

150W Dual Output AC-DC Power Supply for Heavy-Duty Industrial Applications

MIW 152-F1 Series



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

This rugged, industrial quality AC-DC power supply with two individually regulated isolated outputs uses field proven topology to generate the required output power. Cooling is via base plate to a heat-sinking surface and by natural convection. 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. It 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 EN62368-1 and related standards

EMI

EN55032 Class A with margins

Switching Frequency

47 kHz \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
Thermal shutdown in case of insufficient cooling (self resetting)

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
Conformal coating

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: 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 lb)

Connections

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

RoHS Compliance

Compliant

Warranty

Two years subject to application within good engineering practice

Terminal Block Pin-out

| O/P V1 | | O/P V2 | | INPUT | | | | |
|--------|---|--------|---|-------|-----|-----|--------|-------|
| + | - | + | - | N/A | N/A | GND | (+) PH | (-) N |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

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



ABSOPULSE ELECTRONICS LTD

110 Walgreen Road, Ottawa, Ontario. K0A 1L0. CANADA
Tel: +1-613-836-3511 Fax: +1-613-836-7488

<https://absopulse.com/contact> | <https://www.absopulse.com>