



DCHV2000 DC/DC CONVERTER

SERIES DCHV2000

This rugged, industrial quality DC/DC converter utilizes field-proven topology to generate 2000W output power. It is a mature design with a track record in numerous applications.

The input and output are filtered for low noise.

High quality built-in fans provide sufficient airflow for operation within the specified temperature range without de-rating.

The fans draw air into the unit, and exhaust at the terminal side of the unit. All heat generating components are installed on aluminum heatsink blocks which are thermally connected to the base plate.

Conformal coating provides protection against humidity and airborne contaminants.

Full electronic protection, low component count, large design headroom, and the exclusive use of components with established reliability contribute to a high MTBF.

This unit is manufactured at our plant under strict quality control.

Customized versions are also available.

APPLICATIONS

- Marine / Automotive / RV
- Electric Utilities and Substations
- Telecom Power Plants
- Manufacturing Locations
- Steel Mills
- Military Applications (COTS)
- Industrial Controls
- OEM Applications
- Solar / Alternative Power Systems
- Fuel Cells

FEATURES

- Rugged industrial quality
- High DC-input voltage
- Wide DC-input voltage range
- Custom inputs available upon request
- Field-proven design
- Fan cooling
- Full electronic protection
- N+1 redundancy
- Single output
- Custom outputs available



High frequency technology



Light weight, compact size



Full electronic protection



Optional Control input



Optional Extended temperature range



Optional Output fail alarm (Form C)

SPECIFICATIONS

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|-------------------------------|--|
| Input Voltage | 600Vdc nominal 450V- 800V operating range Other input range on request |
| Input Protection | Inrush current limiting Varistor Reverse polarity protection Internal safety fuse Lower voltage than the specified minimum input will not damage the unit |
| Isolation | 3000Vdc input to chassis 3000Vdc input to output 5600Vdc type test 1000Vdc output to chassis |
| Switching Frequency | 55kHz \pm 3kHz |
| Output Voltage | 24V, 36V, 48V or 110Vdc Output is floating; either terminal can be grounded Other outputs on request |
| Redundancy Diode | Installed internally for separation for the internal modules |
| Load/Line Regulation | \pm 1% combined from zero load to full load |
| Dynamic Response | Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time |
| Output Ripple Noise | Better than 1% of output voltage peak to peak or 0.2% Vrms (20MHz BW) |
| Efficiency | Min. 80% at full load depending on input/output configuration |
| Output Overload Protection | Rectangular current limiting with short-circuit protection (no hiccup) Thermal shutdown in case of insufficient airflow (self-resetting) |
| Output Overvoltage Protection | Second regulator loop, completely stable and independent of main regulator loop |
| Standards | Designed to meet EN 60950-1, EN 62368-1, CE and related standards |
| EMI | EN55032 Class A with margins |

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|--------------------------|--|
| Operating Temperature | 0°C to 50°C cold plate temperature for full specification without derating Extended temperature ranges available |
| Humidity | 5 - 95% non-condensing |
| Temperature Drift | 0.03% per °C over operating temperature range |
| Cooling | Forced air by high quality built-in fans and conduction to customer heat sink or chassis. Fans draw air into the unit. |
| Environmental Protection | Basic ruggedizing and conformal coating Full ruggedizing available as an option |
| Shock/Vibration | IEC 61373 Cat 1 A&B |
| Dimensions | 3U3: 132 x 187 x 407 mm including terminal block and mounting flanges Mounting holes are clear |
| Weight | 7 Kg |
| Connections | Input: Terminal block Output: Threaded studs, M6 or terminal block |
| MTBF | 85,000 hours at 45°C Demonstrated MTBF is significantly higher |
| Indicators | None Available as option |
| Control Input | None Available as option |
| Alarm output | None Available as option |
| RoHS Compliance | Fully compliant |
| Warranty | 2 years |

