

DESCRIPTION

PRODUCT COVERED:

USR/CNR - Rectifier Shelf for building-in, Models **FNR-5-12**, **FNR-5-48**, **FNR-3-48**, FRHX1500-48 and FXR-3-48. Model number may be followed by "G" or SXXX, where X is any number 0-9, denoting non-safety-critical options.

ELECTRICAL RATINGS:

Models	Input			Output	
	V	A (per Input)	Hz	V	A
*FRHX1500-48, FXR-3-48, FNR-3-48 *	100-240	20-9	50-60	48	118 (200-240 Vac) 97 (200-240 Vac) 76 (200-240 Vac)
				12	1.0
FNR-5-48	100-240	13.5 - 5.5	50-60	48	105
				12	0.5
FNR-5-12	100-240	12.0 - 5.0	50-60	12	365
*				12	0.5

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

Use - For use only in complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.

Special Considerations - The following items are considerations that were used when evaluating this product.

USR/CNR indicates investigation to the U.S. and Canadian (Bi-National) Standard for Safety of Information Technology Equipment, Including Electrical Business Equipment, CSA C22.2, No. 60950-1-03 * UL 60950-1, First Edition, dated April 1, 2003.

The component was submitted by the manufacturer for use in an ambient of 50°C.

The component rectifier shelf is intended for fixed installation and mounting in a cabinet or rack. The equipment is intended to supply DC distribution power to communications equipment. The equipment is Class I (earthed), intended for use on a TN power system.

Disconnect Device - A disconnect device shall be provided in the branch circuit and shall disconnect all supply connections.

Conditions of Acceptability - When installed in the end product, consideration shall be given to the following:

1. These components has been judged on the basis of the required spacings in the Standard for Safety of Information Technology Equipment, UL 60950-1, First Edition * CAN/CSA-C22.2 No. 60950-1-03, First Edition, dated April 1, 2003, Sub-Clause 2.10, which would cover the component itself if submitted for Listing
2. The shelf shall be properly bonded to the main protective earthing termination in the end product. Earthing within the rack has not been evaluated for connection of the main protective earthing.
3. The rectifier's own descriptive report must be considered in the end-product. **Models FXP1800-48, FXP1500-48, FNP1800-48 and FNP1500-48 are covered under File E131905, Vol. 3, Sec. 11, report issue date 2005-06-24. Models FNP850-12, FNP600-12, FNP600-48 and FNP1000-48 are covered under File E131905, Vol. 1, Sec. 118, report issue date 2005-09-09.**
4. The equipment has been evaluated for use in a Pollution Degree 2 environment.
5. The output circuit is SELV and hazardous energy level.
6. The accessibility of the output terminals needs to be checked in the end product.
7. A suitable Electrical and Fire enclosure shall be provided in the end-use product.
8. The product was tested on a 50 A branch circuit. If used on a branch greater than this, additional testing may be necessary.
9. Rack mounting instructions for the end-use product shall contain wording to address the following concerns:
 - A. Elevated Operating Ambient Temperature - Informs user that unit is to be installed in an environment compatible with the manufacturer's maximum rated ambient temperature (T_{mra}) of 50°C.
 - B. Reduced Air Flow - Informs user to not block the vent openings of the equipment when installed in a rack system.
 - C. Mechanical Loading - Informs user to install the equipment in the rack such that hazardous conditions are not present due to uneven mechanical loading.
 - D. Circuit Overloading - Informs user that consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate rating is also addressed.
 - E. Reliable Earthing - Informs user that reliable earthing of rack mounted equipment should be maintained.

*

10. The Overload of Operator Accessible Connector test was not performed and shall be considered during end product evaluation.
11. Highest measured working voltage for each rectifier is listed below and should be considered when conducting the Electric Strength test for Basic Insulation.

Models FXP1500-48, FXP1500-48, FNP1500-48 and FNP1800-48 is 424 V peak.
Models FNP600-12 and FNP850-12 is 540 V peak.
Models FNP600-48 and FNP1000-48 is 580 V peak.
12. The front panel of the Power One component rectifier, models FNP1500, FNP1800, FXP1500 and FXP1800 have not been evaluated as a mechanical enclosure and shall be considered during the end-product evaluation.
13. The output busbar terminals connections shall be monitored during the Heating Test of the end-product and shall not exceed 85⁰C, per Table 4B
- Temperature Limits: Part 1.



