

Proprietary Information of:  POWER SOLUTIONS & PROTECTION a bel group	Title: EN 50155 Declaration of Conformity	Document No. URR.20104	Rev. 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 50155:2021**.

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

Product: **DC-DC Converter**

Type Designation: **HR/ER Series**
 (Refer to Annex 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: 

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Uster, Switzerland **April 20th, 2022**
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Annex 1: Product part number description

Part Number Description

	HR 2 5 40 -9 R B1 G
Operating input voltage $V_{i\ cont}$ (continuously):	
16.8 – 150 VDC	HR, HRL, HRP
77 – 150 VDC	ER, ERL, ERP
Number of outputs	2, 7 ²
Nominal voltage of main output $V_{o1\ nom}$	
12 V	3
15 V	5
48 V	8
Other voltages ¹	9
Nominal voltage of tracking output V_{o2} ³	
12 V	20
15 V	40
48 V	80
Other specifications or additional features ¹	21 – 99
Operational temperature range: T_A :	
$T_A = -40$ to 71 °C, $T_C \leq 95$ °C	-9
Other ¹	-0, -5, -6
Auxiliary functions and options:	
Output voltage control input	R
Cooling plate standard case	B, B1
Cooling plate for long case 220 mm ²	B2 ²
RoHS-compliant for all 6 substances	G ⁴

¹ 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.

² Converters with 220 mm case (customer-specific models). Add 5000 to the model number, e.g. HR2540-9RB1G → HR7540-9RB1G.

³ The nominal voltages of both outputs are always equal.

⁴ G is always placed at the end of the part number.

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

Example: HR2540-9RB1G: DC-DC converter, operating input voltage range 16.8 – 150 VDC, 2 isolated outputs, each providing 15 V, 8 A, control input R to adjust the output voltages, cooling plate B1, and RoHS-compliant for all six substances.

Table 2: Compliance status

Subclause	Title	Default requirement	Product compliance
4.4.1	Altitude	Class A1 (1400 metres) Table 1 of EN 50125-1	Fulfilled (AX - 2000 metres)
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 applies by default	Fulfilled (Salt Mist per EN 50155:2017, clause 13.4.13)
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 (24V, 36V, 48V, 72V, 96, 110, 120V)
5.2.2	Continuous DC power supply range	Table4: 0.7 x Un – 1.25 x Un	Fulfilled (16.8V – 150V)
5.2.3	Temporary DC power supply fluctuation	Table4: 0.6 x Un – 1.4 x Un (for 100msec)	Fulfilled (12.0V – 168V)
5.2.4	Interruption of supply voltage	Table5: Class S2 (10 msec)	Fulfilled (S2)
5.2.5	Supply change-over	Table6: Class C1	Fulfilled (C1)
5.2.7	DC ripple factor	Ripple factor of +/- 5%	Fulfilled (+/-5%)
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 50124-1:2017	Fulfilled (PD2)
		Table 13 (13.4.7): Insulation & withstand tests voltages shall be applied	Fulfilled
10.2.1	Electronic assembly acceptability	Class 2 according to IPC-A-610G	Fulfilled (Class 2)
10.2.5	IC Sockets and Edge connectors	Class K2 (not allowed)	Fulfilled (K2)
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 (IP40)
10.10	Cooling and ventilation	Forced ventilation for cooling is not allowed	Fulfilled (No forced cooling)
11.4	Fire behaviour requirements	Fire behaviour testing shall be according to EN 45545-2:2020.	Fulfilled (Hazard level 3)
12.7.8.3	Programmable Component	Table10: Class M0	Not Applicable (No user programmable components)