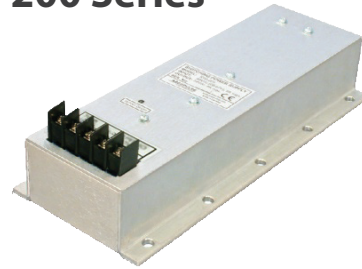


200W, Rugged DC/DC Converter for redundant operation in Railway and other Heavy Duty Environments RWD 200 Series

- ◆ Rugged, field-proven design
- ◆ Built-in redundancy diode
- ◆ Complete encapsulation
- ◆ Very wide temperature range
- ◆ Full electronic protection
- ◆ Wide input ranges



The RWD 200 Series fully encapsulated, railway quality DC/DC converter uses a field-proven design to generate 200W output power. A built-in output separation diode allows for redundant operation. It is a mature product with a track-record in numerous applications. This converter is entirely potted with a thermally conductive MIL-grade silicon rubber compound to ensure immunity to shock, vibration and humidity. Cooling is by conduction via a base plate to a heat-sinking surface. Low component count, large design headroom, and the use of components with established reliability result in a high MTBF. The unit meets the requirements of EN50155 for electronic equipment used on rolling stock. The unit is also suitable for transportation, mining, oilrigs, military and other harsh environments. The RWD 200 is manufactured at our plant under strict quality control. Customized versions are also available.

SPECIFICATIONS

Standard Input Voltages

24Vdc (14.4 – 34V)
 36Vdc (22 – 51V)
 48Vdc (29 – 67V)
 72Vdc (43 – 101V)
 96Vdc (58 – 135V)
 110Vdc (66 – 154V)
 Other inputs upon request

Input Protection

Inrush current limiting
 Varistor
 Reverse polarity protection
 Internal safety fuse
 Lower voltage than specified
 minimum input will not damage
 unit

Isolation

1500Vdc input to chassis
 3000Vdc input to output
 1500Vdc output to chassis

Standards

Meets EN 60950 and EN 50155

Immunity

Meets criteria of EN 50155 and EN 50121-3-2 including:
 EN 61000-4-2 (ESD)
 EN 61000-4-3 (RF Immunity)
 EN 61000-4-4 (Fast Transients)
 EN 50155 (Surge)
 EN 61000-4-6 (Conducted Imm.)
 EN 50155 (Voltage Variations)

EMI

EN 55022 Class B and
 EN 50121-3-2 conducted
 and radiated

Switching Frequency

80kHz \pm 5kHz

Output Voltage/Current

12Vdc/16A or 24Vdc/8A
 Output is floating, either terminal
 can be grounded
 Consult factory for other voltages

Redundancy Diode

Built-in redundancy diode

Line/Load Regulation

+/- 1.5% combined from zero load
 to full load including redundancy
 diode

Dynamic Response

Max 5% voltage deviation for 10%
 to 50% load step, with better than
 1msec recovery time

Output Ripple/Noise

Less than 1% peak-to-peak or
 0.2% RMS of the output voltage
 (20MHz BW)

Output Overload Protection

Rectangular current limiting with
 hiccup type short-circuit protection
 Thermal shutdown with automatic
 recovery in case of insufficient
 cooling

Output Overvoltage Protection

Second regulator loop completely
 stable and independent of main
 regulator loop
 Transzorb clamp

Efficiency

80 to 90% depending on
 input/output configuration

Operating Temperature Range

-40 to +70°C cold plate
 temperature for full specifications

Temperature Drift

0.03% per °C over operating
 temperature range

Cooling

Conduction cooling via base plate to
 customer chassis or heat-sink

Environmental Protection

Full encapsulation with thermally
 conductive silicon potting
 compound with UL94V-0
 flammability rating.

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 – 95% non-condensing

MTBF

150,000 hours @ 45 °C
 Demonstrated MTBF is significantly
 Higher

Indicators

None.
 Optional 'ON' LED available

Control Input

None

Alarm Output

None

Package/Dimensions (W x H x L)

P200L: 94 x 60 x 230 mm
 3.7" x 2.4" x 9.1" including terminal
 block and flanges
 Mounting holes are clear

Weight

1.3 kg (2.8 lb)

Connections

5-pole barrier-type terminal block
 with 3/8" spacing.
 Cover can be provided upon
 Request

RoHS Compliance

Fully compliant

Warranty

Two years subject to application
 within good engineering practice.

Enhancements to these general specifications and customizing can be accommodated upon request. Specifications subject to change.



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