CERTIFICATE

No. B 09 03 24238 01167

Holder of Certificate: **Power-One, Inc.**



740 Calle Plano
Camarillo, CA 93012-8583
USA

Production
Facility(ies):

44727, 61968

Certification Mark:



Product:

**Switching power supply unit
AC/DC Power Shelf**

Model(s):

**FXR-3-48, FNR-5-12, FNR-5-48 and FNR-3-48
Model name maybe followed by G indicating ROHS
compliance.**

Parameters:

Rated Input:	Model dependent
Rated Output:	Model dependent
Temperature, Ambient:	50°C
Protection Class:	I

See attachment for additional information.

Tested according to: EN 60950-1/A11:2004

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. The certification mark must not be altered in any way. See also notes overleaf.

Test report no.: 095-600125-200

Date, 2009-03-06

Page 1 of 2





**Attachment to Certificate B 09 03 24238 01167
For Power-One Inc.**

ELECTRICAL RATING:

Models	Input			Output	
	V	A (per Input)	Hz	V	A
FXR-3-48, FNR-3-48	100- 240	20-9	50-60	48	118 A(200-240 Vac) 97 A (120-200 Vac) 76 A (100-120 Vac)
				12	1 A
FNR-5-48	100- 240	13.5-5.5	50-60	48	105 A
				12	0.5 A
FNR-5-12	100- 240	12 – 5	50-60	12	365 A
				12	0.5 A

Conditions of acceptability:

The following must be evaluated at end use:

- 1) A suitable fire enclosure.
- 2) A reliable permanent ground (Protective Earth) connection.
- 3) Operator access with a tool
- 4) Energy hazard protection
- 5) Interconnection of equipment
- 6) A reliable disconnecting device
- 7) Enclosure test



Ref. Certif. No.

DE 3 - 54437M2

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

Switching power supply unit
(AC/DC Power Shelf)

Power-One, Inc.

740 Calle Plano

Camarillo, CA 93012-8583, USA

Power-One, Inc., 740 Calle Plano, Camarillo, CA 93012-8583,
USA

Power-One s.r.o., ArealZTS Dubnica n.Vahom c.924, 01841
Dubnica nad Vahom, SLOVAK REPUBLIC

For further information please see attachment

Input, AC, 1-3:

100 - 240 V, 50-60 Hz

Input Ccurrent:

20 - 9 A

(FXR-3-48, FNR-3-48)

13.5 - 5.5 A

(FNR-5-48)

12 - 5 A

(FNR-5-12)

Rated Output:

model dependent

Temperature, Ambient:

50°C

Protection Class:

I

For further information please see attachment.

Power-One

FXR-3-48, FNR-3-48, FNR-5-12, and FNR-5-48

(maybe followed by G indicating ROHS compliance)

SMT

IEC 60950-1:2001

095-600125-200

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,

2009-03-12

CB 09 03 24238 01168

William Wenthold



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

Product Service

Additional factory information:

Name and address of the factory 61968
Nom et adresse de l'usine

Power-one Asia Pacific Electronics (Shenzhen) Co., Ltd,
Block 5, 6; Area B,
Tantou Western Industrial Park,
Songgang, Baoan District,
Shenzhen, Guangdong, China 518105

ELECTRICAL RATING:

Models	Input			Output	
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FNR-5-12	100-240	12 – 5	50-60	12	365 A
				12	0.5 A

Date: 2009-03-12
Project: 095-600125-200
CB 09 03 24238 01168
Page 2 of 2

William A. Wenthold
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TÜV SÜD Product Service GmbH • Certification Body • Ridlerstrasse 65 • D-80339 München

Declaration of Conformity

CE MARKING

We, **Power-One, Inc., 740 Calle Plano, Camarillo, CA. 93012 USA**
declare under our sole responsibility that the products;

**Rectifier Shelves Models: FRHX1500-48, FXR-3-48,
FNR-5-48, FNR-5-12**

to which this declaration relates, is/are in compliance with the following document(s):

Quality Standard(s): **ISO 9001, EN 29001**

Directive: **DIR 2006/95/EC, Low Voltage Directive**

Product Safety Standard(s): **EN 60950-1: 2001
IEC 60950-1: 2001**
(Licensed by a Notified Body to the European Union)

These component level rack systems are intended exclusively for inclusion within other equipment by an industrial assembly operation or by professional installers per the Installation Instructions provided with the power supplies. The system is considered Class I and must be connected to a reliable earth grounding system.



(Manufacturer)

Robert P. White Jr.
Product Safety Director

Camarillo, Ca.
(Place)

March 12, 2009
(Date)