

150W, Rugged, Dual Output, Industrial Quality AC/DC Power Supply

MIW 162-F1 Series

- Rugged field proven design
- Two outputs
- Isolated, floating outputs
- Conduction/convection cooled
- Full electronic protection



This rugged, dual output, industrial quality AC/DC power supply uses field-proven technology to generate up to 150W output power depending on output voltage combination. The main output (V1) is fully regulated, adjustable, with the second output (V2) tracking the main. Each output is limited to 8A. This mature design has a track record in numerous applications. Cooling is by conduction via baseplate. Additional cooling is achieved by natural convection through the cooling slots. All heat generating components are installed on aluminum heatsink blocks which are thermally connected to the base plate. This also provides exceptional mechanical ruggedness. Conformal coating provides protection against humidity and airborne contaminants. Full electronic protection, low component count, large design headroom and the exclusive use of components with established reliability contribute to a high MTBF. The unit is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage

95V to 264Vac universal
47 - 63Hz
DC-input also available.
Consult factory for other voltages

Input Protection

Inrush current limiting
Varistor
Internal safety fuse
Lower voltage than the specified minimum input will not damage the unit.

Isolation

2250VDC input to chassis
4300VDC input to output
8mm spacing
500VDC output to chassis
500Vdc between outputs

Standards

Designed to meet EN 60950-1 and related standards

EMI

EN55032 Class A with margins

Switching Frequency

47kHz \pm 2kHz

Hold Up Time

Minimum 5ms at full load for 5% drop of output voltage at 120Vac and higher input

Output Voltage/Current

Various outputs are possible:
2 x 12/6A, 2 x 24/3A or
2 x 48V/1.5A
V1: regulated and adjustable
V2: tracking V1
Consult factory for other outputs

Redundancy Diode

None

Line/Load Regulation

V1: \pm 1% combined from no load to full load
V2: \pm 5% from 10% to full load with constant load of \geq 20% on V1

Dynamic Response

Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time

Output Ripple / Noise

Less than 1% of output voltage peak to peak or 0.2% RMS of the output voltage (20MHz BW)

Output Overload Protection

Rectangular current limiting with hiccup mode short-circuit protection

Output Overvoltage Protection

V1 output: double regulator loop
V2 output: transorb

Efficiency

Output voltage dependent.
Typically 80% at full load

Operating Temperature Range

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

Temperature Drift

0.03% per °C over operating temperature range

Cooling

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

Environmental Protection

Basic ruggedizing
Full ruggedizing and conformal coating available as an option

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 – 95% non-condensing

MTBF

140,000 hours @ 45 °C
Demonstrated MTBF is significantly higher

Indicators

Green "Output ON" LED visible through the cooling slots

Control Input

None

Alarm Output

None on standard version
Available as option

Package/Dimensions (W x H x L)

F1: 114 x 51 x 201 mm
(4.5" x 2" x 7.9") including terminal block and flanges
Mounting holes are clear

Weight

0.8 kg (1.8 lb)

Connections

9-pole barrier type terminal block, 3/8" spacing.

RoHS Compliance

Fully compliant

Warranty

Two years subject to application within good engineering practice

Terminal Block Pin-out

O/P V1		O/P V2		N/A		GND		INPUT	
+	-	+	-	N/A	N/A	$\frac{\square}{\square}$	(+) PH	(-) N	
1	2	3	4	5	6	7	8	9	

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

Designer and manufacturer of DC-DC converters, AC-DC power supplies, DC-AC sine wave inverters, AC-AC frequency converters, DC-output UPS systems, complete rack mount systems and DC-input fluorescent lamp inverters since 1982. Custom or standard. ABSOPULSE is a ABBT-approved Facility.



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