DCC5000 Series DC/DC Voltage Converter

Chassis-mount

Rack-mount

Benefits

- 19” Rack- or chassis-mount, 3U
- Power sensitive electronics without interference
- Rugged & Reliable
- Ensure years of safe and trouble free operation

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

DC/DC Converters

DCC5000 Series (isolated)

Description

The DCC5000 Series is a modular, industrial quality DC/DC converter system that uses a field technology to deliver up to 5000W output power, depending on the input/output configuration.
It is a mature design with a track record in numerous applications. The fully loaded shelf can hold up to seven internal modules, which also provide inherent redundancy; the failure of one module would only cause a minor loss in output power.
Several shelves can be paralleled for higher output power. Multiple output versions can also be achieved by combining various internal modules.
Full electronic protection eliminates failure due to abnormal operational conditions, including application errors.
The system has input and output filtering in compliance with EN 55022 EMI standards. Built-in fans provide sufficient airflow for operation without de-rating to the specified temperature.
Low component count, large design headrooms, and the use of components with established reliability result in a high MTBF.
Additional ruggedizing and conformal coating are available for operation in humid environments. Other options include module fail alarm, extended temperature ranges and remote shut down. The unit is manufactured at our plant under strict quality control.

Features

- Redundant, modular
- Full electronic protection
- Telecom quality
- Field-proven design
- Single or multiple output
- Up to 5000W output power
- 2 years parts and labour warranty

Specifications *(Specifications Subject to Change Without Notice)*

Input Voltage range	24V, 48V, 125V ± 15% are standard. Consult factory for other inputs
Input Protection	Inrush current limiting. Reverse polarity protection Varistor Internal safety fuse Lower voltage than specified minimum input will not damage unit
Input Isolation	Depends on the required input/output Combination. At minimum: 1000Vdc input to chassis 1500Vdc input to output 500Vdc output to chassis
Output Voltages	Any DC output from 12V to 300VDC, Consult factory for other outputs
Redundancy diodes	Installed on each internal module for separation and redundancy
Line / Load Regulation	± 1% to ± 2% combined depending on output voltage
Dynamic Response	Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time
Output Overvoltage Protection	Double regulator loop
Overload Protection	Current limiting with short circuit protection Self-resetting thermostat for thermal protection
Efficiency	75 - 94% depending on Input/Output combination
EMI	EN 55022 Class A with margins, Class B filtering as option
Switching Frequency	55kHz +/- 3kHz
Output Ripple/Noise	Better than 1% of output voltage peak to peak or 0.2% RMS of the output voltage (20MHZ BW)
Output Fail Alarm	Not on standard version Optional module fail alarm or output fail alarm
Operating Temperature	0°C to +50°C with built-in fan cooling. Extended temperature range available
Temperature Drift	0.03% per °C over operating temperature range
Cooling	Forced air by built in fans
Environmental Protection	Basic ruggedizing, Optional heavy ruggedizing and conformal coating is available
Shock/Vibration	IEC61371 Cat 1 A&B
Humidity	5 - 95% non-condensing
MTBF	150,000 hours @ 45°C per internal module Demonstrated MTBF is significantly higher
Indicators	None, Available as option
Control Input	None, Available as option
Connections	Terminal blocks or threaded studs. Other connectors according to customer requirements
Dimensions	Chassis-mount: 3U7: 132 x 432 x 407mm including connectors Rack-mount: 3U7: 132 x 483 x 407mm including connectors
Weight	Approximately 14kg
Safety	EN 55022 Class A with margins Class B filtering as option
RoHS Compliance	Fully compliant
Warranty	Two years subject to application within good engineering practice

Available from:

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The power conversion company

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