



Certificate of Compliance

Certificate: 70044406 (170351)

Master Contract: 170351

Project: 70044406

Date Issued: 2015-08-25

Issued to: **Bel Fuse Inc.**
206 Van Vorst St
Jersey City, New Jersey 07302
USA
Attention: Editha S. Vergara

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.



*Juan-Carlos
Olivera*
Issued by: Juan-Carlos Olivera,
MSc.

PRODUCTS

CLASS – 5311 11 - POWER SUPPLIES - Component Type (CSA 60950-1-07-2nd Ed)

CLASS – 5311 91 - POWER SUPPLIES - Component Type (UL 60950-1-2nd Ed) - Certified to U.S. Stds

For details related to rating, size, configuration, etc. reference should be made to the CSA Certification Record or the descriptive report.

Rectifier Shelves for building-in, intended for use with Information Technology and Business Equipment, where the suitability of the combination is to be determined by CSA Group.

AC/DC Rectifier Shelf, Models FNR-3-12, FNR-5-12, FNR-5-48, FNR-3-48, FXR-3-48 and FXR-3-32. The model number may be followed by “G” or SXXX, where X is any number 0-9, denoting non-safety critical options.



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Electrical Ratings:

Models	Input			Maximum Output	
	V	A (per input)	Hz	V (dc)	A
FRHX1500-48, FXR-3-48, FNR-3-48	100-240	20-9	50-60	48	118 (200-240 V ac)
				12	97 (120-200 V ac) 76 (100-120 V ac)
FNR-5-48	100-240	13.5 – 5.5	50-60	48	105
				12	0.5
FXR-3-32	100-240	20-9	50-60	32	140.7 (120-240 V ac)
				5	112.5 (100-120 V ac)
FNR-5-12	100-240	12.0 – 5.0	50-60	12	365
				12	0.5
FNR-3-12	100-240	20-9	50-60	12	450 (200-240 V ac)
				12	387 (120-200 V ac) 306 (100-120 V ac)
					1

APPLICABLE REQUIREMENTS

- CAN/CSA-C22.2 No 60950-1-07, +Am.1:2011 +Am.2:2014 – Information Technology Equipment - Safety - Part 1: General Requirements
- UL 60950-1-2014 – Information Technology Equipment - Safety - Part 1: General Requirements

CONDITIONS OF ACCEPTABILITY

1. The shelves are to be installed only by trained service personnel, according to manufacturer installation instructions.
2. Evaluated as Class I (earthed equipment). Reliable earth connection shall be provided in the end use installation.
3. Evaluated for use in a Pollution Degree 2 environment, up to 3048 m altitude.
4. Temperature tests shall be considered for specific installation conditions in the end system.
5. Suitable fire and electrical enclosure shall be provided in the end system. The front panel of the individual component rectifier, models FXP1500, FNP1500, FXP1800 and FNP1800 Series, has not been evaluated as a mechanical enclosure and shall be considered during the end-product evaluation.
6. All secondary output circuits for all models are SELV. Output 1 is at hazardous energy level.



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7. The equipment was tested on a Listed 50 A branch circuit. If used on a branch circuit greater than this, additional testing may be necessary.
8. The shelves shall be properly bonded to the main protective earthing termination in the end product.
9. The accessibility of the output terminals needs to be checked in the end product.
10. All shelves have been tested with Power-one rectifiers. The rectifier's own descriptive report must be considered in the end-product.
11. The output busbar terminal connections shall be monitored during the Heating Test of the end-product and shall not exceed 85 °C.
12. Rack mount instructions for the end-use product shall contain appropriate wording to address the following: Elevated ambient, reduced airflow, mechanical loading, circuit overloading and reliable earthing.



Supplement to Certificate of Compliance

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*The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.*

Product Certification History

Project	Date	Description
70044406	2015-08-25	AC/DC Rectifier Shelf, Models FNR-3-12, FNR-5-12, FNR-5-48, FNR-3-48, FXR-3-48 and FXR-3-32.. (C/US) (transferred from 173688 - 2260568 and upgraded to include Am1 and Am2).