

Proprietary Information of:  bel POWER SOLUTIONS & PROTECTION a bel group	Title: EN 50155 Declaration of Conformity	Document No. URR.03607	Rev. A
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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**.

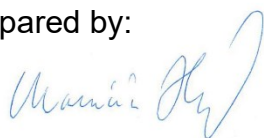
Manufacturer/Address: **Bel Fuse Inc.**
300 Executive Drive, Suite 300
West Orange, NJ 07052
USA

Product: **DC-DC Converter**

Type Designation: **RCM500 Series**
 (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/A1:2019
EN 60529:1991/A2:2013/AC:2019-02
EN 61373:2010/AC:2017-09
EN 45545-2:2020+A1:2023
 (Refer to Table 2 listing achieved compliance)

Prepared by:



Dubnica nad Váhom, Slovakia

Feb 24th, 2024

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Place

Date

Approved by:



Uster, Switzerland

Feb 24th, 2024

Silvan Mueller,
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Manager

Place

Date

Table 1: List of affected product part numbers

[illegible]

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

Part Number Description

		110 RCM 500 -24 D M Q F K
Operating input voltage $V_{I\text{cont}}$ (continuously):		
50.4 – 90 VDC	72	
77 – 137.5 VDC	110	
Series	RCM	
Output power:		
500 W	500	
1000 W	1000	
Nominal output voltage:		
24 V	-24	
Auxiliary functions and options:		
Out OK, output voltage adjust, shutdown ¹	D	
Interruption time	M	
ORing FET	Q	
Fuse built-in	F	
Pluggable Connectors	K	

¹ Opt. D requires the auxiliary connector.

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

Note: All models are RoHS-compliant for all six substances.

Available combinations of options:

72/110RCMxxx-24 (K)
 72/110RCMxxx-24D (K)
 72/110RCMxxx-24DF (K)
 72/110RCMxxx-24DMQ (K)
 72/110RCMxxx-24DMQF (K)

Example: 110RCM500-24DMQ: DC-DC converter, input voltage range 77 to 137.5V continuously, output providing 24 V /21 A, monitoring relay, output voltage adjust, shutdown input, active current sharing, interruption time 10 ms, integrated ORing FET, RoHS-compliant for all six substances.

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Table 2: Compliance status

Subclause	Title	Default requirement	Product compliance
4.4.1	Altitude	Class A1 (1400 meters) Table 1 of EN 50125-1	Fulfilled (AX - 3000 meters)
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	Fulfilled (Salt Mist per EN 50155:2021, 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 V	Fulfilled (72V, 96, 110V)
5.2.2	Continuous DC power supply range	Table4: 0.7 x Un – 1.25 x Un	Fulfilled (50.4V – 90V for 72RCM500) (77V – 137.5V for 110RCM500)
5.2.3	Temporary DC power supply fluctuation	Table4: 0.6 x Un – 1.4 x Un (for 100msec)	Fulfilled (43.2V – 100.8V for 72RCM500) (66V – 154V for 110RCM500)
5.2.4	Interruption of voltage supply	Class S2 (10 msec)	Fulfilled (S2 – 10msec)
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	Fulfilled (PD2)
		Table 13 (13.4.7): Insulation & withstand test voltages shall be applied	Fulfilled
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 (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	Fulfilled (IP30)
10.10	Cooling and ventilation	Forced ventilation for cooling is not allowed	Fulfilled (No forced cooling)
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	Not Applicable