

Model: DCW 150-48FTND (Standard ND Stock Version)
OSD: 1857 6634SPTB
Summary Description: 150W, Single-output DC/DC Converter,
 20-60V to 48V/3A
Customer Name: ABS ND Stock



Product description:

This rugged, industrial quality wide input range DC/DC converter uses field-proven technology to generate the required output power. It is a mature design with a track record in numerous applications. Cooling is via baseplate to a heatsinking surface and by natural convection. Low component count, large design headrooms, and the use of components with established reliability result in a high MTBF. This converter has two output terminals: a *Redundant* via built-in redundancy diode, and a *Direct*, which bypasses the redundancy diode. The unit also has a Form C output fail alarm. It is manufactured at our plant under strict quality control.

Special Feature: These stock units are individually packed and ready for immediate delivery.

SPECIFICATIONS

Input Voltage

24V, 36V and 48Vdc nominal
 Operating range 20-60Vdc
 Maximum input current: 9A

Input Protection

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

Isolation

1000Vdc input to chassis
 1500Vdc input to output
 1000Vdc output to chassis

Standards

Designed to meet EN60950 and related standards

EMI

EN55022 Class B
 conducted & radiated

Switching Frequency

47kHz +/- 2kHz

Output Voltage/Current

Direct: 48.8Vdc +/-0.1V/3A
 Redundant: 48V/3A, tracking
Direct output with one diode drop
 Total output power 150W continuous
 Adjustment range: 47.8-56V on *Redundant* output
 Output is floating, either terminal can be grounded

Redundancy Diode

Installed on *Redundant* output

Terminal Block Pin-Out

| DC OUTPUT | | | ALARM | | | DC INPUT | | |
|-----------|-----|-----------|-------|-----|-----|----------|---|---|
| + | RTN | + | F/O | COM | F/C | GND | - | + |
| DIRECT | | REDUNDANT | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Line/Load Regulation

+/-1% combined from no load to full load on the *Direct* output

Dynamic Response

Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time

Output Ripple / Noise

Better than 100mVrms or 400mVpp (20MHz BW)

Output Overload Protection

Rectangular current limiting with hiccup-type short circuit protection.
 Current Limit set to: 4A ±0.5A

Output Overvoltage Protection

Double regulator loop. Second loop is completely stable and independent of main regulator loop
 OVP setting: 59V ±1V (*Direct* output)

Efficiency

80% at full load

Operating Temperature Range

0°C to +50°C for full specification with proper installation on cooling surface

Temperature Drift

0.03% per deg.C over operating temperature range

Cooling

Conduction via base plate and additional air convection

Environmental Protection

Basic ruggedizing

Humidity

95% non-condensing

MTBF

Min. 140,000 hours @ 45°C
 Demonstrated MTBF is significantly higher

Indicators

Green "OUTPUT ON" LED visible through the cooling slots

Control Input

None

Alarm Output

Form C alarm

Package / Dimensions (WxHxL)

F1: 113 x 51 x 198mm (4.4" x 2.0" x 7.8") including mounting 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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| Drawn by PW/bh | Date Jan. 28, 2010 |
| Checked by PW | Drawing No./ Rev. SCD 1857 6634NDA1 |
| Approved by TS | |