

DCL60 SERIES

DC/DC Single Output: 60 Watts



Features

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

Description

This rugged, industrial quality DC/DC converter is a simplified version of the field-proven DCW 100 Series and is built on a 3" x 5" PCB. It is a mature design with a track record in numerous applications. Cooling is by conduction via the semi-open enclosure to a heat-sinking surface and by natural convection. Low component count, large design headroom, and the use of components with established reliability result in a high MTBF. Fully enclosed or open PCB versions are available. Heavy ruggedizing and conformal coating are available for operation in extreme environments. The unit is manufactured at our plant under strict quality control. The unit is also available in versions fully compliant with railway standard EN 50155.

Generic Specifications

Input Voltage

24V, 36V, 48V, 110V or
125Vdc as standard $\pm 15\%$
Other inputs are available on request

Input Protection

Inrush current limiting
Varistor
Reverse polarity
Internal safety fuse
Lower voltage than specified
minimum input will not damage unit

Isolation

1500VDC input to chassis,
1500VDC input to output,
500VDC output to chassis
Or according to requirements

Standards

Designed to meet EN 60950 and
corresponding UL and CSA standards

EMI

EN 55022 Class B

Switching Frequency

47kHz +/- 2kHz

Output Voltage/Current

12V/5A, 24V/2.5A, 48V/1.25A,
125V/0.5A are standard.
Other voltages on request

Redundancy Diode

None

Line/Load Regulation

Better than $\pm 5\%$ combined from
10% 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% RMS of the
output voltage (20MHZ BW)

Output Overload Protection

Current limiting with short circuit
protection (hiccup mode)

Output Overvoltage Protection

Transorb clamp on output

Efficiency

Output voltage dependent.
Typically 80% at full load

Operating Temperature Range

0°C to 50°C for full specification
Extended rating depends on
available conduction and
convection.

Temperature Drift

0.03% per °C over operating
temperature range

Cooling

Conduction to customer heatsink
or chassis and natural convection

Environmental Protection

Basic ruggedizing
Heavy ruggedizing and conformal
coating as option

Vibration/Shock

IEC 61373 Cat 1 A&B

Humidity

5 – 95% non-condensing

MTBF

180,000 hours @ 45°C (calculated)
Demonstrated MTBF is significantly
higher

Indicators

None on standard version

Control Input

None

Alarm Output

None

Package / Dimensions

F0: 86 x 48 x 155mm
(3.4" x 1.9" x 6.1")
Mounting holes are clear

Weight

0.55kg (1.2 lbs)

Connections

Barrier type terminal block
with 3/8" spacing, 6 poles

RoHS Compliance

Fully compliant

Warranty

Two years subject to application
within good engineering practice

Enhancements to these general specifications can be accommodated upon request. Specifications subject to change.