



Ref. Certif. No.

DE 3 - 4231

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 supplies

Name and address of the applicant
Nom et adresse du demandeur

XP Power
305 Foster Street
Littleton MA 01460, USA

Name and address of the manufacturer
Nom et adresse du fabricant

XP Power, 305 Foster Street, Littleton MA 01460, USA

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

4th Fl., No.76, Chen-Kong Rd., Sec.1,
Nan Kann Distr., Taipei, TAIWAN

Rating and principal characteristics
Valeurs nominales et caractéristiques principales

Rated voltage: 100-240VAC
Rated frequency: 50-60Hz
Rated input current: 1.5-0.75A
Type: No applied part
Class: II

Trade mark (if any)
Marque de fabrique (si elle existe)

XP Power

Model/type Ref.
Ref. de type

PDM60US12, PDM60US15, PDM60US18, PDM60US24,
PSM60US30, PDM60US36 and PDM60US48

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

N/A

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/A2:1995

as shown in the Test Report Ref. No. which form part of this certificate
comme indiqué dans le Rapport d'essais numéro de référence qui constitue une partie de ce certificat

TÜV SÜD Product Service
091-307656-000

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

Date, 2006-07-25
CB 06 07 57271 009

Dieter Wohner



TÜV SÜD Product Service GmbH · Certification Body · Ridlerstrasse 65 · D-80339 München

Product Service



Product Service

Technical Report

Project Number : 091-307656-000

Applicant: XP Power
305 Foster Street
Littleton
MA 01460

Manufacturing location: XP Power
305 Foster Street
Littleton
MA 01460

Project Number: 091-307656-000

Date: 25 July 2006

Equipment: Brick Style Power Supplies

Type /Model: Models: PDM60US12, PDM60US15, PDM60US18, PDM60US24, PDM60US 30, PDM60US36 and PDM60US48
(Hereinafter referred to as the 'Equipment')

Specifications: IEC601-1/A2:1995
Selected requirements as detailed in Section 1

Purpose of Inspection: See section 7

Test results: The above mentioned Equipment has been assessed with respect to the above Specifications and has been found to comply with the requirements.



Product Service

Technical Report

Project Number : 091-307656-000

1. Description of test sample

The PDM60US series of power supplies are 'Brick Style' power supplies intended for use with medical devices.

The power supplies are contained in plastic enclosures of nominal dimensions 133mm x 64mm x 44mm and are fitted with a Class II appliance inlet, in accordance with IEC320, for connection to the mains supply. The input is multi ranging from 100 to 240VAC and the output voltages are 12, 15, 18, 24, 30, 36 and 48 VDC at up to 60 Watts.

As the power supplies are not medical devices in their own right they cannot fully comply with all of the requirements of the listed Specifications and have, therefore, been subjected only to the applicable requirements of selected sub-clauses as listed below:

- 6.1 External marking
- 6.4 Symbols
- 7.1 Power Input
- 14.4 Class I and Class II Equipment
- 15 Limitation of Voltage and/or Energy
- 16 Enclosures and Protective Covers
- 17 Separation
- 19 Continuous Leakage Current
- 20 Dielectric Strength
- 21 Mechanical Strength
- 23 Surfaces, Corners and Edges
- 24 Stability in Normal Use
- 42 Excessive temperatures
- 43 Fire Prevention
- 44.5 Humidity
- 49 Interruption of the Power Supply
- 52 Abnormal operation and fault conditions
- 56 Components and General Assembly
- 57.10 Creepage distances and air clearances
- 59 Construction and Layout



Product Service

Technical Report

Project Number : 091-307656-000

2. Technical data

Classification/rating:

Rated input voltage:	100-240VAC
Rated input frequency:	50/60Hz
Rated input current:	1.5-0.75A
Input power (Nominal)	60Watts
Output voltage:	12-48VDC
Output current:	Varies by model
Type of protection against electric shock:	Class II
Degree of protection against electric shock:	N/A – No applied part
Degree of protection against ingress of liquids:	Not protected
Protection against flammable anaesthetics:	Not protected
Mode of operation:	Continuous

3. Clients purchase order

For the purpose of this investigation the client provided partial pre-payment dated 04/03/2006.

