Ref. Certif. No.

US-19857-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	Power Supply, Built-In DC/DC
Name and address of the applicant Nom et adresse du demandeur	XP POWER LTD 401 COMMONWEALTH DR HAW PAR TECHNOCENTRE LOBBY B, #02-02 SINGAPORE 149598 Singapore
Name and address of the manufacturer Nom et adresse du fabricant	XP POWER LTD 401 COMMONWEALTH DR HAW PAR TECHNOCENTRE LOBBY B, #02-02 SINGAPORE 149598 Singapore
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*	CINCON ELECTRONICS CO LTD 8-1 FU KUNG RD FU HSING PARK FU HSING HSIANG CHANGHUA HSIEN 506 TAIWAN ☒ 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	TMP
Model / Type Ref. Ref. De type	JCA04XXYZZ and JCA06XXYZZ Series, JCA0605D01#30041-01 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	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	E317867-A32-CB-2 issued on 2012-10-01

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: 2012-10-01

Signature:

Jolanta M. Wroblewska

Ref. Certif. No.

US-19857-UL

Model Details:
JCA04XXYZZ and JCA06XXYZZ Series (where XX = 05, 12, 24, or 48, Y= S or D, ZZ = two digit number, 01-15),
JCA0605D01#30041-01

Factories:
DONGGUAN DONGCHENG ZHUSHAN CINCON
ELECTRONICS FACTORY 1 JING XIANG RD DONGCHENG
FOREIGN TRADE INDUSTRIAL PARK
ZHUSHAN DONGCHENG DISTRICT
DONGGUAN 523128 GUANGDONG
CHINA

Ratings:
Input voltage:
JCA04XXYZZ Series
5Vdc (4.5-9.0Vdc), 1000mA
12Vdc (9 - 18Vdc), 440mA
24Vdc (18 - 36Vdc), 220mA
48Vdc (36 -75Vdc), 110mA

JCA06XXYZZ Series
5Vdc (4.5-9.0Vdc), 1450mA
12Vdc (9 - 18Vdc), 600mA
24Vdc (18 - 36Vdc), 300mA
48Vdc (36 -75Vdc), 150mA

JCA0605D01#30041-01: 6.25-16Vdc, 1450mA

Output: See Test Report Model Differences for details.

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: 2012-10-01

Signature:

Jolanta M. Wroblewska

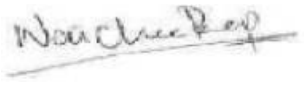
Test Report issued under the responsibility of:

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

Report Reference No ..... :	E317867-A32-CB-2
Date of issue ..... :	2012-10-01
Total number of pages ..... :	53
CB Testing Laboratory ..... :	UL San Jose
Address ..... :	455 E. Trimble Rd., San Jose, CA, 95131-1230, USA
Applicant's name ..... :	XP POWER LTD
Address ..... :	401 COMMONWEALTH DR HAW PAR TECHNOCENTRE LOBBY B, #02-02 SINGAPORE 149598 SINGAPORE
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 ..... :	Power Supply, Built-In DC/DC
Trade Mark ..... :	XP
Manufacturer ..... :	XP POWER LTD 401 COMMONWEALTH DR HAW PAR TECHNOCENTRE LOBBY B, #02-02 SINGAPORE 149598 SINGAPORE
Model/Type reference ..... :	JCA04XXYZZ and JCA06XXYZZ Series (where XX = 05, 12, 24, or 48, Y= S or D, ZZ = two digit number, 01-15), JCA0605D01#30041-01
Ratings ..... :	Input voltage: JCA04XXYZZ Series 5Vdc (4.5-9.0Vdc), 1000mA 12Vdc (9 - 18Vdc), 440mA 24Vdc (18 - 36Vdc), 220mA 48Vdc (36 -75Vdc), 110mA JCA06XXYZZ Series 5Vdc (4.5-9.0Vdc), 1450mA 12Vdc (9 - 18Vdc), 600mA 24Vdc (18 - 36Vdc), 300mA 48Vdc (36 -75Vdc), 150mA JCA0605D01#30041-01: 6.25-16Vdc, 1450mA Output: See Model Differences for details.

