

Rugged, Industrial Quality, Triple Output DC/DC Converter Provides 75-100W Output Power MOF 306 Series



- Rugged, industrial quality
- Three fully regulated outputs
- Conduction/convection cooled
- Full electronic protection
- Wide selection of input/output combinations

This rugged, industrial quality DC/DC converter uses field-proven technology to generate between 75W and 100W output power, depending on the input/output combination required. It has three fully regulated, isolated outputs. This design has been upgraded several times and has an excellent track record in numerous applications. It is a flexible design that can easily be customized for almost any requirements without set-up/NRE costs. Cooling is via base plate to a heat-sinking surface and by natural convection. The standard version operates at full specification over a wide temperature range. Full electronic protection, low component count, large design headroom, and the use of components with established reliability result in a high MTBF. Additional ruggedizing and conformal coating are also available for applications requiring higher immunity to shock, vibration and humidity. The unit is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage

24Vdc (21 – 30V)
48Vdc (42 – 60V)
125Vdc (95 – 145V)
Other inputs upon request

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

According to input voltage minimum of:
1000VDC input to chassis,
1500VDC input to output,
500VDC output to chassis

Standards

Designed to meet EN 60950 and corresponding standards.

EMI

EN55022 Class A with margins

Switching Frequency

80KHz +/- 5KHz

Output Voltage

V1: 5V, 12Vdc, 15Vdc, 24Vdc,
36Vdc or 48Vdc. 10A max.
V2, V3: 5V, 12Vdc, 15Vdc, 24Vdc,
28Vdc. 1A max.
All outputs are fully regulated,
floating and isolated from each other.
Either side of each output can be grounded
Other output voltages available

Redundancy diode

Not available

Line/Load Regulation

± 1% combined from zero load to full load on all 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

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

Output Overvoltage Protection

Double regulator loop completely stable and independent of main loop

Efficiency

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

Operating Temperature

0°C to 50°C cold plate temperature for full specification
Extended temperature ranges as option

Temperature Drift

0.03% per °C over operating temperature range

Cooling

Conduction via base plate to customer heatsink or chassis and/or natural convection

Environmental Protection

Basic ruggedizing
Heavy ruggedizing and conformal coating available as an option

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

160,000 hours @ 45°C
Demonstrated MTBF is significantly higher

Indicators

Green output ON LED visible through cooling slots

Control Input

None

Alarm Output

None on standard version
Available as option

Package/Dimensions (W x H x L)

F3209: 79 x 51 x 234 mm (3.1" x 2" x 9.2") including terminal block and flanges
Mounting holes are clear

Weight

500g (1.1 lb)

Connections

Input: 3-pole terminal block
Output: 6-pole terminal block (3/8" spacing)

RoHS Compliance

Fully compliant

Warranty

Two years subject to application within good engineering practice

Enhancements to these general specifications and customizing can be accommodated upon request. Specifications are subject to change

Designer and manufacturer of quality ac-dc power supplies and battery chargers, converters, inverters, dc-output 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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