

100W, Rugged, Dual-output DC-DC Converter, High Input Voltage, Wide Input Range

DCW 102-300/4824-F2 Series



- Rugged industrial quality
- High reliability
- Conduction/convection cooled
- Full electronic protection
- Field-proven design concept
- Wide input ranges

This rugged, dual-output 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. Both outputs are regulated. 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 headroom 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.

SPECIFICATIONS

Input Voltage

300Vdc nominal
200-400Vdc operating range
Input Current: 0.6A max
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

2250Vdc input to chassis
4300Vdc input to output
8mm spacing
500Vdc output to chassis

Standards

Designed to meet EN 60950-1 and related standards

EMI

EN55022 Class A with wide margins

Switching Frequency

47kHz \pm 2KHz

Output Voltages

V1: 48Vdc \pm 0.5V/1.5A max.
V2: 24Vdc \pm 0.3V/3A max.
Total 100W
Common return
Other outputs available on request

Redundancy diode

None

Line/Load Regulation

\pm 1% combined from no load to full load on both outputs

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

Current limiting with short-circuit protection

Output Overvoltage Protection

Transorb across the outputs

Efficiency

Typically 85% at full load depending on input/output configuration

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 to customer heatsink or chassis and natural convection

Environmental Protection

Basic ruggedizing
Conformal coating

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

130,000 hours @ 45°C
Demonstrated MTBF is significantly higher

Indicators

Green Output ON LED visible through the cooling slots

Control Input

None

Alarm Output

Not installed.
Available on request

Package/Dimensions (W x H x D)

F2: 114 x 58 x 256 mm
4.5" x 2.3" x 10.1" including terminal block and flanges
Mounting holes are clear.

Weight

1.3kg (2.9 lbs)

Connections

9-pole barrier-type terminal block, 9.5mm spacing

RoHS Compliance

Compliant

Warranty

Two years subject to application within good engineering practice

Terminal Block Pin-Out

DC OUTPUT							DC INPUT	
V2		V1		NOT USED	GND	NOT USED	+	-
+	-	+	-	5	6	7	8	9
1	2	3	4					

The specifications on this data sheet are generic and are subject to change. Enhancements to these specifications can be provided upon request.

OEM of professional quality AC/DC power supplies and battery chargers, DC/DC converters, DC-AC sine-wave inverters, phase and frequency converters, DC-output UPS systems and complete power systems in 19" and 23" racks since 1982. Custom or standard.



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