

## 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 transzorb 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



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