

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

## MIW 152-F1 Series



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

This rugged, dual output, industrial quality power supply uses field-proven technology to generate 150W output power depending on output voltage combination. The unit has two individually regulated floating outputs. The V2 output is limited to 3A max. 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 or higher input

#### Output Voltage/Current

Various combinations possible, for example:  
5V/12A & 12V/3A  
24V/3A & 24V/3A or  
12V/6A & 24V/3A  
Consult factory for required output combination  
Both outputs are fully regulated  
The outputs are floating and isolated from each other.  
Either terminal can be grounded

#### Redundancy Diode

None

#### Line/Load Regulation

$\pm$  1% combined from zero load to full load on each output

#### 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 on both outputs

#### Output Overvoltage Protection

Double regulator loop on main output.  
Transzorb on second output.

#### 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  
Meaning

#### 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		INPUT		
+	-	+	-	N/A	N/A	GND	(+) 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 BABT-approved Facility.*



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