



## DCC319 DC/DC CONVERTER

### SERIES DCC319

This rugged, industrial quality DC/DC converter uses field-proven topology to generate 300W output power.

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

Cooling is via baseplate to a heat sinking surface and by natural convection.

An optional built-in redundancy diode allows for parallel and N+1 operation.

Additional ruggedizing and conformal coating are available on request for applications that require immunity to high levels of shock, vibration and humidity.

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

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

Customized versions are also available.

### 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

### FEATURES

- Rugged industrial quality
- Custom inputs available upon request
- Field-proven design
- Regulated and adjustable output
- Conduction / convection cooling (no fans)
- Full electronic protection
- N+1 redundancy available as option
- Single output
- Custom outputs available
- Plug-in (Eurocard) version available



High frequency technology



Light weight, compact size



Full electronic protection



Conduction Cooling (no Fan)



Optional Extended temperature range



Optional Output fail alarm (Form C)

# SPECIFICATIONS

Input Voltage	24Vdc (21-29V) 48Vdc (42-56V) 125Vd (105-145V) For 12Vdc and other input voltages, consult factory
Input Protection	Inrush current limiting Varistor Reverse polarity protection Internal safety fuse Lower voltage than the specified minimum input will not damage the unit
Isolation	According to input voltage minimum of: 1000VDC input to chassis 1500VDC input to output 500VDC output to chassis
Switching Frequency	80kHz $\pm$ 5kHz
Output Voltage	12V, 24V, 48V or 125Vdc Total output power 500W continuous Output is floating; either terminal can be grounded Consult factory for other voltages
Redundancy Diode	None Installed on request
Load/Line Regulation	$\pm$ 1% combined from zero load to full load
Dynamic Response	Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time
Output Ripple Noise	Better than 1% of output voltage peak to peak or 0.2% Vrms (20MHz BW)
Efficiency	Typically 80% at full load depending on input/output combination
Output Overload Protection	Rectangular current limiting with short-circuit protection (hiccup). Thermal shutdown in case of insufficient cooling (self -resetting)
Output Overvoltage Protection	Double regulator loop completely stable and independent of main loop
Standards	Designed to meet EN 60950, EN 62368-1, CE and related standards
EMI	EN55032 Class A with margins

Operating Temperature	0°C to 50°C for full specification Extended temperature ranges available
Humidity	5 - 95% non-condensing
Temperature Drift	0.03% per °C over operating temperature range
Cooling	Conduction via base plate to customer heat-sink or chassis and natural convection
Environmental Protection	Basic ruggedizing Heavy ruggedizing and conformal coating as option
Shock/Vibration	IEC 61373 Cat 1 A&B
Dimensions	F4: 130 x 64 x 353 mm including terminal block and flanges Mounting holes are clear
Weight	2.2 Kg
Connections	12-pole barrier type terminal block, 3/8" spacing
MTBF	160,000 hours at 45°C Demonstrated MTBF is significantly higher
Indicators	None Available as option
Control Input	None
Alarm output	None Output fail alarm Form C contacts installed on request
RoHS Compliance	Fully compliant
Warranty	2 years

## Terminal Block Pin-out

DC OUTPUT				DC INPUT							
+	+	-	-	NOT USED	NOT USED	NOT USED	GND	-	-	+	+
1	2	3	4	5	6	7	8	9	10	11	12