4. Date of receipt of test sample

04/03/2006.

5. Date of inspection

04/03/2006 to 07/25/2006.

6. Purpose of the inspection:

The purpose of this investigation is to determine whether the power supplies are in compliance with the applicable selected requirements of those standards listed on page 1 under "Specifications".



Product Service

Technical Report

Project Number : 091-307656-000

7. Results

Details of the results of this investigation can be found in the attached document titled:

**TEST REPORT
IEC 60601 -1
Medical electrical equipment
Part 1: General requirements for safety**

and its attachments

and

**TEST REPORT
National Deviations to
IEC 60601-1 (1988) + A1:1991 + A2:1995
Australia, Canada, Denmark, United States, Israel, Korea
Medical electrical equipment**

8. Test Conditions:

1. The outputs were not evaluated as patient connected circuits
2. Compliance with EMC requirements needs to be evaluated for the end use product
3. This product is investigated only for use as a component in equipment where the suitability of the combination is subject to end product investigation



Product Service

Technical Report

Project Number : 091-307656-000

9. Conclusion:

The Equipment has been assessed for electrical and mechanical safety with respect to selected requirements of the Specifications as detailed on page one of this report and has been found to comply with the requirements.

A handwritten signature in cursive script that reads 'Antony C. Young-Taylor'.



Antony C. Young-Taylor
MHS East Manager
Senior Safety Engineer
Quality System/Technology Auditor

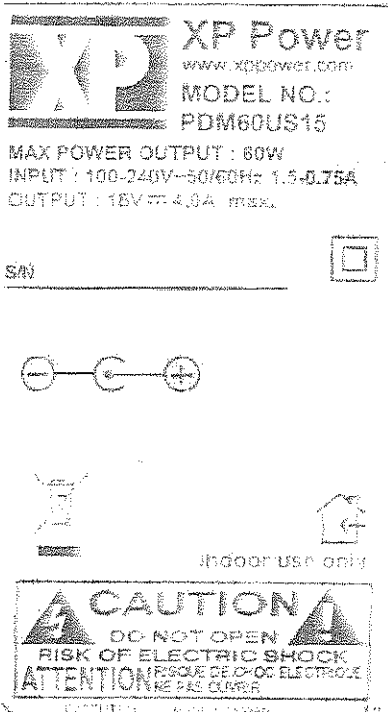


TEST REPORT IEC 60601 -1 Medical electrical equipment Part 1: General requirements for safety	
Report reference No.....	091-307656-000
Compiled by (+ signature).....	A C Young-Taylor <i>A C Young-Taylor</i>
Reviewed by (+ signature).....	Nikolaus-Peter Ohl <i>N. Ohl</i>
Additional information.....	CB reviewed TPS-Munich
Approved by (+ signature).....	Refer to CB certificate
Date of issue.....	Refer to CB certificate
Testing laboratory.....	TUV Product Service, Ridlerstrasse 65, 80339 Munich, Germany
Address.....	<input type="checkbox"/> CBTL <input type="checkbox"/> SMT <input checked="" type="checkbox"/> TMP
Testing location.....	XP Power, 305 Foster Street, Littleton, MA 01460
Applicant.....	XP Power
Address.....	305 Foster Street, Littleton, MA 01460
Standard.....	IEC 60601-1:1988 + A1:1991 + A2:1995
Test Report Form No.....	IEC 60601-1:1988+A1:1991 + A2:1995 Rev. 01/2003-05
TRF modified by.....	TÜV PRODUCT SERVICE GmbH
Master TRF.....	Can be obtained by IECEE (see general remarks).
Copyright blank test report.....	This report is based on a blank test report that was prepared by KEMA using information obtained from the TRF originator. Copyright reserved to the bodies participating in the Committee of Certification (CCB).
Test procedure.....	CB Scheme
Procedure deviation.....	N
Non-standard test method.....	N
Type of test object.....	Component power supplies
Trademark.....	XP Power
Model/type reference.....	PDM60US12, PDM60US15, PDM60US18, PDM60US24, PDM60US 30, PDM60US36 and PDM60US48
Manufacturer.....	XP Power
Address.....	305 Foster Street, Littleton, MA 01460
Rating.....	Input – 100 - 240VAC, 1.5-0.75A, 50/60Hz Output – 12VDC to 48VDC, 60Watts

