

# DC/DC-Converter 146025501 RED

## for railway applications

### in accordance with IEC571-EN50155-RIA12

**VEW-Redesign  
of 146025501**

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

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 as a pin and functionally compatible redesign for a plug-and-play replacement of the power supply type 146025501 and has fully modular design. The input modules are designed for an input voltage of nom. 110V DC.

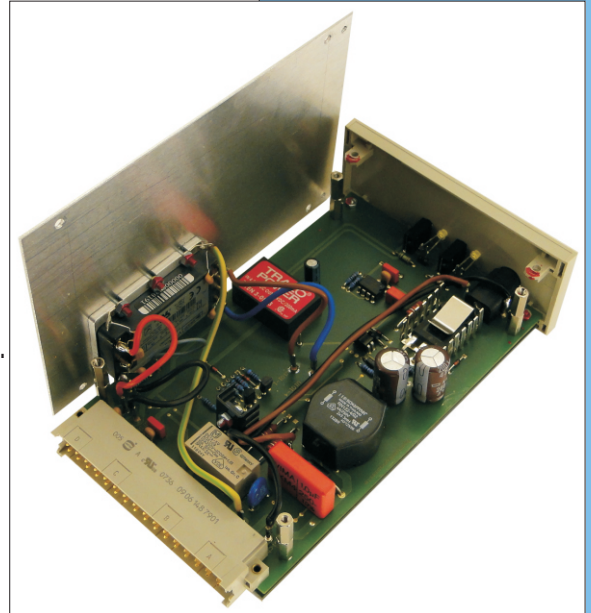
According to EN50155, the necessary input voltage range is  $0.7...1.25 \times UN = 77...137V$ .

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 an active transient protection, which securely eliminates the RIA12-specified overvoltage (for 20 mS) of the 3.5V-times of the nominal input voltage of up to 385V, as well as peaks of up to  $1800V/50\mu s$ .

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

The installation box meets the requirements for railway applications, is extremely robust and can resist a vibration load on three axels with an amplitude of 7.5mm at 5-150Hz and acceleration of  $20m/s^2$ .



Redesign

#### Technical data:

PCB-card	: 100 x 160mm, Frontplate 8TE 3HE
Plug-in	: DIN 41612 F48
Supply voltage	: nom. 110V DC, min. 66V DC, max. 154V DC
Power	: max. 60VA
Efficiency	: appr. 85%
Temperature range:	-25...+70°C
Output	: 5,1V 9A, 15V 0,2A
Front plate	: inspection sockets for UA1, UA2 LEDs and fuse



**DIE ENTWICKLER**

VEW Vereinigte Elektronikwerkstätten GmbH  
Edisonstraße 19 \* POb: 330543 \* 28357 Bremen  
Fon:(+49) 0421/271530 Fax(+49) 0421/273608  
E-Mail: VEW-GmbH-Bremen@t-online.de