

280W, Dual Output, Rugged, AC/DC Industrial Power Supply with Universal Input MIW 282-FT Series



- Rugged industrial quality
- Two regulated outputs
- Conduction/convection cooled – no fan
- Full electronic protection
- Field-proven design in a wide range of applications

This rugged, industrial quality, dual-output AC/DC power supply generates up to 280W continuous output power, depending on the input/output configuration. The design is based on the field-proven MIW 150 series topology, which has a track record in numerous applications. The unit has two completely independent regulated converter stages providing up to 140W on each isolated output at max 12A per output. The outputs are floating and can be connected in series to generate higher output voltage or in parallel to increase the output current. Adjustments for both outputs are accessible. Cooling is via base plate to a heat-sinking surface and by natural convection. Additional ruggedizing and conformal coating are available for applications that require higher immunity to shock, vibration and humidity Full electronic protection, low component count, large design headroom, and the use of components with established reliability result in a high MTBF. The unit is manufactured at our plant under strict quality control. Customized versions are also available.

SPECIFICATIONS

Input Voltage

95V to 264Vac
47 - 420Hz
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 min. output to chassis
500VDC min. between outputs

Standards

Designed to meet EN 60950-1 and related standards

EMI

EN55022 Class A with margins conducted and radiated

Switching Frequency

47 kHz \pm 2kHz

Hold Up Time

Minimum 5ms at nominal input for 5% drop of the output voltage

Output Voltage

V1: Any voltage 5V to 125Vdc
V2: Any voltage 5V to 125Vdc
The current on each output is limited to 12A
Both outputs are fully regulated
The outputs are floating, either terminal can be grounded

Redundancy Diode

None

Line/Load Regulation

\pm 1% combined from zero load to full load on both outputs

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 on both outputs (hiccup)
Thermal shutdown with automatic recovery in case of insufficient cooling

Output Overvoltage Protection

Second regulator loop and transient on both outputs

Efficiency

Typically 85% at full load depending on input/output configuration

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 heat-sink or chassis and natural convection

Environmental Protection

Basic ruggedizing
Heavy ruggedizing and conformal coating is available as 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

None on standard version.
Available as option.

Package/Dimensions (W x H x D)

F1W: 163 x 51 x 200 mm
(6.4" x 2" x 7.9") including terminal block and flanges
Mounting holes are clear

Weight

1.4 kg (3 lbs)

Connections

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

RoHS Compliance

Fully compliant

Warranty

Two years subject to application within good engineering practice

Terminal Block Pin-Out

OUTPUT						INPUT					
V1		NOT USED	V2		NOT USED	NOT USED	NOT USED	NOT USED	GND	PH	N
-	+		-	+					⊕	~	~
1	2	3	4	5	6	7	8	9	10	11	12

The specifications on this data sheet are generic and are subject to change. Enhancements to these specifications can be provided upon request.

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



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