

Redesign DC/DC-converter for railway applications

in accordance with IEC571-EN50155-RIA12

Two international standards are used to regulate the compliance of electrical and electronic equipment in railway applications:

The IEC571, EN50155, (UK) RIA12

RIA 12 (UK) requires overvoltage protection exceeding those of the requirements in the European standards.

The present power supply meets or exceeds all the basic standards.

The device was developed to be a pin compatible and functionally compatible redesign to act as a plug-and-play replacement for power supply B54794 and has fully modular design.

The GND of the supply voltage is linked to the GND for the output voltage. The input modules are designed for an input voltage of nom. 110V DC.

According to EN50155, the necessary input voltage range is $0.7 \dots 1.25 \times U_N = 77 \dots 137V$.

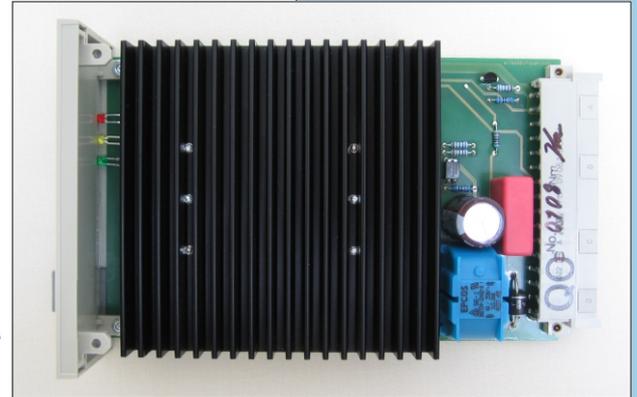
The under/over voltage range needs to include both 66 V and 154V.

The modules used are designed for 66V to 154V and are also equipped with active transient protection, which securely eliminates the RIA12-specified overvoltage (for 20 mS) of 3.5V-times the nominal input voltage or up to 385V, as well as peaks of up to 1800V/50 μ s.

The MTBF is > 250.000h for the module, which meets the life requirements for railway equipment of 24/d for 30a.

The installation box meets the requirements for railway applications and is extremely robust and can resist a vibration load on three axels with and amplitude of 7.5mm at 5-150Hz and acceleration of 20m/s².

**VEW-Redesign
B54794
110//24V DC**



Technical data:

PCB-card	: 100 x 160mm, Frontplate 12TE 3HE
Plug-in	: DIN 41612 F48
Supply voltage	: nom. 110V DC, min. 66V DC, max. 154V DC
Power	: max. 80VA
Efficiency	: ca. 85%
Temperature range:	-25...+70°C
Output	: 24V 3,3A
Option	: 12DC; $\pm 12VDC$; $\pm 15VDC$



DIE ENTWICKLER

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