

150W, Universal Input, Rugged, Industrial Quality AC/DC Power Supply

MIW 150-F1 Series

- Rugged industrial quality
- Conduction/convection cooled (no fans)
- Full electronic protection
- Large design headroom
- Field proven design



This rugged, industrial quality power supply uses field-proven technology to generate the required output power. It is a mature design with 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 $\pm 15\%$
47 - 63Hz
DC-input also available.
Other inputs available on request

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 (or corresponding to output voltage)

Standards

Designed to meet EN 60950-1 and corresponding UL and CSA standards.
Several versions have formal agency approvals

EMI

EN55032 Class A with margins

Switching Frequency

47kHz ± 2 kHz

Hold Up Time

Minimum 5ms at full load for 5% drop of output voltage

Output Voltages

12V/12A, 24V/6A; 36V/4.1A; 48V/3A; 72V/2A or 125V/1.2A are standard.
Other outputs on request.
The output is floating, either terminal can be grounded

Redundancy Diode

Not installed
Available as option

Line/Load Regulation

$\pm 1\%$ combined from zero 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

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 short-circuit protection (hiccup mode)

Output Overvoltage Protection

Second regulator loop, completely stable and independent of main regulator loop

Efficiency

Output voltage dependent.
Typically better than 80% at full load

Operating Temperature Range

0°C to 50°C for full specification installed on heat-sinking surface with good air flow
Extended temperature ranges Available on request

Temperature Drift

0.03% per °C over operating temperature range

Cooling

Conduction to customer heat-sink 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

None on standard version

Control Input

None

Alarm Output

Not installed on standard version
Form C output Fail Alarm on request

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 lbs)

Connections

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

RoHS Compliance

Compliant

Warranty

Two years subject to application within good engineering practice

Terminal Block Pin-out ($\leq 72V$ output)

DC OUTPUT						AC INPUT		
NOT USED	-	+	NOT USED	NOT USED	NOT USED	⊥	PH	N
1	2	3	4	5	6	7	8	9

Terminal Block Pin-out ($\geq 110V$ output)

DC OUTPUT						INPUT		
+	NOT USED	NOT USED	-	NOT USED	NOT USED	GND	PH (+)	N (-)
1	2	3	4	5	6	7	8	9

Please note that ABSOPULSE power supplies are designed and built to customer specifications. The specifications on this data sheet are generic and will vary depending on input/output configuration and other customer requirements. Generic specifications are subject to change.

Designer and manufacturer of quality converters, inverters, 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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