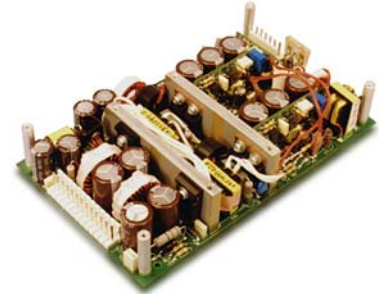


160W, Rugged, Triple Output, Ultra-compact, Industrial DC/DC Converter MIP 320-FT Series



- Rugged industrial quality
- Triple output
- Conduction/convection cooled
- Full electronic protection
- Field-proven design
- Cost optimized

The MIP 320 Series triple output, rugged industrial quality DC/DC converter uses a field proven design to generate 160W output power. It can be customized to achieve 200W with sufficient cooling, such as forced air. This is a mature product with a track record in numerous applications, including computers and instrumentation in mobile applications. It is a complete turn-key unit with input filter, hold-up capacitors and output filter. 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. It features 135kHz switching frequency. Additional ruggedizing and conformal coating are available for applications requiring higher immunity to shock, vibration and humidity. Customized, potted versions are also available. The MIP 320 is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage

12Vdc, 24Vdc, 36Vdc or 48Vdc standard
Consult factory for other voltages

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

Depends on the required input/output configuration. At a minimum:
500VDC input to chassis,
500VDC input to output,
500VDC output to chassis

Standards

Designed to meet EN 60950 and corresponding UL and CSA standards

EMI

Each version meets the requirements of EN55022 Class A with margins

Switching Frequency

135kHz +/- 5kHz

Output Voltage/Current

5.1V/10 and 12V/5A, -12V/1A are standard
Consult factory for other voltages

Redundancy Diode

None on this series

Line/Load Regulation

+/- 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 1% of output voltage peak to peak or 0.2% RMS of the output voltage (20MHz BW)

Output Overload Protection

Current limiting with short circuit protection (hiccup mode)

Output Overvoltage Protection

Double regulator loop and transzorbc clamp

Efficiency

Output voltage dependent.
Typically 80% at full load

Operating Temperature Range

0 to +50°C. Higher rating depends on available conduction and convection.

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 as option

Humidity

5 – 95% non-condensing

MTBF

150,000 hours @ 45 °C
Demonstrated MTBF is significantly higher

Indicators

None on standard version

Control Input

None

Alarm Output

None

Packaging/Dimensions/Weight

PCB Size: 4.2" x 7.0"
Component height: 1.2"

Weight

Approx: 0.4 kg (0.9 lb)

Connections

Header pins with 0.156" spacing

RoHS Compliance

Fully compliant

Warranty

Two years subject to application within good engineering practice

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

Designer and manufacturer of quality converters, inverters, 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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