

## 50W, Cost Efficient, Industrial Quality Compact DC/DC Converter MIM 50 Series

- Rugged industrial quality
- Conduction/convection cooled
- Full electronic protection
- Field-proven design
- High immunity
- Cost optimized
- Small size



The MIM 50 Series rugged, industrial quality DC/DC converter uses field-proven technology to generate the required output power. It is a mature design with a track record in numerous applications. Cooling is via baseplate to a heatsinking surface and by natural convection. The standard version operates at full specification over a wide temperature range. Options include heavy ruggedizing and conformal coating for additional immunity to shock, vibration and humidity. Low component count, large design headrooms, and the use of components with established reliability result in a high MTBF. The unit is manufactured at our plant under strict quality control.

### SPECIFICATIONS

<p><b>Input Voltage</b> 24Vdc (21 – 30V) 48Vdc (42 – 60V) 125Vdc (105 – 145V) Other inputs available on request</p> <p><b>Input Protection</b> Inrush current limiting Surge protection Reverse polarity protection Internal safety fuse Lower voltage than the specified minimum input will not damage the unit.</p> <p><b>Isolation</b> 1500Vdc input to chassis 2200Vdc input to output 500Vdc output to chassis</p> <p><b>Standards</b> Meets EN 60950 and corresponding UL and CSA standards</p> <p><b>EMI</b> EN55022 Class B</p> <p><b>Switching Frequency</b> 135kHz +/- 5kHz</p>	<p><b>Output Voltage/Current</b> 12Vdc/4A or 24Vdc/2A Output is floating, either terminal can be grounded Other outputs available on request</p> <p><b>Redundancy Diode</b> None</p> <p><b>Line/Load Regulation</b> +/- 1% combined from no load to full load.</p> <p><b>Dynamic Response</b> Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time</p> <p><b>Output Ripple / Noise</b> Better than 1% peak to peak or 0.2% RMS of the output voltage (20MHz BW)</p> <p><b>Output Overload Protection</b> Rectangular current limiting with hiccup-type short-circuit protection</p> <p><b>Output Overvoltage Protection</b> Transorb across the output</p>	<p><b>Efficiency</b> Min. 80% at full load</p> <p><b>Operating Temperature Range</b> -25 °C to +55 °C cold plate temperature for full specification</p> <p><b>Temperature Drift</b> 0.03% per °C over operating temperature range</p> <p><b>Cooling</b> Conduction via base plate and natural convection</p> <p><b>Environmental Protection</b> Basic ruggedizing Heavy ruggedizing and conformal coating available as an option</p> <p><b>Shock/Vibration</b> IEC 61373 Cat 1 A&amp;B</p> <p><b>Humidity</b> 5 - 95% non-condensing</p> <p><b>MTBF</b> 150,000 hours @ 45 °C Demonstrated MTBF is significantly higher</p>	<p><b>Indicators</b> None</p> <p><b>Control Input</b> None</p> <p><b>Alarm Output</b> None</p> <p><b>Package / Dimensions (W x H x L)</b> FM: 66 x 38 x 163 mm (2.6" x 1.5" x 6.4") including terminal block and flanges Mounting holes are clear</p> <p><b>Weight</b> 400g (0.9 lb)</p> <p><b>Connections</b> 5-pole terminal block (3/8" spacing)</p> <p><b>RoHS Compliance</b> Fully compliant</p> <p><b>Warranty</b> Two years subject to application within good engineering practice</p>
---	---	---	--

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

*Designer and manufacturer of custom and standard switch-mode power supplies, battery chargers, dc/dc converters, sine wave inverters, complete power systems with plug-in modules for 19" and 23" racks and DC-input fluorescent lamp inverters, since 1982. Absopulse is a BABT-approved facility.*



**ABOPULSE ELECTRONICS LTD**  
110 Walgreen Road, Ottawa  
Ontario. K0A 1L0. CANADA  
Tel: +1-613-836-3511 Fax: +1-613-836-7488  
E-mail: [absopulse@absopulse.com](mailto:absopulse@absopulse.com)  
<http://www.absopulse.com>