

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

## CSI 500-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 headrooms, 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

1700Vdc input to chassis/output  
or corresponding to the voltage  
requirements  
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 55022 Class A  
with margins

#### Output Voltage

230Vac/2.17A continuous, 50Hz  
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 80% 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

None

#### 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

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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