Copy of marking plate: As reflected below or displayed in the attachment (see also attachment overview at the end of this protocol).

Example of the rating plate

The subject power supplies are components for use with a medical device



Note: the other label in the range have the same format and content

GENERAL INFORMATION	
Test item particulars (see also clause 5):	
Classification of installation and use.....	Transportable
Supply connection	100-240VAC
Accessories and detachable parts included in the evaluation	None
Options included	PDM60US12, PDM60US15, PDM60US18, PDM60US24, PDM60US, PDM60US 30, PDM60US, PDM60US36 and PDM60US48
Possible test case verdicts:	
- test case does not apply to the test object	:N/A N
- test object does meet the requirement.....	:Pass P
- test object does not meet the requirement.....	:Fail F
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
General remarks:	
<p>“This report is not valid as a CB Test Report unless appended to a CB Test Certificate issued by a NCB, in accordance with IECEE 02”.</p> <p>“(see Attachment #)” refers to additional information appended to the report. “(see appended table)” refers to a table appended to the report. Throughout this report a point or a comma is used as the decimal separator. Master TRF: UL Inc. dated 97-04. The tests 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. Summary of contents provided on the last page of this report.</p>	
General product information and considerations:	
<p>The power supplies are contained in plastic enclosures of nominal dimensions 133mm x 64mm x 44mm and are fitted with a Class II appliance inlet, in accordance with IEC320, for connection to the mains supply. The input is multi ranging from 100 to 240VAC and the output voltages are 12, 15, 18, 24, 30, 36 and 48 VDC at up to 60Watts</p> <p>As the power supplies are not medical devices in their own right they cannot fully comply with all of the requirements of the listed Specifications and have, therefore, been subjected only to the applicable requirements of selected sub-clauses as follows: 6.1 External marking, 6.4 Symbols, 7.1 Power input, 14.4 Class I and Class II equipment, 15 Limitation of voltage and/or energy, 16 Enclosures and protective covers, 17 Separation, 19, Continuous leakage currents, 20 Dielectric strength, 21 Mechanical strength, 23 Surfaces, corners and edges, 24 Stability in normal use, 42 Excessive temperatures, 43 Fire prevention, 44.5 Humidity, 49 Interruption of the power supply, 52 Abnormal operation and fault conditions, 56 Components and general assembly, 57.10 Creepage distances and air clearances, 59 Construction and layout.</p> <p>Clauses 36 (IEC 60601-1-2) was not part of the manufacturers order.</p>	



Ref. Certif. No.

DE 3 - 54824

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

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

Rating and principal characteristics
Valeurs nominales et caractéristiques principales

Trade mark (if any)
Marque de fabrique (si elle existe)

Model/type Ref.
Ref. de type

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

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 form part of this certificate
comme indiqué dans le Rapport d'essais numéro
de référence qui constitue une partie de ce
certificat

Power supplies
Brick Style Power Supplies

XP Power
305 Foster Street
Littleton MA 01460, USA

XP Power, 305 Foster Street, Littleton MA 01460, USA

XP Power, 305 Foster Street, Littleton MA 01460, USA

Rated Input Voltage: 100-240 V AC
Rated Frequency: 50/60 Hz
Rated Input Current: 1.5-0.75 A
Rated Output Voltage: 12 V DC to 48 V DC
Rated Output Power: 60 W
Protection Class: II

