

DCCE250 Series DC/DC Voltage Converter



Benefits

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

Applications

- Railway / Transportation
- Mining
- Oil Rigs
- Military Applications
- Marine / Automotive / RV
- Electric Utilities and Substations
- Telecom Power Plants
- Manufacturing Locations
- Steel Mills
- Industrial Controls
- OEM Applications

DC/DC Converters

DCCE250 Series (isolated)

Description

This fully encapsulated, industrial quality DC/DC converter uses field-proven technology to generate up to 250W output power.

It has an excellent track record in numerous heavy-duty applications.

The unit is entirely potted with a thermally conductive MILgrade silicon rubber compound to increase resistance to shock, vibration and humidity.

Cooling is via base plate by conduction. The unit is designed for continuous operation at 70°C with installation on an appropriate size heatsinking surface. It has full electronic protection.

Low component count, large design headroom, and the use of components with established reliability result in high MTBF.

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

Versions that comply with EN 50155 railway specifications are available.

Features

- Compact case
- Rugged construction
- Complete encapsulation
- Conduction cooling
- Very wide temperature range
- Wide input ranges
- 250W output power
- Meets EN60950
- Full electronic protection
- Telecom quality
- Field-proven design
- 2 years parts and labour warranty

Specifications (Specifications Subject to Change Without Notice)

Input Voltage range	24V (21 – 30Vdc) 48V (42 – 60Vdc) 125V (95 – 140Vdc) Other inputs upon request
Input Protection	Inrush current limiting Varistor Internal safety fuse Lower voltage than the specified minimum input will not damage the unit
Isolation	According to input/output voltage, but minimum of: 1000VDC input to chassis 1500VDC input to output 500VDC output to chassis
Output Voltages	12Vdc/20A, 24Vdc/10A, 36Vdc/7A or 48Vdc/5A, 72Vdc/3.3A Consult factory for other voltages
Switching Frequency	55kHz \pm 3kHz
Line / Load Regulation	+/- 1% combined from zero load to full load, including separation diode
Dynamic Response	Max 5% voltage deviation for 10% to 50% load step, with better than 1ms recovery time
Output Overvoltage Protection	Second regulator loop completely stable and independent of main regulator loop
Output Overload Protection	Rectangular current limiting with short-circuit protection (no hiccup) Thermal shutdown in case of insufficient cooling (self resetting)
Efficiency	Min. 80% at full load
EMI	EN55022 Class A as a minimum
Output Ripple/Noise	Better than 1% of output voltage peak to peak or 0.2% Vrms (20MHz BW)
MTBF	150,000 hours @ 45°C Demonstrated MTBF is significantly higher
Indicators	None
Control Input	None
Alarm Output	None
Environmental Protection	Fully encapsulated and potted enclosure
Shock/Vibration	IEC 61373 Cat 1 A&B
Humidity	5 - 95% non-condensing
Operating Temperature	-40 to 70°C cold plate temperature for full specification
Temperature Drift	0.03% per °C over operating temperature range
Cooling	Conduction cooling via base plate
Connections	9-pole barrier-type terminal block with 3/8" spacing
Dimensions	19.1cm x 10.8cm x 7.0cm including terminal block and flanges.
Weight	2 Kg
Standards	Designed to meet EN60950 and related standards
RoHS Compliance	According to requirements
Warranty	2 years

Available from:



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