



Certificate of Compliance

Certificate: 80044200

Master Contract: 170351

Project: 80119611

Date Issued: 2022-03-16

Issued To: **Bel Fuse Inc.**
206 Van Vorst St
Jersey City, New Jersey, 07302
United States

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.

Issued by: *Regenald Macaranas*
Regenald Macaranas



PRODUCTS

CLASS - C531167 - POWER SUPPLIES Component Type(CSA 62368-1)

CLASS - C531197 - POWER SUPPLIES - Component Type (UL 62368-1) - Component Type (UL 62368-1)

- Certified to US Std

Component type power supplies intended for use with Information Technology and Business Equipment, where the suitability of the combination is to be determined by CSA Group.

AC/DC Switching Power Supply, Models PFE1100-12, PFE850-12, SNP1100-12, SNP850-12, PFE600-12, SNP600-12, followed by -054NA or -054RA; where N indicates normal airflow (from rear to front), R indicates reverse airflow (from front to rear), A for AC input. May be followed by letters and/or numbers 0-9, denoting non-safety critical options.

AC/DC Switching Power Supply, Models SPABRCD-01G, SPABRCD-02G, SPAFCBK-09G May be followed by letters and/or numbers 0-9, denoting non-safety critical options.



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AC/DC and DC/DC Switching Power supply PFE1100-12-NAS435. May be followed by letters and/or numbers 0-9, denoting non-safety critical options.

Electrical Ratings:

Model	Input			Output (DC)	
	V	A	Hz	V	W
PFE1100-12 SNP1100-12 SPABRCD-01G SPABRCD-02G	100-240	12-5	50-60	V1: 12 V2: 3.3**/5V	1100* 16.5
PFE850-12 SNP850-12	100-240	10-4	50-60	V1: 12 V2: 3.3**/5V	850* 16.5
PFE600-12 SNP600-12 SPAFCBK-09G	100-240	8-3	50-60	V1: 12 V2: 3.3/5V	600* 16.5
PFE1100-12-NAS435	100-127 ***	11	50-60	V1: 12	1100*
	200-240	6	50-60	V2: 3.3/5V	16.5
	200-300Vdc	6	—		

Notes:

- *1) V1 maximum output power de-rated at different input voltages and operating ambient temperatures. See Conditions of Acceptability for details.
- **2) 3.3V output current is limited to 3.5 A at 35°C and 45°C operating ambient and derated to 3 A above 45°C ambient for models PFE1100-12-054RA, PFE850-12-054RA and SPABRCD-02G.
- ***3) Canada & U.S.A input voltage 120-127Vac

Conditions of Acceptability:

1. The power supply is to be installed only by trained service personnel, according to manufacturer installation instructions.
2. Supply cord is not part of the evaluation, suitability of the supply cord for AC or DC supply shall be consider at the end product application.
3. Evaluated as Class I (earthed equipment). Reliable Protective Earth connection shall be provided and evaluated in the end use installation.
4. Evaluated for use in a Pollution Degree 2 environment, up to 4000 m altitude, 45 to 65°C ambient for PFE850/SNP850, PFE600/SNP600 and 35 to 65°C for PFE1100/SNP1100.
5. Temperature tests shall be considered for specific installation conditions in the end system.
6. Suitability of the equipment enclosure as a Fire, Mechanical, Electrical Enclosure is to be determined in the use installation. Front Panel has been evaluated and meets fire, electrical and mechanical enclosure.
7. All secondary output circuits for all models are ES1; output V1 is PS3.
8. The output connector has not been evaluated for field wiring.



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9. The Connector Current Interruption Test was performed on the Tyco Type Minipak HDL connector (1926736-3), Output Connector for 100 cycles (insertion/withdrawal). Testing for additional cycles shall be determined during the end product evaluation, depending on end product application.
10. Limited Short Circuit Test was conducted at 1500 A on Protective Earth trace from the Input connector to chassis mounting screw.
11. The equipment was tested on a circuit protected by listed 20 A branch circuit breaker. If used on a branch circuit higher breaker rating, additional testing shall be required.
12. All models have been tested at input voltage of 90-264 V ac, operating ambient of 35°C, 45°C, 55°C and 65°C, based on the below maximum load conditions on V1.

Models SNP1100-12, PFE1100-12-054NA and SPABRCD-02G, maximum load on V1:
 (Note: SPABRCD-02G maximum operating temperature is up to 45°C only)

Input Voltage	Maximum Operating Ambient			
	35°C	45°C	55°C	65°C
90-115 V	82	70	60	50
115 – 264 V	90	90	77	65

Models PFE1100-12-054RA and SPABRCD-01G, maximum load on V1:
 (Note: SPABRCD-01G maximum operating temperature is up to 45°C only)

Input Voltage	Maximum Operating Ambient			
	35°C	45°C	55°C	65°C
90-135 V	80	-	-	-
135 – 264 V	90	-	-	-
90-180 V	-	70	53	36
180-264 V	-	90	73	56

Models SNP850-12 and PFE850-12-054NA, maximum load:

Input Voltage	Maximum Operating Ambient		
	45°C	55°C	65°C
90-115 V	70	60	50
115 – 264 V	70	70	65

Model PFE850-12-054RA, maximum load on V1:

Input Voltage	Maximum Operating Ambient		
	45°C	55°C	65°C
90-145 V	65	-	-
145 – 264 V	70	-	-
90-180 V		57.5	50
180-264 V		65.5	58.2

Models SNP600-12 and PFE600-12-054NA, maximum load:

Input Voltage	Maximum Operating Ambient		
	45°C	55°C	65°C
90-264 V	50	43	36

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Models PFE600-12-054RA and SPAFCBK-09G, maximum load on V1:

Input Voltage	Maximum Operating Ambient		
	45°C	55°C	65°C
90-110 V	45	38	31
110 – 264 V	50	43	36

Model PFE1100-12-NAS435, maximum load on V1:

Input	Maximum Operating Ambient		
	45°C	55°C	65°C
100 – 127Vac	80A	70A	58A
120 - 127Vac	90A	70A	58A
200 - 240Vac	90A	78A	66A
200 - 300Vdc	90A	78A	66A

APPLICABLE REQUIREMENTS

- CAN/CSA C22.2 No. 62368-1-19 - Audio/video, information and communication technology equipment – Part 1: Safety requirements
- UL 62368-1 3rd Ed. - Audio/video, information and communication technology equipment – Part 1: Safety requirements

Notes:

Products certified under Class C531167 have been certified under CSA’s ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC). www.scc.ca





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
80119611	2022-03-16	Update CSA 80044200 (PFE1100) to add alternate main/auxiliary/current transformer with different TIW wire used, alternate Y capacitor, PWB manufacturer, add transformer suppliers and correct isolating transformer rating and allowed maximum temperature. - based on acceptance of data from CPC program
80044200	2020-06-03	AC/DC Switching Power Supply, Models Models PFE1100-12, PFE850-12, SNP1100-12, SNP850-12, PFE600-12, SNP600-12 (CSA c/us) (upgrade 70036836 to 62368-1)