XP Power

PDM60US12, PDM60US15, PDM60US18, PDM60US24,
PDM60US30, PDM60US36, PDM60US48

CBTL Procedure

IEC 60950-1:2001

TÜV SÜD Product Service
090-602005-000

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

Date: 2006-07-25
CB 06 07 57271 008

Joseph Janeliunas

TÜV SÜD Product Service GmbH · Certification Body · Ridlerstrasse 65 · D-80339 München



Product Service

Technical Report No. 090-602005-000

Rev. 0

Dated 2006-07-05

Client: XP Power
305 Foster Street,
Littleton, MA 01460
USA

Manufacturing place: XP Power
305 Foster Street,
Littleton, MA 01460
USA

Test subject: Product: Brick Style Power Supplies

Type: PDM60US12, PDM60US15, PDM60US18, PDM60US24,
PDM60US 30, PDM60US36 and PDM60US48

Test specification: EN 60950-1:2001, IEC 60950-1 2001

Purpose of examination: Test according to the test specification

Test result: *Positive:* The test subject was found to be in compliance with
• the mentioned test specification

This technical report may only be quoted in full. Any use for advertising purposes must be granted in writing. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production.

1 Description of the test subject

1.1 Function

Brick Style Power Supplies

The power supplies are contained in plastic enclosures of nominal dimensions 133mm x 64mm x 44mm and are fitted with a Class II appliance inlet, in accordance with IEC320, for connection to the mains supply. The input is multi ranging from 100 to 240VAC and the output voltages are 12, 15, 18, 24, 30, 36 and 48 VDC at up to 60Watts

1.2 Technical Data

Input: 100 - 240VAC, 1.5-0.75A, 50/60Hz

Output: 12VDC to 48VDC, 60Watts

2. Order

2.1 Date of Purchase Order, Customer's Reference

2006-04-03; PO# Pre-payment

2.2 Receipt of Test Sample, Location

2006-04-03: TUV Product Service, 5 Cherry Hill Drive, Danvers, MA 01923, USA

2.3 Date of Testing

2006-04-03 through 2006-06-18

2.4 Location of Testing

TUV Product Service, 5 Cherry Hill Drive, Danvers, MA 01923, USA

2.5 Points of Non-compliance or Exceptions of the Test Procedure

None

3. Test Results

3.1 Positive Test Results

- Electrical safety
EN 60950-1:2001, IEC 60950-1 2001

3.2 Points of non-compliance according to the test specification

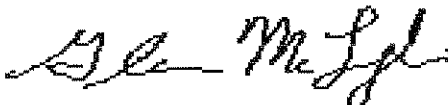
None


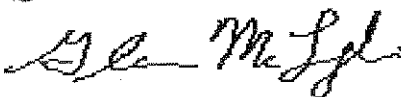

4. Remark 4.1 Remarks to Factory *(necessary)*

The assembly of the product has to comply with the documentation (CDF). Before the implementation of safety relevant modifications to the product into the ongoing production the product must be assessed for acceptance. The results must be implemented to the documentation and if necessary the certificate must be updated. The final inspections in the production are described in EN 50116. If fluctuations in production quality in a production facility are to be expected it has to be pondered whether a shorter cycle of factory inspections must be applied. Causes therefore may be up directly to the manufacturer or arise from the environment in the country.

