



DCC2500 DC/DC CONVERTER

SERIES DCC2500

This rugged, industrial quality DC/DC converter uses field-proven topology to generate 2500W output power.

It is a mature design with a track record in numerous applications.

The unit is built with internal modules

Built-in fans provide sufficient airflow for operation without de-rating to the specified temperature.

Full electronic protection eliminates failure due to abnormal operational conditions, including application errors.

The input and output are filtered for low noise.

Low component count, large design headroom, and the use of components with established reliability result in a high MTBF.

Options include a Form C output fail alarm and remote shutdown.

Additional ruggedizing and conformal coating are available for applications that require high immunity to shock, vibration and humidity.

Customized versions are also available.



High frequency technology



Light weight, compact size



Full electronic protection



Optional Control input



Optional Extended temperature range



Optional Output fail alarm (Form C)

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
- Custom inputs available upon request
- Field-proven design
- Fan cooling
- Full electronic protection
- N+1 redundancy available as option
- Single output
- Custom outputs available

SPECIFICATIONS

Input Voltage	24Vdc (21-30V) 48Vdc (42-60V) 125Vd (105-145V) Other inputs 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	Depends on the required input/output combination At minimum: 1000VDC input to chassis 1500VDC input to output 500VDC output to chassis
Switching Frequency	55kHz +/- 3kHz
Output Voltage	24V/104A, 36V/69A, 48V/52A, 72V/34A, 96V/26A or 125V/20A are standard Output is floating, either terminal can be grounded Other outputs on request
Redundancy Diode	Optional
Load/Line Regulation	±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	Typically 85% at full load depending on input/output combination
Output Overload Protection	Rectangular current limiting with short-circuit protection (hiccup). Thermal shutdown in case of insufficient cooling (self -resetting)
Output Overvoltage Protection	Second regulator loop. Second loop completely stable and independent of main regulator loop
Standards	Designed to meet EN60950 and related UL & CSA standards
EMI	EN 55022 Class A as minimum

Operating Temperature	0°C to 50°C for full specification Extended temperature ranges available
Humidity	5 - 95% non-condensing
Temperature Drift	0.03% per °C over operating temperature range
Cooling	Forced air by two built-in fans and conduction to customer heatsink or chassis
Environmental Protection	Basic ruggedizing Heavy ruggedizing and conformal coating as option
Shock/Vibration	IEC 61373 Cat 1 A&B
Dimensions	3U3: 187 x 132 x 407 mm (W x H x L) including connectors, excluding flanges
Weight	6 Kg
Connections	Depends on input/output combination
MTBF	130,000 hours at 45°C (fans not included) Demonstrated MTBF is significantly higher
Indicators	None
Control Input	Optional
Alarm output	None Output Fail Alarm (Form C) as option
RoHS Compliance	Fully compliant
Warranty	2 years

