

# DCC500 Series DC/DC Voltage Converter



## Benefits

- Ultra-Quiet
- 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

### DCC500 Wide Input DC/DC Converter

#### Description

This rugged, industrial-quality power converter system uses field-proven technology to generate the required output power.

The system consists of one input buck regulator and one output module.

Built-in fan provide sufficient airflow for operation at the specified temperature without de-rating.

The fan draws air into the unit and the exhaust exits at the rear of the unit.

The system has full electronic protection. The input and output are filtered for low noise. Large design headrooms, and the use of components with established reliability result in a high MTBF.

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

Special Features: Wide input range 42-250Vdc. Conformal coating

#### Features

- Compact size
- Single regulated and adjustable output
- 500W output power
- Full electronic protection
- Rugged industrial quality
- Field-proven design
- 2 years parts and labour warranty

# Specifications ( Specifications Subject to Change Without Notice)

<b>Input Voltage range</b>	Operating range 42 to 250Vdc Input current: 15A max.
<b>Input Protection</b>	Inrush current limiting Varistor Reverse polarity protection Internal safety fuse Lower voltage than the specified minimum input will not damage the unit
<b>Input Isolation</b>	1700Vdc input to chassis 1700Vdc input to output 1000Vdc output to chassis
<b>Output Voltages</b>	48Vdc $\pm$ 0.2V / 10A 500W continuous The output is floating, either terminal can be grounded
<b>Redundancy diode</b>	Not installed
<b>Line / Load Regulation</b>	$\pm$ 1% combined from zero load to full load
<b>Output Overvoltage Protection</b>	Second regulator loop. Second loop completely stable and independent of main regulator loop OVP setting: 54V $\pm$ 2V
<b>Output Overload Protection</b>	Rectangular current limiting with short-circuit protection Thermal shutdown with automatic reset in case of insufficient cooling (self-resetting) Current Limit set to: 11A $\pm$ 0.8A
<b>Efficiency</b>	80% at full load
<b>EMI</b>	EN 55022 Class A as a minimum
<b>Switching Frequency</b>	55kHz +/- 3kHz
<b>Dynamic Response</b>	Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time
<b>Output Ripple/Noise</b>	Better than 100mVrms or 400mVpp (@20MHz BW)
<b>Operating Temperature</b>	0 to + 50°C ambient for full specification
<b>Humidity</b>	95% non-condensing
<b>Temperature Drift</b>	0.03% per °C over operating temperature range
<b>Cooling</b>	By built-in high quality fan
<b>MTBF</b>	110,000 hours at 45°C (Fan excluded)
<b>Indicators</b>	None
<b>Control Input</b>	None
<b>Alarm Outputs</b>	None
<b>Environmental Protection</b>	Basic ruggedizing Conformal coating
<b>Shock/Vibration</b>	IEC61373 Cat 1 A&B
<b>Connections</b>	Input / Output: Terminal block
<b>Dimensions</b>	U5512: 127 x 127 x 316mm Mounting holes are clear
<b>Weight</b>	5.2 kg
<b>Standards</b>	Designed to meet EN 60950-1 requirements and related standards Meets requirements for CE marking
<b>RoHS Compliance</b>	Fully compliant
<b>Warranty</b>	2 years

Available from:



## RIPEnergy®

The power conversion company

RIPEnergy AG  
Wägitalstrasse 24  
CH-8854 Siebnen  
Switzerland

Ph +41-(0)43-818 53 85  
Fax +41-(0)43-818 53 87  
www.ripenergy.ch