300W, Dual Output, Rugged, AC/DC Industrial Power Supply with Universal Input
MIW 302-FT Series

- Rugged industrial quality
- Two regulated and adjustable output
- Conduction/convection cooled
- Full electronic protection
- Wide selection of input/output combinations
- Field proven design
- N+1 redundancy available

The MIW 302 Series rugged, dual output AC/DC industrial power supply uses field proven technology to generate 300W output power. This mature design is built on the KIW 302 PCB and has a track record in numerous of applications. The unit has two completely independent converter stages to provide 150W on each output. The outputs are floating and can be connected in series to generate high output voltage (100 – 250Vdc) or in parallel to increase the output current. Adjustments for both outputs are accessible. An optional built-in redundancy diode allows for the outputs to be connected in parallel for 1+1 redundancy, or handle high peak load currents. Other options include a built-in alarm and a wide range of output configurations. The unit has full electronic protection. Low component count, large design headroom, and the use of components with established reliability result in a high MTBF. Additional ruggedizig and conformal coating are available for operation in extreme environments. The MIW 302 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.
Please consult factory.

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 EN 60950 and corresponding UL and CSA standards

EMI
EN55022 Class B

Switching Frequency
47 kHz +/-2kHz

Hold Up Time
Minimum 5ms at full load for 5% drop of output voltage at > 120Vac input

Output Voltage/Current
Up to 125Vdc per output
Up to 15 Amps per output
Outputs are floating and can be connected in series or parallel.

Redundancy Diode
Optional built-in redundancy diode

Line/Load Regulation
+/- 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 on both outputs (hiccup mode)
Thermal shutdown with automatic recovery in case of insufficient cooling

Output Overvoltage Protection
Second regulator loop on both outputs

Efficiency
Min. 80% at full load

Operating Temperature Range
0 to 50 °C for full specification
installed on heat-sinking surface with good air flow
Extended temperature ranges available

Temperature Drift
0.03% per °C over operating tempera range

Cooling
Conduction via base plate to customer heatsink 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
None on standard version
Available as option

Package/Dimensions (W x H x D)
F3: 132 x 62 x 300 mm
(5.2" x 2.4" x 11.8")
including mounting flanges and terminals.
Mounting holes are clear

Weight
2 kg (4.4 lb)

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

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