Certificate of Compliance

Certificate: 70045366 **Master Contract:** 170351

Project: 70045366 **Date Issued:** 2015-09-03

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.

Issued by: Juan-Carlos Olivera
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.

Component power supply (switching type), Model LKP 5000 series, Model LK 5000 series, Model LK 4000 series, Model LS 5000 series, and Model LS 4000 series.

Ratings (next page):

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Type	Rated Input			Operating Input			Rated Output		Max. Total Output Power/W
	V	A	Hz	V	A	Hz	Output 1	Output 2	
LKP 5000	200-240 V ac	1.9-2.1 A	50/60 Hz	180-255 V ac	1.9-2.1 A	47-63 Hz	Max. 28.25 V dc, max. 5.8 A	Max. 28.25 V dc, max. 5.8 A	280
There are two outputs: If you put them in parallel, you can provide one output with max. output current (LKP 5660) If you put them both in series, you can provide one output with max. output voltage (LKP 5740) Alternatively, both models can have a basic plate instead of the heatsink.									

Type	Rated Input			Operating Input			Rated Output		Max. Total Output Power/W
	V	A	Hz	V	A	Hz	Output 1	Output 2	
LK 4000	100-240 V ac 88-300 V dc	2.2-2.3A	50/60 Hz	85-264 V ac 88-300 V dc	2.2-2.3A	47-63 Hz	2-28.25 V dc, max. 20 A	--	150
LK 5000	100-240 V ac 88-300 V dc	2.2-2.4A	50/60 Hz	85-264 V ac 88-300 V dc	2.2-2.4A	47-63 Hz	2-28.25 V dc, max. 6 A	Max. 2-28.25 V dc, max. 6 A	150
LS 4000	100-240 V ac 95-300 V dc	2.2-2.3A	50/60 Hz	85-264 V ac 88-300 V dc	2.2-2.3A	47-63 Hz	2-28.25 V dc, max. 16 A	--	100
LS 5000	100-240 V ac 95-300 V dc	2.2-2.4A	50/60 Hz	85-264 V ac 88-300 V dc	2.2-2.4A	47-63 Hz	2-28.25 V dc, max. 4.2 A	Max. 2-28.25 V dc, max. 4.2 A	100
There are two outputs in X5000: If you put them in series, you can provide one output with max. output voltage 56.5V. (LK 574x-7R) Model differences: The S version has a smaller heatsink version than the K version. Alternatively, both models can have a base plate for mounting to another heatsink in the end product instead of the heatsink. Refer to list of safety critical components.									

Nomenclature: ab cdee-fgg (e.g. LK 5660-6ER)	
"ab" can be:	Series Designation and input voltage range:
LK	Input voltage 100-240 V ac or 88-300 V dc; output power 150W
LS	Input voltage 100-240 V ac or 95-300 V dc; output power 100W
LKP	Input voltage 200-240 V ac; output power 250 W.
"c" can be:	and means:
4	One output
5	Two outputs

6 or higher	Customer specific models: - Some only with mechanical changes; e.g. other front plate, other LEDS, and so on. - Some with other output voltages; e.g. 13 V. - Some with smaller input voltage range, but up to 280 W output power. Not safety relevant.
"d" can be:	and means output voltage:
0 or 1 or 2	5.1 V dc
3	12 V dc
4 or 5	15 V dc
6	24 V dc
7 or 8	Customer specific products with output voltages between 2 and 28.25 V dc
May be followed by 01…99	Other specifications for single output models.
"ee" can be:	and for models with two outputs means (except customer specific models):
20	12 V dc, 12 V dc
40	15 V dc, 15 V dc
60	24 V dc, 24 V dc
	Customer specific products may have different output rating.
70-99	Other specifications and additional features.
"f" can be:	and means ambient range:
-5	Up to 51ºC
-6	Up to 60ºC
-7	-25ºC to 71ºC
-9	-40ºC to 71ºC
-0, -1, -2, -3 or -4	Customer specific models
"gg" can be:	and means auxiliary functions and options:
E	Inrush current limitation. Option E is available for all models; mandatory for all -9 model types.
R	Output voltage control input. Feature R excludes option P, and vice versa.
P	Potentiometer (output voltage adjustment)
D	Save data signal (D0…DD; to be specified). Option D excludes option V, and vice versa.
V	ACFAIL signal (V2, V3). Option V is available for LK/LS 4000 types with 5 V outputs.
T	Current sharing.
B1	Cooling plate standard case.
B2	Cooling plate for long case 220 mm.
K	H15S2 connector replaced by H15S4 (only models with 5V output)

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. This component has been judged on the basis of the required spacings in the Standard for Safety of Information Technology Equipment, CSA/UL 60950-1, Second Edition, dated March 27, 2007, including Am 1:2001 and Am 2:2014Sub-clause 2.10, which would cover the component itself if submitted for Listing.
2. All secondary output circuits are SELV up to 48 V dc and are not hazardous energy levels.
3. The terminals and connectors are suitable for factory wiring only.
4. Magnetic devices TR1 constructed of R/C insulation system Designated Class F (155°C). The auxiliary transformer is a planar type constructed of an (UL Approved printed wiring board material V-2 or better) rated 130°C. Consideration for conducting the temperature on the transformer needs to be measured in the end product use.
5. The equipment has been evaluated for use in a Pollution Degree 2 environment.
6. The input voltage rating specified contains the maximum and minimum voltage tested, no additional tolerances were considered.
7. The temperature test was conducted by monitoring the exposed heat sink temperature as rated in the manufacturer's specifications. The S Series was maintained at 95°C and the K Series at 85°C. Consideration should be given to measure the hotspot so that the specified maximum temperature (95°C for the S- and 85°C for the K- Series) will not be exceeded.
8. Suitability of the enclosure bond to earth is to be evaluated in the end use application
9. The disconnect device shall be a suitable type provided in the end use application.

Supplement to Certificate of Compliance

Certificate: 70045366 (170351) **Master Contract:** 170351

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
70045366	2015-09-03	Component power supply (switching type), Model LKP 5000 series, Model LK 5000 series, Model LK 4000 series, Model LS 5000 series, and Model LS 4000 series. (C/US) (transferred from 173688 - 2247052 and upgraded to include Am1 and Am2).