

150W, Rugged, Wide input range, Dual-output DC/DC Converter

DCW 152 Series



- Rugged industrial quality
- Dual adjustable output
- Full electronic protection
- Plug-in or stand-alone packages

This rugged, industrial quality DC/DC converter has a wide input range and uses field-proven topology to generate 150W output power. The unit has two fully regulated outputs. It is a mature design with a track record in hundreds of applications. The series has large design headrooms and it is rated for full operation over the specified temperature range. Cooling is via baseplate to a heatsinking surface and by natural convection. Low component count and the use of components with established reliability result in a high MTBF. The unit is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage

20...60VDC

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

1500VDC input to chassis,
2250VDC input to output,
500VDC output to chassis

Standards

Designed to meet EN 60950 and corresponding UL and CSA standards

EMI

EN55022 Class A with margins

Switching Frequency

47kHz +/- 2kHz

Output Voltages

Any voltage combination in the 12V to 56Vdc range.

Redundancy diode

None

Line/Load Regulation

± 1% combined from zero load to full load on V1,
± 5% or better on V2 depending on voltage

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)

Output Overload Protection

Rectangular current limiting with hiccup mode short-circuit protection.
Thermal shutdown in case of insufficient cooling (self resetting)

Output Overvoltage Protection

Double regulator loop on main output

Efficiency

Typically 80% at full load depending on output

Operating Temperature Range

0 to + 50°C for full specification
Extended temperature ranges available

Temperature Drift

0.03% per °C over operating temperature range

Cooling

Stand alone version: conduction via base plate and convection
Plug-in version: convection only

Environmental Protection

Basic ruggedizing
Conformal coating as option

MTBF

150,000 hours at 45°C
Demonstrated MTBF is significantly higher

Indicators

LED on plug-in version only

Control Input

None

Alarm Output

None on standard version

Package/Dimensions/Connections

Enclosed case version (F1):

112 x 51 x 201 mm
(4.43" x 2" x 7.9") including terminal block and flanges
Barrier-type terminal block or Connector: H15 DIN
Weight: 0.8 Kg (1.8 lb)

Plug-in (Eurocard) module (E1):

3U x 160mm x 10HP
Connector: H15 DIN
Weight: 0.8 Kg (1.8 lb)

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.

Designer and manufacturer of quality converters, inverters, UPS systems, complete rack mount systems and DC-input fluorescent lamp inverters since 1982. Custom or standard. Absopulse is a BABT-approved Facility



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