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) ... :		
[x]	**Testing Procedure: TMP**		
	Tested by (name + signature) ..... :	CheeBeng Wai	
	Approved by (+ signature) ..... :	Linus Park	
	Testing location / address..... :	XP POWER LTD, 401 Commonwealth Dr., Haw Par Technocentre, Lobby B #02-02, Singapore 149598 Singapore	
[ ]	**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 (41 pages)

Enclosures (177 pages)

Summary Of Testing

Unless otherwise indicated, all tests were conducted at XP POWER LTD, 401 Commonwealth Dr., Haw Par Technocentre, Lobby B #02-02, Singapore 149598 Singapore.

	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 previous CB Scheme evaluation.

Input: Single-Phase (1.6.2)	Evaluated under previous CB Scheme evaluation.
SELV Reliability Test Including Hazardous Voltage Measurements (2.2.2, 2.2.3, 2.2.4, Part 22 6.1)	Evaluated under previous CB Scheme evaluation.
Determination of Working Voltage; Working Voltage Measurement (2.10.2)	Evaluated under previous CB Scheme evaluation.
Heating (4.5.1, 1.4.12, 1.4.13)	Evaluated under previous CB Scheme evaluation.
Electric Strength (5.2.2)	Evaluated under previous CB Scheme evaluation.
Component Failure (5.3.1, 5.3.4, 5.3.7)	Evaluated under previous CB Scheme evaluation.
Power Supply Output Short-Circuit/Overload (5.3.7)	Evaluated under previous CB Scheme evaluation.

Summary of Compliance with National Differences:

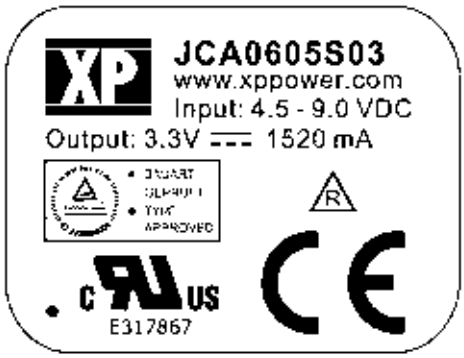
Countries outside the CB Scheme membership may also accept this report.

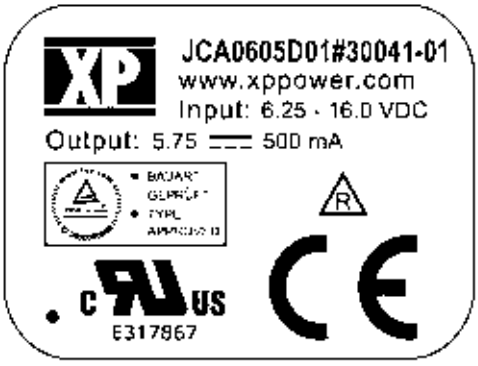
List of countries addressed: AT, BE, BG, CA, CH, CZ, DE, DK, ES, EU, FI, FR, GB, GR, HU, IE, IL, IT, JP, KR, NL, NO, PL, PT, RO, SE, SI, SK, UA, US

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

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 .....:	for building-in
Connection to the mains .....:	N/A
Operating condition .....:	continuous
Access location .....:	for building-in
Over voltage category (OVC) .....:	N/A
Mains supply tolerance (%) or absolute mains supply values .....:	No direct connection
Tested for IT power systems .....:	No
IT testing, phase-phase voltage (V) .....:	N/A
Class of equipment .....:	Special Application - TNV-2
Considered current rating of protective device as part of the building installation (A) .....:	-
Pollution degree (PD) .....:	PD 2
IP protection class .....:	IP X0
Altitude of operation (m) .....:	3048
Altitude of test laboratory (m) .....:	<2000
Mass of equipment (kg) .....:	0.02
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 .....:	2010-05-19, 2010-11-04
Date(s) of Performance of tests .....:	2010-05-19

