



Certificate of Compliance

Certificate: 80005631

Master Contract: 170351

Project: 80111077

Date Issued: 2022-01-10

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: Gwangyeol Park
Gwangyeol Park



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 Stds

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.

Power Supply, Models PFE1500-12-054NAH; PFE1500-12-054NAC; PFE1500-12-054NA; PPC33 A022; PFE1500-12-054RAH; PFE1500-12-054RAC; PFE1500-12-054RA; SPABRCD-14G; SPABRCD-15G, SPABRCD-16, SPABRCD-17, PFE1500-12NAS412, PFE1500-12NACS412, PFE1500-12NAHS412, PFE1500-12-054NACS439; model number may be followed by XXX or SXXX, X may be blank,0-9, or a-Z indicating non-safety option



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Electrical Rating:

Model	Input		Output (DC)	
	V	A	V	A
SPABRCD-16, SPABRCD-17	200-380 VDC	10-5	12.0	125 max.
			3.3 or 5	5 or 3.3
PFE1500-12-054NAC; PFE1500-12-054RAC; PFE1500-12-054NA; PFE1500-12-054RA; PFE1500-12-054NAH; PFE1500-12-054RAH; SPABRCD-14G; SPABRCD-15G	100-240 VAC	12-7	12	125 max.
			3.3 or 5	5 or 3.3
PFE1500-12NAS412, PFE1500-12NACS412	100-240 VAC	12-7	12	125 max.
	200-350 VDC	10-5	12	3
PFE1500-12NAHS412	100-240 VAC	12-7	12	125 max.
	200-380 VDC	10-5	12	3
PFE1500-12-054NACS439	100-240 VAC	12-7	12.0	125 max.
	200-350 VDC	10-5	3.3 or 5	5 or 3.3
PPC33 A022	100-240 VAC	12-5	12.0	70
	200-380 VDC	7-4	3.3 or 5	5 or 3.3

The maximum current of main output V1: 12.0V derate linearly when ambient increase from 45°C to 60°C and when input voltage decreases from 200 to 100V, see tables as below:

For PFE1500-12-054NAH, PFE1500-12NAHS412 and PFE1500-12-054RAH:

Vin\ambient	45°C	60°C
100-200Vac	90-125A	69-104A
200-240Vac,200-380Vdc	125A	104A

For PFE1500-12-054NAC, PFE1500-12-054RAC, PFE1500-12-054NA, PFE1500-12-054RA, For PFE1500-12-054NAC, PFE1500-12-054RAC, PFE1500-12-054NA, PFE1500-12-054RA, PFE1500-12NAS412, PFE1500-12NACS412, SPABRCD-14G, SPABRCD-15G:

Vin\ambient	45°C	60°C
100-200Vac	83.4-125A	69-104A
200-240Vac,200-350Vdc	125A	104A



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For SPABRCD-16, SPABRCD-17:

Vin\ambient	45°C	60°C
200-380Vdc	125A	104A

For PPC33 A022:

Vin\ambient	45°C	60°C
100-240Vac,200-380Vdc	70A	69A

APPLICABLE REQUIREMENTS

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

CONDITIONS OF ACCEPTABILITY

1. Equipment shall be installed only trained service personal, according to manufacturer installation instructions.
2. The detachable power supply cord connector for detachable power supply core is considered the main disconnect device.
3. Suitability of the equipment enclosure as a Fire, Mechanical and Electrical Enclosure is to be determined in the end use installation. Front and sides panels have been evaluated and meet fire, electrical and mechanical enclosure.
4. The Power supply unit (PSU) has been evaluated for use in Class I equipment, Reliable connection to Protective Earth shall be provided in the end use installation.
5. The Clearance values of PSU have been evaluated for an altitude of 3048 m, under IEC60664-1:1992 Table A.2 (altitude correction factor is 1.15)
6. The Creepage values of PSU have been evaluated for material group IIIb.
7. The PSU was tested on a listed 20A branch circuit. If use on branch circuit greater than this, additional testing may be necessary
8. Safety isolating transformers T603, T604 employ an insulation system designated Class F, T400/T607 is employs Class B, evaluated to UL 1446. Safety isolating transformer T601, T605 are Class A.
9. The output connector is not suitable for field connection; only intended for connection to a mating connector inside the end system. The connector was evaluated and may be used for hot swap operation. Current Interruptions Test (200 cycles) was performed.
10. The maximum output rating of unit varies with input voltage and ambient as below
For PFE1500-12-054NAH, PFE1500-12NAHS412 operating at Canada and United States of America, and PFE1500-12-054RAH operating at worldwide. the main output V1: 12.0V derate linearly when ambient increase from 45°C to 60°C and input voltage decrease from 200Vac to 100Vac as table below:



