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

CSI 500-F21 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. 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. 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. All of our products are manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage
24V, 36V, 48V, 125Vdc
± 15% are standard
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
1700Vdc input to chassis/output or corresponding to the voltage requirements
Output neutral is connected to the chassis internally
Floating output as option

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

EMI
EN 55032 Class A with margins

Output Voltage
115Vac/4.3A continuous at 60Hz or 400Hz; or
230Vac/2.17A continuous at 50Hz
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
±2% from no load to full load.

Load Crest Factor
3.0 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
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

Shock/Vibration
IEC 61373 Cat 1 A&B

Humidity
5 - 95% non-condensing

MTBF
130,000 hours at 45ºC
Demonstrated MTBF is significantly higher

Indicators
None

Control Input
None
Remote shutdown as option

Alarm Output
None
Optional output fail alarm (Form C)

Package/Dimensions (W x H x L)
F21: 254 x 65.5 x 350.5 mm
10" x 2.58" x 13.8" includes baseplate, excludes connectors

Weight
4.2 kg (9 lb)

Connections
Input/output: Compression-type terminals

RoHS Compliance
Compliant

Warranty
Two years subject to application within good engineering practice

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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Made in Canada