

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

MIW 150-F1 Series



- Rugged industrial quality
- Universal input
- Conduction/convection cooled - no fan
- Full electronic protection
- Field proven design

This rugged, industrial quality AC-DC power supply utilizes 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. 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

Standards

Designed to meet EN62368-1 and corresponding UL and CSA standards.

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
Other outputs on request.
The output is floating, either terminal can be grounded

Redundancy Diode

None

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)
Thermal shutdown in case of insufficient cooling (self-resetting)

Output Overvoltage Protection

Double 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
Conformal coating

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5- 95% non-condensing

MTBF

160,000 hours @45 °C
Demonstrated MTBF is significantly higher

Indicators

Green "Output ON" LED on visible through cooling slots

Control Input

None

Alarm Output

None

Package/Dimensions (W x H x L)

F1: 113 x 51 x 198 mm
4.45" x 2" x 7.8"
Includes baseplate, excludes terminals
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	PH	N
1	2	3	4	5	6

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

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

ABSOPULSE power supplies are designed and built to customer requirements. The specifications on this data sheet are generic guidelines only and are subject to change.

OEM of industrial and railway quality DC-DC converters, AC-DC power supplies and battery chargers, DC-AC sine-wave inverters, phase and frequency converters, DC-output UPS systems and complete power systems in 19" and 23" racks since 1982. Custom or standard. ABSOPULSE is a BABT-approved Facility.

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