

# DCHV500F Series DC/DC Voltage Converter



## Benefits

- Ultra-Quiet
- Power sensitive electronics without interference
- Rugged & Reliable
- Ensure years of safe and trouble free operation

## Applications

- Trams, light Rail, Metros
- 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

### DCHV500F Single-Output DC Converter

#### Description

The rugged, industrial quality DC/DC converter series uses field proven design topology to generate the specified output power.

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

The unit accepts an input voltage of 600Vdc.

An optional built-in redundancy diode would allow for a number of units to be connected in parallel to achieve higher output power or N+1 redundancy.

The output separation diode also makes the unit suitable for battery charging applications.

To ensure high reliability and long operating life, all critical components on the primary side are designed and tested for corona inception levels, which are significantly higher than the operating voltages.

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

Full electronic protection, low component count, large design headrooms, and the use of components with established reliability result in a high MTBF.

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

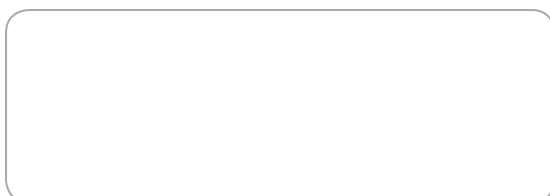
#### Features

- Rugged industrial quality
- Wide DC-input voltage range
- Field-proven design
- Full electronic protection
- Fan cooling
- N+1 redundancy available

# Specifications ( Specifications Subject to Change Without Notice)

<b>Input Voltage</b>	600Vdc nominal 450 - 800Vdc operating range Other input range on request
<b>Input Protection</b>	Inrush current limiting Varistor Reverse polarity protection Internal safety fuse Lower voltage than specified input min. will not damage unit
<b>Isolation</b>	3000VDC input to chassis 4300VDC input to output 5600VDC type test 1000VDC output to chassis
<b>Standards</b>	Designed to meet EN60950 and related standards
<b>EMI</b>	EN55022 Class A with margins
<b>Switching Frequency</b>	55kHz +/- 3kHz
<b>Output Voltage</b>	24V, 36V, 48V or 110Vdc Output is floating; either terminal can be grounded Other outputs on request
<b>Redundancy Diode</b>	None Available as option
<b>Line / Load Regulation</b>	Better than +/-1% combined from zero load to full load
<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 0.2% Vrms or 1% Vpp of the output voltage (20MHz BW)
<b>Output Overload Protection</b>	Rectangular current limiting with short-circuit protection (no hiccup) Thermal shutdown in case of insufficient airflow (self-resetting)
<b>Output Overvoltage Protection</b>	Second regulator loop, completely stable and independent of main regulator loop
<b>Efficiency</b>	Min 80% at full load depending on input/output configuration
<b>Operating Temperature</b>	0°C to 55°C for full specification without derating Extended temperature ranges available
<b>Temperature Drift</b>	0.03% per °C over operating temperature range
<b>Cooling</b>	Forced air by two high quality built-in fans and conduction to customer heatsink or chassis. Fans draw air into the unit
<b>Environmental Protection</b>	Basic ruggedizing and conformal coating Heavy ruggedizing available as option
<b>Vibration/Shock</b>	IEC 61373 Cat 1 A&B
<b>Humidity</b>	5 – 95% non-condensing
<b>MTBF</b>	130,000 hours @45°C (fans excluded) Demonstrated MTBF is significantly higher.
<b>Indicators</b>	Green "Output ON" LED visible through cooling slots
<b>Control Input</b>	None Available as option
<b>Alarm Outputs</b>	None Available as option
<b>Dimensions</b>	FFX: 185 x 66 x 351 mm including terminal block and mounting flanges Mounting holes are clear
<b>Weight</b>	2.9kg
<b>Connections</b>	12-pole barrier type terminal block with 3/8" spacing
<b>RoHS Compliance</b>	Fully compliant
<b>Warranty</b>	2 years

Available from:



## RIPEnergy®

The power conversion company

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