300VA Rugged, Industrial Quality DC-AC Sine Wave Inverter with 24Vac Output
CSI 300-24/24FX 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
24Vdc nominal
21-30Vdc operating range
Input current: 16A max
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
1000Vdc input to chassis
1500Vdc input to output
700V output to chassis
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
24Vac/12A, 50Hz
300VA 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
Thermal shutdown with automatic recovery in case of insufficient cooling

Output Overvoltage Protection
By internal supply voltage limiting at 30Vac

Efficiency
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 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 45ºC 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 357mm
(6" x 2.7" x 14.1")
Mounting holes are clear

Weight
2.2 kg (4.9 lbs)

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	N/A	N/A	N/A	N/A	N/A	GND ⏚	–	–	+	+
1	2	3	4	5	6	7	8	9	10	11	12

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