Ref. Certif. No.

US-20432-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 for building-in, switch mode type
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 INC 990 BENECIA AVE SUNNYVALE CA 94085 USA ☒ Additional Information on page 2
Ratings and principal characteristics Valeurs nominales et caractéristiques principales	Input: 100-240 Vac, 50/60 Hz, 2.2 A. Output: 56 Vdc, 1.78 A, 100 W Max with forced air cooling
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	POE100US56
Additional information (if necessary may also be reported on page 2) Les informations complémentaires (si nécessaire,, peuvent être indiqués sur la 2ème 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 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-A22-CB-2 issued on 2012-12-20

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

☒ 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: 2012-12-20

Signature:

Jolanta M. Wroblewska

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

XP POWER (S) PTE LTD
LIPO BLDG, #05-01
621 ALJUNIED RD
SINGAPORE 389834
SINGAPORE

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: 2012-12-20

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-A22-CB-2
Date of issue ..... :	2012-12-20
Total number of pages ..... :	65
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 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 for building-in, switch mode type
Trade Mark ..... :	
Manufacturer ..... :	XP POWER LLC SUITE 150 1241 E DYER RD SANTA ANA CA 92705 UNITED STATES
Model/Type reference ..... :	POE100US56
Ratings ..... :	Input: 100-240 Vac, 50/60 Hz, 2.2 A. Output: 56 Vdc, 1.78 A, 100 W Max with forced air cooling

Testing procedure and testing location:			
[ ]	**CB Testing Laboratory**		
	Testing location / address..... :		
[x]	**Associated CB Test Laboratory**		
	Testing location / address..... :	UL Brea 2929 Imperial Hwy, Ste 100, Brea, CA, 92821, USA	
	Tested by (name + signature) ..... :	Jason Ferguson	
	Approved by (name + signature) ... :	Randy Johnson	
[ ]	**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 (37 pages)

Enclosures (34 pages)

Summary of Testing:

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

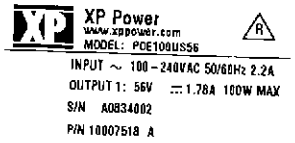
Summary of Compliance with National Differences:

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

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

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 ..... :	for building-in
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 or Class II (Determined by end product)
Considered current rating of protective device as part of the building installation (A) ..... :	20 A
Pollution degree (PD) ..... :	PD 2
IP protection class ..... :	IPX0
Altitude of operation (m) ..... :	Up to 3048 m
Altitude of test laboratory (m) ..... :	less than 2000 meters
Mass of equipment (kg) ..... :	0.17 kg
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 ..... :	2008-09-26, 2008-10-01
Date(s) of Performance of tests ..... :	2008-10-13 to 2008-10-17
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 INC 990 BENECIA AVE SUNNYVALE CA 94085 USA

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

XP POWER (S) PTE LTD
LIPO BLDG, #05-01
621 ALJUNIED RD
SINGAPORE 389834 SINGAPORE

GENERAL PRODUCT INFORMATION:

Report Summary

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

Product Description

The model covered in this report is a component power supply intended for use in Information Technology Equipment. It is an open frame power supply intended for building-in Class I or Class II end-products. Double insulated symbol is optionally provided. Earthing symbol may only be provided for Class I power supplies. The need for the additional testing and evaluation shall be determined in the end product investigation.

The power supply covered by this report employ Double/Reinforced Insulation between Primary and Secondary circuits.

When installed in a Class I end product, the power supply shall be mounted in a manner that provides, at a minimum, 2 mm Clearance between the primary side 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 minimum, 4 mm Clearance between the power supply and any accessible conductive parts.

Model Differences

N/A

Additional Information

Only limited tests were performed on model POE100US56 because of similarity in construction to previous model ECM80US56.

This report is a reissue of CBTR Ref. No.E139109-A22-CB-1, CB Test Certificate Ref. Nos.US/13315/UL. Based on previously conducted testing and the review of product construction it was determined that the product continues to comply with the standard.

Some of the attached Critical Component Licenses/Certs may be more than 3 years old. Manufacturer to

provide updated licenses upon request from an accepting NCB.

The Critical Components Table includes components in the product as submitted and also includes, in certain cases, alternate generic descriptions (designated as "interchangeable") for equivalent component substitutions. Recognizing NCBs may require additional information and/or evaluation to qualify alternate components.

User's Manuals, instructions and markings will be provided in the national language of the country of sale. The manufacturer is aware of the requirements for language requirements for markings/instructions, cords/cables, plugs and EMC. Detailed information may be obtained directly from the client. See Enclosure-Miscellaneous for a Letter of Assurance.

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 80W convection cooled; maximum ambient temperature of 50 °C at Maximum load (100W) with 10CFM forced air cooled; and for a maximum ambient temperature of 70°C at Half load (50W) with 10CFM forced air cooled.,
- The means of connection to the mains supply is: for building-in
- The product is intended for use on the following power systems: TN
- The following accessible locations (with circuit/schematic designation) are within a limited current circuit: Load side of C17 (Pri to Sec bridging capacitor)
- Power supplies covered by this report were evaluated for both Class I and Class II (double insulated). Double insulated symbol is optionally provided. See Conditions of Acceptability for insulation required for Class II. Earthing symbol may only be provided for Class I power supplies. --

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 end-product Electric Strength Test is to be based upon a maximum working voltage of: Primary-SELV: 201 Vrms, 462 Vpk
- 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: 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 when the power supply is used in a Class I end product. The power supply will be considered Class II when protection against electric shock does not rely on Basic Insulation only, unit provides additional safety precautions such as Double/Reinforced Insulation and provide minimum of 5 mm creepage and 4 mm clearance distance (mounted above chassis/accessible metal parts on Insulating posts etc). Class II units have no reliance upon protective earthing.
- An investigation of the protective bonding terminals has: Not been conducted
- The following input terminals/connectors must be connected to the end-product supply neutral: ACN J1-3
- 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 and T1 (Class F)

- The following end-product enclosures are required: Electrical, Fire
- The maximum continuous power supply output (Watts) relied on forced air cooling from: 50 W and 100 W with external 10 cfm fan applied to the front of the power supply, 5cm from the AC input connector. Maximum 80 W convection cooling.
- The equipment is suitable for direct connection to: AC mains supply
- Printed Wiring Board rated 130°C. --
- The equipment is provided with a fuse in the hot line of the primary circuit. --
- Heatsinks are floating and considered live. They should not be accessible in the end-product. --
- Consideration to repeating the Touch Current test should be given in the end-product evaluation. --

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)