

## 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



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