

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

DCW 152 Series

- Rugged industrial quality
- Field-proven design
- Dual output
- Conduction/convection cooled
- Full electronic protection
- Wide input range, or standard $\pm 20\%$



This rugged, industrial quality, DC/DC converter with a wide input range uses field-proven technology to generate the specified output power. The unit has two fully regulated outputs. It is a mature design with a track record in numerous applications. Cooling is via baseplate to a heat-sinking surface and by natural convection. Additional ruggedizing and conformal coating are available for applications that require higher immunity to shock, vibration and humidity. Low component count, large design headrooms, and the use of components with established reliability result in a high MTBF. The unit is manufactured at our plant under strict quality control. This converter is also available in Eurocard (plug-in) format.

SPECIFICATIONS

Input Voltage

20 - 60Vdc input range
Consult factory for other input voltages and ranges

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 60950-1 and related standards

EMI

EN55022 Class A conducted and radiated with margins

Switching Frequency

47KHz ± 2 KHz

Output Voltages

V1: Any voltage 12V to 56Vdc
V2: Any voltage 12V to 28Vdc
Output power depends on the combination. Consult factory for required output combination
Both outputs are fully regulated
The outputs are floating and isolated from each other.
Either terminal can be grounded

Redundancy diode

None

Line/Load Regulation

$\pm 1\%$ combined from zero load to full load on each output

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.

Output Overvoltage Protection

Double regulator loop on main output

Efficiency

Typ.80% at full load depending on output voltages

Operating Temperature Range

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

Temperature Drift

0.03% per °C over operating temperature range

Cooling

Conduction via base plate and additional natural air convection

Environmental Protection

Basic ruggedizing
Optional heavy ruggedizing and conformal coating is available

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

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

Indicators

None

Control Input

None

Alarm Output

None

Package/Dimensions (W x H x D)

F1: 114 x 51 x 201mm
(4.5" x 2" x 7.9") including terminal block and flanges
Mounting holes are clear

Weight

0.8kg (1.8 lbs)

Connections

9-pole barrier-type terminal block, 3/8" spacing

RoHS Compliance

Fully compliant

Warranty

Two years subject to application within good engineering practice



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