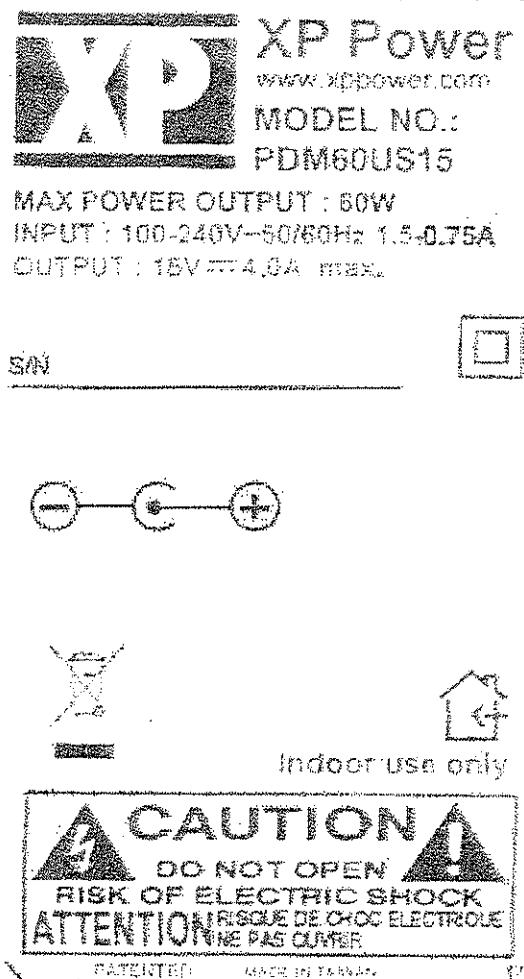
TÜV PRODUCT SERVICE GMBH

Engineer: 

Technical Report checked: 

TEST REPORT IEC 60950-1 and/or EN 60950-1 Information technology equipment – Safety – Part 1: General requirements	
Report reference No	090-602005-000
Tested by (printed name and signature)	Bill Stinson 
Approved by (printed name and signature)	Glenn McLaughlin 
Date of issue	2006-07-05
Testing Laboratory Name	TÜV Product Service
Address	5 Cherry Hill, Danvers MA 01923, USA
Testing location	CBTL <input checked="" type="checkbox"/> CCATL <input type="checkbox"/> SMT <input type="checkbox"/> TMP <input type="checkbox"/>
Address	Same as above
Applicant's Name	XP Power
Address	305 Foster Street, Littleton, MA 01460
Test specification	
Standard.....	IEC 60950-1:2001 (1 st Edition) and/or EN 60950-1:2001
Test procedure	CB/CCA –scheme
Non-standard test method	N/A
Test Report Form No.	IECEN60950_1B
TRF originator	SGS Fimko Ltd
Master TRF	dated 2003-03
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Test item description	Brick Style Power Supplies
Trademark	 XP Power www.xppower.com
Manufacturer	XP Power , 305 Foster Street, Littleton, MA 01460
Model and/or type reference	PDM60US12, PDM60US15, PDM60US18, PDM60US24, PDM60US30, PDM60US36 and PDM60US48
Serial number	-
Rating(s).....	Input – 100 - 240VAC, 1.5-0.75A, 50/60Hz Output – 12VDC to 48VDC, 60Watts

Copy of marking plate



Summary of testing:

XP Power, power supplies, models: PDM60US12, PDM60US15, PDM60US18, PDM60US24, PDM60US30, PDM60US36 and PDM60US48 fulfill the requirements of IEC 60950-1:2001 (1st Edition) and/or EN 60950-1:2001

Particulars: test item vs. test requirements Equipment mobility : Transportable Operating condition : Continuous Mains supply tolerance (%)..... : -10 % to +6% Tested for IT power systems : No IT testing, phase-phase voltage (V) : N/A Class of equipment : Class II Mass of equipment (kg) : 0.375 kg Protection against ingress of water : IP20
Test case verdicts Test case does not apply to the test object : N/A Test item does meet the requirement : P(ass) Test item does not meet the requirement .. : F(ail)
Testing Date of receipt of test item : 2006-04-03 Date(s) of performance of test : 2006-04-03 through 2006-06-18
General remarks "This report is not valid as a CB Test Report unless appended by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IEC60950-1". The test result presented in this report relate only to the object(s) tested. This report shall not be reproduced, except in full, without the written approval of the Issuing 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 comma (point) is used as the decimal separator.
General product information: The power supplies are contained in plastic enclosures of nominal dimensions 133mm x 64mm x 44mm and are fitted with a Class II appliance inlet, in accordance with IEC320, for connection to the mains supply. The input is multi ranging from 100 to 240VAC and the output voltages are 12, 15, 18, 24, 30, 36 and 48 VDC at up to 60Watts