

DCR500 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

DCR500 (isolated)

Description

The DCR500 series consists of DC-DC converters with a galvanic isolation between input and output. The converters operate at a fixed switching frequency and use push-pull converter topology.

For maximum regulation, the remote sensing terminals can be connected to the load.

This will allow a power cable voltage drop of up to 0.3 V on each cable to be offset.

The device is protected against overloads and short-circuits by means of a current limiting circuit.

The device is also protected against reverse polarity input voltage, and the input fuse blows if an improper connection is made.

When a converter input under voltage condition occurs, the converter is disabled, thus preventing the battery from becoming totally discharged.

Features

- Designed according to EN50155
- Fire and smoke: EN45545-2 approved
- High input-output isolation
- Adjustable output voltage
- Input & Output OK LEDs
- Remote sensing
- Remote inhibit
- Output failure alarm
- Full electronic protection
- ORing FET option
- 2 years parts and labour warranty

Specifications (Specifications Subject to Change Without Notice)

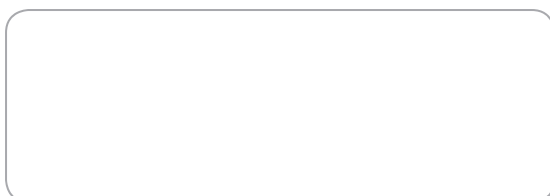
	24 Vin 14.4 ... 30V 16.8 ... 30V (1)	36Vin 21,6V ... 45V 25,2V ... 45V ⁽¹⁾	48 Vin 28.8 ... 60V 33.6 ... 60V (1)	72 Vin 43.2 ... 90V 50.4 ... 90V (1)	110 Vin 66 ... 144V 77 ... 144V(1)
24Vout	DCR500-24-24 500W 88%	DCR500-36-24 500W 88%	DCR500-48-24 500W 91%	DCR500-72-24 500W 91%	DCR500-110-24 500W 91%
48Vout	DCR500-24-48 500W 89%	DCR500-36-48 500W 89%	DCR500-48-48 500W 91%	DCR500-72-48 500W 91%	DCR500-110-48 500W 92%

INPUT	
Input voltage range	See table
Maximum input ripple	5% Vrms, 15% Vpp
Typical efficiency at full load	See table
OUTPUT	
Voltage adjust range	-10% ... 0% Vout nom
Voltage adjust range (1)	-10% ... +15% Vout nom
Line regulation	< 0,2 %
Load regulation	< 0,2 %
Ripple	< 50 mVpp
Noise (BW 20MHz)	< 100 mVpp
Max. overvoltage protection	< 140% Vout nom
Max. remote sense	0,3V / pole
Total Output power (Po):	See table
AMBIENT	
Storage temperature	-40°C ... 85°C
Operating temperature range lo: 100%	-25°C ... 55°C (-40°C ... 55°C, see note-1)
Operating temperature range lo :63%	-25°C ... 70°C (-40°C ... 70°C, see note-1)
Cooling	Natural convection
Relative humidity	95% with no condensation
MTBF	400.000h @ 40°C according to IEC61709
EMC	
Emission according to norm/s	EN61000-6-3 (EN50121-3-2)
Immunity according to norm/s	EN61000-6-2 (EN50121-3-2)
SAFETY	
Safety according to norm/s	EN60950
Dielectric strength Input/Output	3000Vac, 4200Vdc 1min.
Dielectric strength Input/Ground	1500Vac, 2100Vdc 1min.
Dielectric strength Output/Ground	1500Vac, 2100Vdc 1min.
Fire and smoke	EN45545-2
MECHANICAL	
Weight	1800g
CONTROL	
Remote inhibit input range	15 ... 143 Vdc
Alarm contacts	1A @ 24Vdc, 0.3A @ 150Vdc, 1A @ 125Vac
Local: Input OK, Output OK	Green LEDs
PROTECTIONS	
Against overloads and short-circuits	Current limiting
Against output over-voltages	Shutdown (reset by input switch off)
Against reverse input voltage	Input fuse (Active protection with option H)
Against input under-voltage	Under-voltage lock-out
Against Input over-currents	Input fuse

Note-1: The unit can start up and work at an ambient temperature of -40°C with the following restrictions:

1) Do not actuate over the connectors below -25°C. 2) The output ripple can rise up to 150mVpp at -40°C

Available from:



RIPEnergy®

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