

## 100W, IP66-Rated, Rugged, Industrial Quality AC/DC Power Supplies with Wide Input Ranges MIW 100-D0 Series (IP66)

- Packaged in waterproof IP66 enclosure
- Cooling by conduction and natural convection
- Internal module ruggedized and conformal coated
- Rugged, field-proven design
- Universal input range
- Full electronic protection



The rugged industrial quality AC/DC power supplies utilize field proven topology to generate the required output power. The units are packaged in waterproof, robust die cast aluminum IP66 enclosures. The input and output are via sealed cable glands or circular connectors. The internal boards are ruggedized and conformal coated for increased immunity to high levels of shock and vibration. Cooling is by internal conduction to the walls of the IP66 enclosure and via baseplate to an external chassis, cabinet wall, or heatsink. Additional cooling is achieved by natural convection via the surface of the IP66 enclosure. This enables operation within the specified temperature range for full specification. The high frequency conversion enables a compact construction and high efficiency. Full electronic protection, generous design headroom and the exclusive use of components with established reliability also contribute to high MTBF. The unit is manufactured at our plant under strict quality control. Customized versions are available. The design is suitable for operation in transportation, mining, marine, oil rig, military and other severe environments.

### SPECIFICATIONS

<p><b>Input Voltage</b> 95 - 264Vac universal 47 - 630Hz 250Vdc (210 - 290V) 300Vdc (250 - 350V) Other DC voltages on request</p> <p><b>Input Protection</b> Inrush current limiting Varistor Internal safety fuse Lower voltage than the specified minimum input will not damage the unit</p> <p><b>Isolation</b> 2250VDC input to chassis 4300VDC input to output 8mm spacing 500VDC output to chassis (or corresponding to output voltage)</p> <p><b>Standards</b> Designed to meet EN60950-1 and corresponding UL and CSA standards</p> <p><b>EMI</b> EN55022 Class A with margins Class B on request</p> <p><b>Switching Frequency</b> 47kHz <math>\pm</math>2kHz</p> <p><b>Hold Up Time</b> Minimum 5ms at full load for 5% drop of output voltage at nominal input</p>	<p><b>Output Voltage/Current</b> 12V, 24V, 36V, 48V, 72V, or 125Vdc. Other outputs on request. The output is floating, either terminal can be grounded</p> <p><b>Redundancy Diode</b> None</p> <p><b>Line/Load Regulation</b> <math>\pm</math> 1% combined from zero 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> Less than 1% of output voltage 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> Double regulator loop Transzorb clamp across the output</p>	<p><b>Efficiency</b> Output voltage dependent. Typically better than 80% at full load</p> <p><b>Operating Temperature Range</b> -25 °C to 55 °C for full specification Extended temperature ranges available on request</p> <p><b>Temperature Drift</b> 0.03% per °C over operating temperature range</p> <p><b>Cooling</b> Conduction to customer heat-sink or chassis. Additional natural convection via the surface of the IP66 enclosure</p> <p><b>Environmental Protection</b> IP66 enclosure Internal module: conformal coating and basic ruggedizing Full ruggedizing or potting of the internal module is also available</p> <p><b>Shock/Vibration</b> IEC 61373 Cat 1 A&amp;B</p> <p><b>Humidity</b> 5-100% condensing</p> <p><b>MTBF</b> 150,000 at 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 (L x W x H)</b> D0: 148.1 x 108 x 75 mm 5.8" x 4.25" x 2.95" D0 with baseplate: 177.8 x 108 x 77.5 mm 7.0" x 4.25" x 3.05"</p> <p><b>Weight</b> 1.2 kg; 2.6 lb</p> <p><b>Connections</b> Internal barrier-type terminal block accessible via sealed cable glands. Optional connectors instead of cable glands</p> <p><b>RoHS Compliance</b> Compliant</p> <p><b>Warranty</b> Two years subject to application within good engineering practice</p>
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