



➤ DC/DC Converter

RDVS has designed a number of DC/DC Converters to provide efficient power conversion from an HV traction battery to a low voltage system as a replacement to the alternator on conventional vehicles.

The unit is fully CAN controllable with configurable output voltage and current, and >2000V galvanic isolation between input and output. The system includes UDS diagnostic features as well as self-protection against over current, voltage and temperature, with automatic current limiting and hardware safety shutdown.



Electrical
Engineering
Solutions

www.rdvs.co.uk

+44 (0)1295 709595



ISO 9001:2008
FS 563617



ISO 14001:2004
EMS 563618

➤ DC/DC Converter

The following is an example specification for a DC/DC converter that RDVS produced. However, we have experience across of a range of automotive DC/DC converters and are capable of producing units with inputs of much higher voltages if required.

Features

- › High voltage input range 250V to 420V, nominal 375V
- › Low voltage output 10V to 15V
- › Power rating of 2kW with up to 120A output current at 65°C
- › Sophisticated software allows soft start-up and shutdown
- › Modular design allows units to be paralleled for increased power
- › Intelligent switching technology provides efficiency >90%
- › Output voltage configurable via CAN
- › UDS diagnostic features
- › Protected against overcurrent, overvoltage and reverse battery
- › On-board temperature sensor allows controlled over-temperature de-rating and finally shutdown
- › Water cooling through attached cooling plate
- › HVIL system with automatic hardware shutdown
- › REG-100 compliant touch-proof HV connectors
- › LV systems galvanically isolated from HV to >2000V

Physical Attributes

- › Dimensions: 324 x 252 x 95 mm
- › LV connections: 20-way Molex MX-150
- › HV connections: HVA 280
- › Mounting: 4 x M6
- › Earth bonds to vehicle chassis

Environmental

- › Operating voltage range: 9-16V DC
- › HV voltage range: 250-420V DC
- › Typical power consumption:
 - › <1A operating
 - › <200µA quiescent
- › Temperature: -40°C to +85°C with liquid cooling
- › Humidity: IEC 60068-2-38 Z/AD
- › Vibration/shock: IEC 60068-2-64, IEC 60068-2-6, IEC 60068-2-27
- › EMC: ISO7637, ISO11452, 2004/104/EC
- › ESD: ISO10605
- › RoHS compliant
- › Sealed to IP67 as standard, can meet IP6K9K in appropriate installation

All parameters are subject to individual installation conditions

