

## 300W, Dual Output, Rugged, AC-DC Industrial Power Supply with Universal Input MIW 302-F3 Series

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



This rugged, dual output, industrial quality power supply uses field-proven technology to generate 300W output power. It is a mature design built on the KIW 302 PCB and has a track record in numerous 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. 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.

### 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 EN62368-1 and corresponding UL and CSA standards

#### EMI

EN 55032 Class A with wide margins

#### Switching Frequency

47 kHz  $\pm$ 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

None  
Built-in redundancy diode available as option

#### 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 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°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

#### 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 290 mm  
5.2" x 2.43" x 11.4"  
Includes baseplate, excludes terminals  
Mounting holes are clear

#### Weight

2 kg (4.4 lb)

#### Connections

12 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

				V1		V2		AC INPUT			
N/A	N/A	N/A	N/A	-	+	N/A	-	+	GND	N	PH
1	2	3	4	5	6	7	8	9	10	11	12

*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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