

Source Control Document

Model: DCW 50-28W/24F0TD-U4173

COSD: XXXX

**Summary description: 50W, Industrial Quality DC/DC Converter
28Vdc to 24Vdc/2A**

Company Name: Amptron/Singapore

Customer Part No.: Same as above



Product description:

This rugged, industrial quality power converter utilizes field-proven technology to generate the required output power. It is a mature design with a track record in numerous applications. Cooling is by conduction via baseplate. Additional cooling is achieved by natural convection through the cooling slots. All heat generating components are installed on aluminum heatsink blocks which are thermally connected to the base plate. This also provides exceptional mechanical ruggedness. Conformal coating provides protection against humidity and airborne contaminants. Full electronic protection, low component count, large design headrooms and the exclusive use of components with established reliability contribute to a high MTBF. The unit is manufactured at our plant under strict quality control.

Special Features: 21-36Vdc input range. Conformal coating. DIN railmount

SPECIFICATIONS

Input Voltage

28Vdc nominal
21-36Vdc operating range
Input current: 3A max

Input Protection

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

Isolation

700Vdc input to chassis
1000Vdc input to output
500Vdc output to chassis

Standards

Designed to meet EN62368-1 and corresponding standards

EMI

EN55032 Class A with margins

Switching Frequency

47kHz \pm 2kHz

Output Voltage/Current

24Vdc \pm 0.2V/2A
Output is floating, either terminal can be grounded

Redundancy Diode

None

Line/Load Regulation

\pm 1% combined from no 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 60mVrms or 300mVpp (20MHz BW)

Output Overload Protection

Rectangular current limiting with hiccup-type short-circuit protection
Current Limit set to: 2.2A \pm 0.15A

Output Overvoltage Protection

Transorb clamp

Efficiency

80% at full load

Operating Temperature Range

0°C to +50°C for full specification

Temperature Drift

0.03% per °C over operating temperature range

Cooling

Conduction by natural air convection on the DIN rail

Environmental Protection

Basic ruggedizing
Conformal coating

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

Not installed

Package / Dimensions (WxHxL)

F0: 86 x 48 x 155mm
(3.4" x 1.9" x 6.1")
DIN railmount

Weight

0.55kg (1.2 lbs)

Connections

6-pole barrier type terminal block with 3/8" spacing

RoHS Compliance

Compliant

Warranty

Two years subject to application within good engineering practice

Terminal Block Pin-out

OUTPUT			INPUT		
-	+	NOT USED	GND	+	-
1	2	3	4	5	6

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