DCL60 SERIES

DC/DC Single Output: 60 Watts

HELIOS POWER SOLUTIONS
www.heliosps.com.au

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 ± 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 ± 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
Transzorb 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 x155mm
(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.