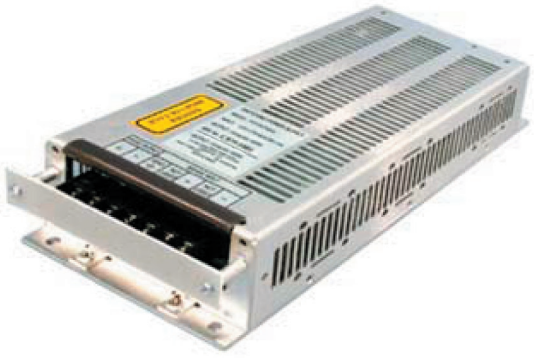
DCHV109 Series DC/DC Voltage Converter



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

DCHV109 Single-Output DC Converter

Description

The DCHV109 Series rugged, single output DC/DC converter uses field-proven double-conversion topology to generate 150W output power.
It is a mature design with a track record in several of applications.
The unit is equipped with nondestructive reverse polarity protection on the input, surge protection and high-grade input/output filtering.
The series is rated for operation over a -25 to +55°C temperature range without derating.
It is cooled by natural convection.
This model is ruggedized and conformal coated for immunity to shock, vibration, humidity, moisture, dust and insects.
An optional redundancy diode allows parallel connection to achieve higher output power or N+1 redundancy.
This chassis-mount design is optimized for low component count and high efficiency.
The use of components with established reliability results in a high demonstrated MTBF.
The DCHV109 is manufactured at our plant under strict quality control.
Versions meeting EN 50155 railway specifications and customized versions are also available.

Features

- Field-proven rugged design
- Harsh environment applications
- Convection cooled
- Full electronic protection
- Wide DC-input voltage range
- N+1 redundancy available

Specifications *(Specifications Subject to Change Without Notice)*

Input Voltage	600VDC (400V – 800V range) Input current: 0.3A max.
Input Protection	Inrush current limiting Varistor Reverse polarity protection Internal safety fuse Lower voltage than specified input min. will not damage unit
Input Isolation	3000VDC input to chassis 4300VDC input to output 5600VDC type test 500VDC output to chassis
Output Voltages	24VDC / 6A Output is floating; either terminal can be grounded Other voltages on request
Redundancy Diode	Available as option
Standards	Designed to meet EN60950 and corresponding UL and CSA standards
Line / Load Regulation	+/- 1% from no load to full load +/- 3% version with higher MTBF also available
Dynamic Response	Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time
Output Overvoltage Protection	Internal clamp and transzorb on output
Output Overload Protection	Rectangular current limiting with short-circuit protection (no hiccup)
Efficiency	Min. 80% at full load
EMI	EN55022 Class A as a minimum
Switching Frequency	83kHz +/- 5kHz
Output Ripple/Noise	Better than 50mVrms or 250mV peak to peak (20MHz BW)
Operating Temperature	-25°C to 55°C with proper airflow
Temperature Drift	0.03% per °C over operating temperature range
Cooling	Convection and conduction via base plate
Environmental Protection	Ruggedizing, Conformal coating
Vibration/Shock	Designed to meet IEC 61373 Cat 1 A&B
Humidity	5 – 95% non-condensing
MTBF	130,000 hours @ 45°C Demonstrated MTBF is significantly higher
Indicators	Optional
Control Input	None
Connections	9 pole barrier type terminal block with 3/8” spacing
Dimensions	F2: 112 x 57 x 256 mm including terminal block and mounting flanges Mounting holes are clear
Weight	1.13kg
RoHS Compliance	Fully compliant
Warranty	2 years

Available from:

RIPEnergy®

The power conversion company

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