



Traction & Power Supplies

RECOM Power GmbH

Full-Range Power: RECOM's Railway DC/DC Line-Up

40W and 75W
Railway DC/DCs are
Fully Featured.

All options are included in rail DC/DCs for a 'Plug and Play' experience.

RECOM is announcing two new cost-efficient DC/DCs for the rail market with an ultra-wide 11:1 input range to cover all nominal input voltages from 24V to 110VDC, with 24V output and a 12V and 15V output version coming soon.

Models RMD40-UW and RMD75-UW have trimmable outputs with reinforced isolation, rated at 40W (60W/10s boost) and 75W (90W/10s boost) respectively. The parts are offered as lightweight baseplate-cooled modules and thanks to their high conversion efficiency of better than 90%, they can operate at full power for OT4+ST1&ST2 classes from -40°C to +85°C with no additional cooling in any mounting position.

A wealth of features are incorporated as standard, including EN50121-3-2 filtering and disturbance protection, input reverse polarity protection, inrush current limiting, remote on/off, power-good signal/contacts, output trim and internal OR-ing diode for paralleling/redundant operation. An active hold-up circuit provides >10ms ride-through across the whole input range. Comprehensive protection



RMD40-UW series and RMD75-UW series

is included against short circuits, over-current, over-temperature and over-voltage. Along with comprehensive EN50155 certification and approvals for rail applications, these features make for easy 'plug and play' system integration with 'fit and forget' confidence from a high MTBF figure and 20 year design lifetime/useful life class L4.

The RMD40-UW is presented in a compact 100 x 60 x 30mm package while the RMD75-UW is just 110 x 73 x 40mm. Connections are by block terminals or optionally by Cage Clamp terminals as suffix /PT and a DIN-rail mounting option is available

for both versions. The units come with aluminum housing in IP20, the electronic part is conformally coated for OV2/PD2 environment and both families fulfil EN45545-2 - HL3 fire protection hazard level.

"These DC/DCs require no extra components and no external circuits for compliance with all of the relevant railway emc, safety, environmental and fire protection standards, making them a cost-effective, compact and straightforward solution for auxiliary systems that need an isolated 24V bus," comments Marco Kuhn, Product Manager DC/DC Plug & Play of RECOM.

300W Railway DC/DC Features 110VDC Output and 12:1 Input Range

Wide input railway-certified
DC/DC range extended.

RECOM has also extended its 300W railway DC/DC range with the cost-effective RMD300-110-110SUW model, featuring a fully regulated 110VDC output.

Input range is ultra-wide 12:1 or 16.8V to 137.5V, to cover all common nominal rail voltages worldwide, with dips and surges according to standard EN 50155. Operation is allowed to 14.4V for 100ms and to 170VDC for three seconds and hold-up of 10ms minimum is also included across the whole

ST1 and ST2 according to EN 50155. Additionally, the DC/DC can provide a boost of 330W for 10s.

Certifications include EN 50155, EN 50121-3-2, and IEC/EN 61000-4-2,3,4,5 for EMC, EN 50124-1 for insulation coordination, and EN 45545-2 for railway fire safety. Isolation is 3.5kVAC/5kVDC reinforced.

The products are equipment Class I-rated and are designed for IP20/pollution degree 2 (PD2) and overvoltage category III (OVC III) environments up to 2000m altitude (Class II to 5000m). Additionally, the internal PCB is protected by coating according to IPC -A-610G Class 2 standard.

The product complies with environmental standards including

Full protection is included against input reverse polarity and undervoltage, overtemperature and output overcurrent, short circuits and overvoltage. For increased power or redundancy, an output OR-ing diode function is included for paralleling outputs. Control and monitoring features include remote ON/OFF, current share pin, output trim, and a Power OK signal indicated by an LED and volt-free relay contacts.

The product is offered in a compact 209 x 141 x 48mm open-frame package with protective cover. Connections are by screw terminal.

“Our RMD300 range now includes 110VDC output which is ideal for powering downstream railway equipment that has a limited input range,” comments Marco Kuhn, Product Manager DC/DC Plug & Play of RECOM.

“The DC/DC is fully compliant with rail specifications without need for external components.”



RMD300-UW series

input range, to allow for supply dropouts with no loss of function.

The RMD300-110-110SUW operates to 85°C ambient without derating using convection/conduction cooling and to 90°C with derating, allowing the product to be rated for Class OT4 and extended Classes

EN 60068 for temperature testing and EN 61373 for life, shock and vibration testing in Class B body-mount applications. Reliability is 1.36M hrs MTBF calculated at 40°C according to IEC 61709/UTE C80-810 and design lifetime is 20 years, rated ‘Useful Life Class’ L4, according to EN 50155.

RECOM Power GmbH
Münzfeld 35
Gmunden
Upper Austria
4810

recom-power.com/railway

info@recom-power.com

Tel: 0043761288325700

