated where outputs are floating, and earthed input . SELV at output compliance shall be determined in end use application --
- CF2.1 - The secondary output circuit is at non-hazardous energy levels --
- CF2.2 - The following magnetic devices are provided with an OBJY2 insulation system: T1 (Class F); T2 (Class F); L1 (155°C), L2 (155°C); L3 (155°) --
- CF2.3 - The power supply PWB has a rated maximum operating temperature of 130°C. --
- CF2.4 - The use of suitable mating connectors for connecting to input/output connectors shall be determined at the end use application. --
- CF2.5 - The load side of bridging capacitor C17 is Limited Current Circuits. --
- CF2.6 - Reinforced Insulation provided between DC input circuits to DC Secondary circuits. --
- CF2.7 - Clearance values have been evaluated for an operating altitude of max 3048 m, based on IEC-60664-1 Edition 1.15 altitude correction factor. Consideration should be given to altitude correction for additional clearances introduced during final installation. The equipment is not for use in aircraft. --
- CF2.8 - Fuses provided with unambiguous cross-reference to servicing instructions (F1). End product servicing instructions to contain fuse type and ratings; 3 A, 125 V DC for model DCM6048S12; or 5A, 125 V DC for model DCM10048S12. --
- CF2.9 - Conducting the following test to be considered as part of the end product: Leakage, Humidity, and Temperature Test --

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)