

500VA Rugged, Industrial Quality Convection Cooled Inverter with Sine Wave Output

CSI 500-5E-FX Series



- Sinusoidal output voltage
- Rugged field-proven design
- Filtered input
- Conduction/convection cooling
- Full electronic protection
- Field-proven design topology

This rugged, industrial quality DC/AC inverter utilizes field proven, microprocessor controlled high frequency PWM technology to generate the required output power with pure sine wave output voltage. It is a mature design with a track record in numerous applications. The DC/DC input stage boosts the input voltage to a higher DC voltage, which feeds the DC/AC inverter to generate the required AC output. 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, 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

125Vdc nominal
105-145V operating range
Consult factory for other inputs, and range

Input Protection

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

Isolation

1500Vdc input to chassis
3000Vdc input to output
2250Vdc output to chassis
Output neutral is connected to the chassis on the terminal block. The jumper can be removed for floating output

Standards

Designed to meet
C22.2 No. 107.1 - 01,
UL 458 and EN60950-1

EMI

EN 55032 Class A
with margins

Output Voltage

230Vac/2.17A, 50Hz
500VA continuous
Output is floating
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
Thermal shutdown with automatic recovery in case of insufficient cooling

Output Overvoltage Protection

280Vac by internal supply voltage limiting

Efficiency

Typically 84% at full load depending on input/output configuration

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 heatsink or chassis and by natural convection

Environmental Protection

Basic ruggedizing
Conformal coating
Heavy ruggedizing available as option

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

Min. 130,000 hours at 45°C fans excluded
Demonstrated MTBF is significantly higher

Indicators

Green output ON LED visible through cooling slots

Control Input

None
Remote shutdown as option

Alarm Output

None
Option: output fail alarm (Form C)

Package/Dimensions (W x H x L)

FX: 153 x 67 x 357 mm
(6" x 2.7" x 14.1") including mounting flanges and terminals

Weight

2.2 kg (4.9 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

| AC OUTPUT | | | | | | DC INPUT | | | | | |
|-----------|----|-----|----------|----------|----------|----------|-----|---|----|----|----|
| L1 | L2 | GND | NOT USED | NOT USED | NOT USED | NOT USED | GND | - | - | + | + |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |

Please note that ABSOPULSE power supplies are designed and built to customer specifications. The specifications on this data sheet are generic and will vary depending on input/output configuration and other customer requirements. Generic specifications are subject to change.

Designer and manufacturer of quality ac-dc power supplies and battery chargers, converters, inverters, dc-output UPS systems, complete rack mount systems and DC-input fluorescent lamp inverters since 1982. Custom or standard. Absopulse is a BABT-approved Facility.



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