

50VA Rugged, Industrial Quality DC-AC Inverter with Sine Wave Output

CSI 50-F1 Series



- Sinusoidal output voltage
- Rugged, field-proven design
- Filtered input and output
- Compact, light weight
- 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. The design is based on mature technology with a track record in numerous applications. The input and output are filtered for low noise. The use of high frequency conversion enables compact construction, low weight and high efficiency. Cooling is by conduction via baseplate. Additional cooling is 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

12V, 24V, 36V, 48V or 125Vdc
± 15%
Min. startup at 12V: 10.5-16V
Other inputs are available on request.

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

According to input voltage
Min. 700Vdc input to chassis
Min. 1000Vdc input to output
700Vdc output to chassis
Floating output

Standards

Designed to meet
C22.2 No. 107.1 - 01,
UL458 and EN62368-1

EMI

EN 55032 Class A with margins

Output Voltage

110Vac/0.45Arms/60Hz or 400Hz;
230Vac/0.21Arms/50Hz
50VA continuous
Output is floating, either terminal can be grounded
Other outputs are available on request.

Output Wave Form

Sinusoidal

Total Harmonic Distortion

Less than 6% 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 200mVrms (20MHz BW)

Output Overload Protection

Current limiting with short circuit protection

Output Overvoltage Protection

30V by internal supply voltage limiting

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 via base plate to customer heat-sink 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

150,000 hours at 45°C
Demonstrated MTBF is significantly higher

Indicators

None

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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