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:

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): CINCON ELECTRONICS CO LTD

8-1 FU KUNG RD
FU HSING PARK
FU HSING HSIANG
CHANGHUA HSIEN
506 TAIWAN

DONGGUAN DONGCHENG ZHUSHAN CINCON ELECTRONICS FACTORY
1 JING XIANG RD DONGCHENG
FOREIGN TRADE INDUSTRIAL PARK
ZHUSHAN DONGCHENG DISTRICT
DONGGUAN 523128 GUANGDONG CHINA

GENERAL PRODUCT INFORMATION:

Report Summary

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

Product Description

The products covered by this report are single and dual output, dc/dc converters. They are provided with input and output connectors (pins) for connection to a source of supply and to the load. All components are mounted on a printed wiring board.

Model Differences

Minor non-safety related changes in circuitry to reflect different input voltages and output voltage and current.

JCA04 Series output loading condition:

Model	V1	Rated	V2	Rated
JCA04xxS03	+3.3V	1.22		
JCA04xxS05	+5V	0.8		
JCA04xxS12	+12V	0.34		
JCA04xxS15	+15V	0.28		
JCA04xxD01	+5V	0.4	- 5V	0.4
JCA04xxD02	+12V	0.17	-12V	0.17
JCA04xxD03	+15V	0.14	-15V	0.14

JCA06 Series output loading condition:

Model	V1	Rated	V2	Rated
JCA06xxS03	+3.3V	1.52		
JCA06xxS05	+5V	1.0		
JCA06xxS12	+12V	0.50		
JCA06xxS15	+15V	0.40		

JCA06xxD01	+5V 0.5	- 5V 0.5
JCA0605D01#30041-01	+5.75V 0.5	- 5.75V 0.5
JCA06xxD02	+12V 0.25	-12V 0.25
JCA06xxD03	+15V 0.20	-15V 0.20

Input: xx indicates input voltage: 05 for 5V (4.5-9.0Vdc), 12 for 12V (9 - 18Vdc), 24 for 24V (18 - 36Vdc) and 48 for 48V (36 -75Vdc).

Special model JCA0605D01#30041-01 has input rating range of 6.25-16Vdc, 1450mA.

Additional Information

This Test Report is a reissue of CBTR Ref. No. E317867-A32-CB-1, CB Test Certificate Ref. No. DK-19044 and DK-19044-A1. 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 IEC 60950-1:2005 + A1:2009 standard. All tests conducted per 2nd ed of IEC 60950-1 were considered representative of the corresponding tests required by IEC 60950-1, 2nd ed including Amendment 1.

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).

The nameplate Marking Plate is considered representative of the entire series.

Technical Considerations

- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 75°C
- The product is intended for use on the following power systems: Regulated DC Power Source.
- 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
- The following secondary output circuits are SELV: All outputs
- The following secondary output circuits are at non-hazardous energy levels: All outputs
- The power supply terminals and/or connectors are: Not investigated for field wiring

- The investigated Pollution Degree is: 2
- The following end-product enclosures are required: Fire, Mechanical
- The source to these dc/dc converters are intended to be supplied from an isolated source, such as a battery, or a source which meets the requirements for basic (ELV) or reinforced (SELV) insulation from primary (mains) or TNV-2 circuitry, depending on output type required. If the input meets all the requirements for ELV, the outputs may be considered ELV. , , If the input meets all the requirements for SELV or TNV-2, then the outputs may be considered SELV. Output voltages remain within SELV limits, even with internally generated non-SELV voltages, if any. --
- The input and output connectors (pins) have not been evaluated for field connections and are only intended for connection to mating connectors of internal wiring inside the end-use machine. The acceptability of these and the mating connectors relative to secureness, insulating materials and temperature shall be considered. --
- The units shall be installed in compliance with the enclosure, mounting, spacing, casualty, and segregation requirements of the end-use application. --
- Unit was tested with a 1.0 Listed fuse placed at input. --
- The need for humidity testing shall be determined as part of the end product. --

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)