

Proprietary Information of:  POWER SOLUTIONS & PROTECTION	Title: EN 50155 Declaration of Conformity	Document No. URR.03113	Rev. AF
--	---	----------------------------------	-------------------

Declaration of Conformity

We, Bel Fuse Inc., hereby declare under our sole responsibility that the products herein after referred to are in compliance with the **EN 50155:2021**.

Manufacturer/Address: **Bel Fuse Inc.
300 Executive Drive
Suite 300
West Orange, NJ 07052**

Product: **AC-DC POWER RACK**

Type Designation: **LBC8000 Series, LBC12000 Serries**
(Refer to Table 1 listing affected part numbers)

Standard(s): **EN 50155:2021
EN 50124-1:2017
EN 50125-1:2014
EN 50121-3-2:2016
EN 60529:1991
EN 61373:2010
EN 45545-2:2020**
(Refer to Table 2 listing achieved compliance)

Prepared by:



Marian Hostacny,
Engineering Manager

Dubnica nad Váhom, Slovakia

(Place)

Nov 9th, 2023

(Date)

Approved by:



Silvan Mueller,
*Business Development
Manager*

Uster, Switzerland

(Place)

Nov 9th, 2023

(Date)

Bel Power Solutions & Protection (Customer Support) : 2nd Floor, Citygate House, Ballycummin Avenue, Raheen Business Park,
Limerick , V94 H9YE, Ireland
belfuse.com/power-solutions

Proprietary Information of:  bel POWER SOLUTIONS & PROTECTION	Title: EN 50155 Declaration of Conformity	Document No. URR.03113	Rev. AF
--	---	----------------------------------	-------------------

Table 1: List of affected product part numbers

No.	P/N	No.	P/N
1	LBC12000-1110S101G	22	
2	LBC12000-1110S102G	23	
3	LBC12000-1110S466G	24	
4	LBC12000-1110S469G	25	
5	LBC12000-1110S470G	26	
6	LBC12000-1110S471G	27	
7	LBC12000-1110S478G	28	
8	LBC12000-1110S479G	29	
9	LBC12000-1110S504G	30	
10	LBC12000-1110S505G	31	
11	LBC8000-1110S102G	31	
12	LBC8000-1110S427G	33	
13	LBC8000-1110S467G	34	
14	LBC12000-1110S522G	35	
15	LBC12000-1110S550G	36	
16	LBC12000-1110S597G	37	
17	LBC8000-1110S547G	38	
18		39	
19		40	
20		41	
21		42	

Note: model names may be followed by suffix indicating non-critical options.

LBC Series

MODEL SELECTION

MODEL	POWER	BATTERY	COMMUNICATION
LBC8000-1110SxxxG *	8000 W	110 V	CAN or Ethernet
LBC12000-1110SxxxG *	12000 W	110 V	CAN or Ethernet

For details regarding finished good part number, please, contact the factory

INPUT SPECIFICATION

PARAMETER	DESCRIPTION / CONDITION
Input Voltage	Nominal: 400 - 480 Vrms (line to line without neutral) / 230 – 277 Vrms (line to ground) Permitted variation: 350 – 528 Vrms / 202 – 305 Vrms
Input Frequency	50 – 60 Hz, permitted variation: 42 – 63 Hz
Input Current	≤14 A (LBC8000) / 21 A (LBC12000) at 350 Vrms from each phase Inrush current <190 A (>1 min. cooling period), I-THD typ. 33 %
Fuse	3 x 20 A, Fast acting, in each power unit (2 or 3 power units inside the shelf)

OUTPUT

PARAMETER	DESCRIPTION / CONDITION
Output Voltage	80-137.5VDC (depending on operating condition and specific battery charging characteristic)
Output Power Rating	8000 / 12000 W
Output Current	73 / 110 A
Efficiency	Typically, 92% at load above 40%
Voltage Setting Accuracy	± 1%
Line / Load regulation	±0.5% / ±0.3%
Transient Response	±5% at load variation 10-100% and back; recovery time <4 ms or ±3% at load variation 50-100% and back; recovery time <1.5 ms
Ripple	<1.5% of Vout_nom (BW 20 MHz)

PROTECTION SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION
Protection	Over temperature protection, Input under and over voltage protection, Output under and over voltage over current / short circuit protection

Proprietary Information of:  bel POWER SOLUTIONS & PROTECTION <small>© bel 2020</small>	Title: EN 50155 Declaration of Conformity	Document No. URR.03113	Rev. AF
---	---	----------------------------------	-------------------

Table 2: Compliance status

Subclause	Title	Default requirement	Product compliance
4.4.1	Altitude	Class AX, Table 1 of EN 50125-1: to 2500 m full power, to 3048 m lin.derating to 90% of full power	Fulfilled
4.4.2	Operating temperature	Table1: Class OT3 (-25 to +71 degC)	Fulfilled (OT4)
4.4.3	Switch-on extended op. temp.	Table2: Class ST1 (Test cycle B)	Fulfilled (ST1)
4.4.4	Rapid temperature variation	Table3: Class H1 (No requirements),	Fulfilled (H1)
4.4.5	Shock and Vibration	Category 1; Class B of EN 61373:2010	Fulfilled
4.4.6	Electromagnetic compatibility	In compliance with EN 50121-3-2:2016	Fulfilled
4.4.7	Relative humidity	In compliance with EN 50125-1:2014	Fulfilled
4.5.2	Atmospheric pollutants	No requirements apply by default	No requirements
5.2.2	The nominal voltage of equipment (Un)	Either of following values: 24 V, 28 V, 36 V, 48 V, 72 V, 96 V, 110, 120 V	Fulfilled
5.2.2	Continuous DC power supply range	Table4: 0.7 x Un – 1.25xUn	Fulfilled
5.2.3	Temporary DC power supply fluctuation	Table4: 0.6 x Un – 1.4 x Un (for 100msec)	Fulfilled
5.2.4	Interruption of voltage supply	Table5: Class S2 (10 msec)	Fulfilled (S3)
5.2.5	Supply Change-Over	Not applicable (AC supplied)	Not applicable
5.2.7	DC ripple factor	Ripple factor of +/- 5%	Fulfilled (+/-1.5%)
6.2	Useful life	Class L3	Fulfilled
6.3.2	Preventive maintenance	Periodic preventive maintenance	Fans replacement each 50000 h
7.2.1	Insulation Coordination	Pollution degree PD2 of EN 50124-1:2017	Fulfilled
		Table 13 (13.4.7): Insulation & withstand test voltages shall be applied	Fulfilled (IN-1000Vac, OUT-1500Vac)
10.2.1	Electronic assembly acceptability	Class 2 according to IPC-A-610	Fulfilled (Class 2)
10.2.5	IC Sockets and Edge connectors	Class K2 (not allowed)	Fulfilled
10.7	Protective coatings for PCB's	Class PC2	Fulfilled (PC2)
10.9	Mounting	Enclosure shall provide the necessary protection IP code acc to EN60529:1991	Fulfilled (IP20)
10.10	Cooling and ventilation	Forced ventilation for cooling	Fulfilled
11.4	Fire behavior requirements	Fire behavior testing shall be according to EN 45545-2:2020.	Fulfilled (Hazard level 3)
12.7.8.3	Programmable component	Table10: Class M0	Fulfilled