

Proprietary Information of:  <b>bel</b> POWER SOLUTIONS & PROTECTION <small>a bel group</small>	Title: <b>EN 50155 Declaration of Conformity</b>	Document No. <b>URR.20094</b>	Rev. <b>A</b>
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## ***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 50155:2017**.

Manufacturer/Address: **Bel Fuse Inc.**  
**206 Van Vorst Street, Jersey City, New Jersey,**  
**USA 07302**

Product: **DC-DC Converter**

Type Designation: **LR Series**  
 (Refer to Annex 1 listing part number Description)

Standard(s): **EN 50155:2017**  
**EN 50124-1:2017**  
**EN 50125-1:2014**  
**EN 50121-3-2:2016**  
**EN 60529:1991**  
**EN 61373:2010**  
**EN 45545-2:2013+A1:2015**  
 (Refer to Annex 2 listing achieved compliance)

Prepared by:



**Dubnica nad Váhom, Slovakia**

**May 24<sup>th</sup>, 2021**

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*Place*

*Date*

Approved by:



**Uster, Switzerland**

**May 24<sup>th</sup>, 2021**

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## Annex 1: Product part number description

### Part Number Description

	LR	2	3	20	-9	B1
Operating input voltage $V_{i\text{cont}}$ (continuously): 90 – 264 VAC, 125 – 300 VDC .....	LR, LRP					
Number of outputs .....		2				
Nominal voltage of main output $V_{o1\text{nom}}$ 12 V .....			3			
15 V .....			5			
Other voltages <sup>1</sup> .....			1 - 9			
Nominal voltage of tracking output $V_{o2}$ <sup>2</sup> 12 V .....				20		
15 V .....				40		
Other specifications or additional features <sup>1</sup> .....				11 – 99		
Operational temperature range: $T_A$ : $T_A = -40$ to $71$ °C, $T_C \leq 95$ °C .....					-9	
Other <sup>1</sup> .....					-0, -5, -6	
Auxiliary functions and options: Fuse options .....						F0, F2
Cooling plate standard case .....						B, B1

<sup>1</sup> Customer-specific models. No safety-relevant changes compared to the respective basic model, e.g. different mechanical details, special markings, mounted front plates, reduced output voltage, etc.

<sup>2</sup> The nominal voltages of both outputs are always equal.

**Note:** The sequence of options must follow the order above.

**Example:** LR2320-9B1: AC-DC converter, operating input voltage range 90 to 264 VAC, 2 isolated outputs, each providing 12 V, 10 A, cooling plate B1, RoHS-compliant for all six substances.

## Annex 2: Compliance status

Subclause	Title	Default requirement	Product compliance
4.3.1	Altitude	Class A1 (1400 meters) Table 1 of EN 50125-1	Fulfilled (AX - 2000 meters)
4.3.2	Operating temperature	Class OT4 (-40 to +70 degC)	Fulfilled (OT4)
4.3.3	Switch-on extended op. temp.	Class ST1 (Test cycle B)	Fulfilled (ST1)
4.3.4	Rapid temperature variation	Class H1 (No requirements)	Fulfilled (H1)
4.3.5	Shock and Vibration	Category 1; Class B of EN 61373:2010	Fulfilled
4.3.6	Electromagnetic compatibility	In compliance with EN 50121-3-2	Fulfilled
4.3.7	Relative humidity	In compliance with EN 50125-1	Fulfilled
4.4.2	Atmospheric pollutants	No requirements apply by default	Fulfilled (Salt Mist per EN 60068-2-11)
5.1.1.1	The nominal voltage of equipment (Un)	Either of following values: 24 V, 28 V, 36 V, 48 V, 72 V, 96 V, 110 V	Not applicable (Un=230VAC)
5.1.1.2	Continuous DC power supply range	0.7 x Un – 1.25 x Un	Fulfilled
5.1.1.3	Temporary DC power supply fluctuation	0.6 x Un – 1.4 x Un (for 100msec)	Fulfilled
5.1.1.4	Interruption of voltage supply	Class S2 (10 msec)	Fulfilled (S2)
5.1.1.6	DC ripple factor	Ripple factor of +/- 5%	Fulfilled (+/-5%)
5.1.3	Supply Change-Over	Class C1	Fulfilled (C1)
5.2.6	Insulation	Follow minimum voltage withstand level (Table 14 of EN 50124-1)	Fulfilled
6.2	Useful life	Class L4	Fulfilled (L4)
6.3.2	Preventive maintenance	No periodic maintenance applies	Fulfilled (No maintenance required)
7.2.1	Insulation Coordination	Pollution degree PD2 of EN 50124-1	Fulfilled (PD2)
10.1.5	Sockets and Edge connectors	Class K2 (not allowed)	Fulfilled (K2)
10.2.1	Electronic assembly acceptability	Class 2 according to IPC-A-610	Fulfilled (Class 2)
10.7	Protective coatings for PCB's	Class PC2	Fulfilled (PC2)
10.9	Mounting	No IP code requirements applies per EN 60529	Fulfilled (IP40)
10.10	Cooling and ventilation	Forced ventilation for cooling is not allowed	Fulfilled (No forced cooling)
11.3	Fire behavior requirements	Fire behavior testing shall be according to EN 45545-2.	Fulfilled (Hazard level 3)
12.7.7.3	Programmable component	Class M0	Not Applicable