

# 100VA, Rugged, Industrial Quality AC-AC Frequency Converter with Universal AC Input or High DC Input Voltage FC 100-F2 Series



- Sinusoidal output voltage
- Universal input voltage
- Rugged, industrial quality
- Filtered input
- Conduction/convection cooled
- Full electronic protection
- Field-proven design topology

This rugged, AC-AC frequency converter utilizes field proven, microprocessor-controlled FCF 100 topology to generate the required output power with pure sine wave output voltage. The AC-DC input stage boosts the input voltage to a higher DC bus voltage, which feeds the DC-AC inverter to generate the required AC output. The use of high frequency PWM technology enables compact construction, low weight and high efficiency. The input and output are filtered for low noise. 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

<p><b>Input Voltage</b> 95-264Vac (Universal) 47... 430Hz or 120Vdc to 350Vdc Factory set for required input</p> <p><b>Input Protection</b> Inrush current limiting Varistors Internal safety fuse Lower voltage than the specified minimum input will not damage the unit</p> <p><b>Isolation</b> 2250Vdc input to chassis 4300Vdc input to output 2250Vdc output to chassis Floating output</p> <p><b>Standards</b> Designed to meet EN62368-1 and corresponding standards</p> <p><b>EMI</b> EN55032 Class A with margins</p>	<p><b>Output Voltage</b> 115Vac/0.8A rms/60Hz or 400Hz 100VA continuous. or 230Vac/.04A rms/50Hz 100VA continuous. Output is floating, either terminal can be grounded. Other outputs are available on request.</p> <p><b>Output Wave Form</b> Sinusoidal</p> <p><b>Total Harmonic Distortion</b> Less than 5% at full load</p> <p><b>Line/Load Regulation</b> ±3% from zero load to full load</p> <p><b>Load Crest Factor</b> 2 at 90% load</p> <p><b>Output Noise</b> High frequency ripple is less than 500mVrms (20MHz BW)</p> <p><b>Output Overload Protection</b> Current limiting with short circuit protection. Thermal shutdown with automatic recovery in case of insufficient cooling</p> <p><b>Output Overvoltage Protection</b> 140Vac (for 115Vac output) or 280Vac (for 230Vac output) by internal supply voltage limiting</p>	<p><b>Efficiency</b> Typically, 80% at full load</p> <p><b>Operating Temperature Range</b> 0°C to +50°C for full specification Extended temperature ranges available</p> <p><b>Temperature Drift</b> 0.05% per °C over operating temperature range</p> <p><b>Cooling</b> Conduction to customer heat-sink or chassis and natural convection</p> <p><b>Environmental Protection</b> Basic ruggedizing Conformal coating</p> <p><b>Shock/Vibration</b> IEC 61373 Cat 1 A&amp;B</p> <p><b>Humidity</b> 5 - 95% non-condensing</p> <p><b>MTBF</b> Min. 120,000 hours at 45°C Demonstrated MTBF is significantly higher</p>	<p><b>Indicators</b> None</p> <p><b>Control Input</b> None</p> <p><b>Alarm Output</b> None Option: output fail alarm (Form C)</p> <p><b>Package/Dimensions (W x H x D)</b> F2: 112 x 57 x 254 mm 4.43" x 2.25" x 10" Includes mounting flanges, excludes connector Mounting holes are clear</p> <p><b>Weight</b> Approx. 1.2 kg; 2.6 lb.</p> <p><b>Connections</b> 9-pole barrier type terminal block, 3/8" spacing</p> <p><b>RoHS Compliance</b> Compliant</p> <p><b>Warranty</b> Two years subject to application within good engineering practice</p>
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### Terminal Block Pin-out

OUTPUT						INPUT		
NOT USED	L1	L2	NOT USED	NOT USED	NOT USED	GND	N	PH
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.*



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