

# DCCL60 Series DC/DC Voltage Converter



incl. DIN Rail Option

## 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

### DCCL60 Single-Output DC Converter

#### Description

The DCCL 60 Series generates 60W output power and it was specially designed to be very competitive in cost, without jeopardizing any quality or reliability features.

The series was designed for utmost simplicity and lowest component count, without the usual optional features. As part of the purist design, the usual complex feedback circuitry was simplified, which provides +/-5% (or better) regulation, fully sufficient for most applications.

The low component count results in a very high MTBF, over 180,000 hours 45°C.

Other quality features, such as conduction cooling of all major heat generating components, large design headroom and strict use of established reliability components, were rigorously maintained, which is an additional contributor to the high reliability.

Standard input voltages are available in a range of 20V to 160V, and output voltages in a 3.3V to 125Vdc range. Other voltages upon request.

The mechanical configuration is a semi-open design for hardware cost reduction. Fully enclosed or open PCB versions are available.

The rugged design allows applications where high shock and vibration are a concern, such as machines, generators, transportation, etc.

The unit is also available in versions fully compliant with railway standard EN 50155.

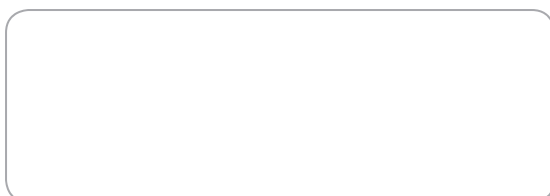
#### Features

- Single regulated output
- Rugged industrial quality
- Full electronic protection
- Convection/conduction cooled
- Field-proven design in a wide range of applications
- Custom outputs available

# Specifications ( Specifications Subject to Change Without Notice)

<b>Input Voltage range</b>	Any voltage in the range of 20V...160V, +/-15% Wider range is available on request
<b>Input Protection</b>	Inrush current limiting Varistor Reverse polarity Internal safety fuse Lower voltage than specified input min. will not damage unit
<b>Input Isolation</b>	1500VDC input to chassis 1500VDC input to output 500VDC output to chassis
<b>Output Voltages</b>	12V / 5A or 24V / 2.5A or 48V / 1.25A or 125V / 0.5A are standard Other voltages on request
<b>Standards</b>	Designed to meet EN 60950 and corresponding UL and CSA standards
<b>Line / Load Regulation</b>	Better than +/- 5% combined from 10% load to full load
<b>Output Overvoltage Protection</b>	Transzorb clamp on output
<b>Output Overload Protection</b>	Current limiting with short circuit protection (hiccup mode)
<b>Efficiency</b>	Output voltage dependent Typical 80% at full load
<b>EMI</b>	EN 55022 Class B
<b>Switching Frequency</b>	47kHz +/- 2kHz
<b>Output Ripple/Noise</b>	Better than 1% of output voltage peak to peak or 0.2% RMS of the output voltage (20MHZ BW)
<b>Operating Temperature</b>	0 to +70°C Full output power up to +50°C, > 50°C derating 2.5% per 1°C (50% Pnom @ 70°C)
<b>Temperature Drift</b>	0.03% per °C over operating temperature range
<b>Cooling</b>	Conduction to customer heatsink or chassis and natural convection
<b>Environmental Protection</b>	Basic ruggedizing
<b>Vibration/Shock</b>	Designed to meet IEC 61373 Cat 1 A&B
<b>Humidity</b>	5 – 95% non-condensing
<b>MTBF</b>	180,000 hours @ 45°C (calculated) Demonstrated MTBF is significantly higher
<b>Indicators</b>	None on standard version
<b>Control Input</b>	None
<b>Alarm Output</b>	None
<b>Connections</b>	Header pins with 0.156" spacing 90° header pins with 0.156" spacing as option
<b>Dimensions</b>	PCB Size: 3" x 5", Component height: 1.5" In chassis (WxHxL): FZ: 114 x 48 x 127 mm (4.5" x 1.89" x 5") including mounting flanges Mounting holes are clear
<b>Weight</b>	Open PCB: 0.23kg (0.5lbs) In Chassis: 0.45kg (1lbs)
<b>RoHS Compliance</b>	Fully compliant
<b>Warranty</b>	2 years

Available from:



## RIPEnergy®

The power conversion company

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