

100VA Rugged, Industrial Quality DC-AC Sine Wave Inverter

Accepts Input Voltages 24V, 36V, 48Vdc

CSI 100-3W-F1 Series



- Sinusoidal output voltage
- Wide input range covering 24V, 36V and 48Vdc
- Rugged, field-proven design
- Filtered input and output
- Conduction/convection cooling
- Full electronic protection

This rugged DC-AC inverter utilizes our field proven, microprocessor-controlled CSI 111 high frequency PWM technology to generate the required output power with pure sine wave output voltage. It is based on a mature design topology with a track record in numerous applications. The wide operating range (20-60Vdc) allows operation from 24V, 36V and 48Vdc input sources. Operator error is minimized. This also simplifies stock keeping - just one model covers three input ranges. The DC-DC input stage boosts the input voltage to an internal bus voltage, which feeds the DC-AC inverter to generate the required AC output. The use of high frequency conversion enables a 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 ensures exceptional mechanical ruggedness. Conformal coating provides protection against humidity and airborne contaminants. Full electronic protection, generous design headroom and the exclusive use of components with established reliability also contribute to high MTBF. The unit is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage

24V, 36V and 48Vdc nominal
20-60Vdc operating range
Consult factory for other inputs

Input Protection

Inrush current limiting
Varistor
Reverse polarity protection
Internal safety fuse
Lower voltage than the specified minimum input will not damage the unit

Isolation

Compliant to input and output voltages according to the corresponding standards
Floating output

Standards

Designed to meet
C22.2 No. 107.1 - 01,
UL 458 and EN62368-1

EMI

EN55032 Class A
with margins

Output Voltage

115Vac/0.8Arms/60Hz or 400Hz;
230Vac/0.4Arms/50Hz
100VA continuous
Isolated floating output
Consult factory for other output requirements

Output Wave Form

Sinusoidal

Total Harmonic Distortion

Less than 5% at full load

Line/Load Regulation

±3% from no load to full load

Load Crest Factor

2 at 90% load

Output Noise

High frequency ripple is better than 500mVrms (20MHz BW)

Output Overload Protection

Current limiting with short circuit protection

Output Overvoltage Protection

Output voltage is limited by internal supply voltage

Efficiency

Input voltage dependent
Typically 80% at full load

Operating Temperature Range

0° C to +50° C for full specification
Extended temperature ranges available

Temperature Drift

0.05% per ° C over operating temperature range

Cooling

Conduction and natural convection
The unit must be installed on heatsinking surface such as chassis or cabinet wall for full power

Environmental Protection

Basic ruggedizing
Conformal coating

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

120,000 hours at 45°C
Demonstrated MTBF is significantly higher

Indicators

Green output ON LED visible through cooling slots

Control Input

None

Alarm Output

None
Optional output fail alarm (Form C)

Package/Dimensions (W x H x D)

F1: 113 x 51 x 198 mm
(4.45" x 2" x 7.8") Includes baseplate, excludes terminals
Mounting holes are clear.

Weight

Approx. 0.8kg (1.8 lb)

Connections

9-pole barrier type terminal block, 3/8" spacing

RoHS Compliance

Compliant

Warranty

Two years subject to application within good engineering practice.

Terminal Block Pin-out

AC OUTPUT			DC INPUT					
NOT USED	L1	L2	NOT USED	NOT USED	NOT USED	GND	+	-
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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