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Vin\ambient	45°C	60°C
100-200Vac	90-125A	69-104A
200-240Vac, 200-380Vdc	125A	104A

For PFE1500-12-054NAH, PFE1500-12NAHS412 operating at countries other than Canada and United States of America, the main output V1: 12.0V derate linearly when ambient increase from 45°C to 60°C and input voltage decrease from 200Vac to 100Vac as table below:

Vin\ambient	45°C	60°C
100-200Vac	70-91A	14-19A
200-240Vac, 200-380Vdc	91A	19A

For PFE1500-12-054NAC, PFE1500-12-054RAC, PFE1500-12-054NA, PFE1500-12-054RA, PFE1500-12NAS412, PFE1500-12NACS412, SPABRCD-14G, SPABRCD-15G operating at Canada and United States of America, the main output V1: 12.0V derate linearly when ambient increase from 45°C to 60°C and input voltage decrease from 200Vac to 100Vac as table below:

Vin\ambient	45°C	60°C
100-200Vac	83.4-125A	69-104A
200-240Vac, 200-350Vdc	125A	104A

For PFE1500-12-054NAC, PFE1500-12NACS412, PFE1500-12-054RAC operating at countries other than Canada and United States of America, the main output V1: 12.0V derate linearly when ambient increase from 45°C to 60°C and input voltage decrease from 200Vac to 100Vac as table below:

Vin\ambient	45°C	60°C
100-200Vac	66.5-125A	66.5-104A
200-240Vac, 200-350Vdc	125A	104A

For PFE1500-12-054NA, PFE1500-12NAS412, SPABRCD-14G operating at countries other than Canada and United States of America, the main output V1: 12.0V derate linearly when ambient increase from 45°C to 60°C and input voltage decrease from 200Vac to 100Vac as table below:

Vin\ambient	45°C	60°C
100-200Vac	42-75A	13-19A
200-240Vac, 200-350Vdc	75A	19A



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For SPABRCD-16 operating at Canada and United States of America, and SPABRCD-17 operating at worldwide, the main output V1: 12.0V derate linearly when ambient increase from 45°C to 60°C and as table below:

Vin\ambient	45°C	60°C
200-380Vdc	125A	104A

For SPABRCD-16 operating at countries other than Canada and United States of America, the main output V1: 12.0V derate linearly when ambient increase from 45°C to 60°C as table below:

Vin\ambient	45°C	60°C
200-380Vdc	91A	19A

For PFE1500-12-054RA, SPABRCD-15G operating at countries other than Canada and United States of America, the main output V1: 12.0V derate linearly when ambient increase from 45°C to 60°C and input voltage decrease from 200Vac to 100Vac as table below:

Vin\ambient	45°C	60°C
100-200Vac	66.5-125A	36-77A
200-240Vac	125A	77A

For PPC33 A022 operating at Canada and United States of America, the main output V1: 12.0V derate linearly when ambient increase from 45°C to 60°C and input voltage decrease from 200Vac to 100Vac as table below:

Vin\ambient	45°C	60°C
100-240Vac,200-380Vdc	70A	69A

For PPC33 A022 operating at countries other than Canada and United States of America, the main output V1: 12.0V derate linearly when ambient increase from 45°C to 60°C and input voltage decrease from 200Vac to 100Vac as table below:

Vin\ambient	45°C	60°C
100-200Vac	70A	14-19A
200-240Vac,200V-380Vdc	70A	19A



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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
80111077	2022-01-10	Update CSA 80005631 (PFE1500) to add transformers due to alternate insulation systems, add alternate component sources, and upgrade to 62368-1 3rd Ed. - based on acceptance of data from CPC program - remove Chily type 3527 as alternate source for AC inlet.
80005631	2019-06-07	Component Power Supplies, models PFE1500-12-054NAH; PFE1500-12-054NAC; PFE1500-12-054NA; PPC33 A022; PFE1500-12-054RAH; PFE1500-12-054RAC; PFE1500-12-054RA; SPABRCD-14G; SPABRCD-15G, SPABRCD-16, SPABRCD-17, PFE1500-12NAS412, PFE1500-12NACS412, PFE1500-12NAHS412, PFE1500-12-054NACS439 (Obsoletes report 70081883, update to Standard 62368-1 and include alternate construction) (CAN/CSA-C22.2 No. 62368-1:14; UL 62368-1 2nd Ed.)