300VA Compact, Encapsulated, Industrial Quality DC/AC Sine Wave Inverter

PSI 300 Series

- Sinusoidal output voltage
- Complete encapsulation
- Conduction cooling
- Compact construction
- Full electronic protection
- Wide temperature range
- Rugged, field-proven design

This rugged DC/AC inverter uses field proven, PSI 300 microprocessor controlled high frequency PWM technology to generate 300VA output power with pure sine wave output voltage. New semiconductor technology and unique design topology simplifies the circuitry and enables a compact construction. The input and output are filtered for low noise. The inverter is entirely potted with a thermally conductive MIL-grade silicon rubber compound to ensure immunity to shock, vibration and humidity. Cooling is via baseplate by conduction. The unit was designed for continuous operation at 70°C with installation on appropriate size of heatsinking surface. Full electronic protection and the exclusive use of components with established reliability also contribute to high MTBF. The unit is manufactured at our plant under strict quality control. The unit is suitable for transportation, mining, oilrigs, military and other harsh environments.

SPECIFICATIONS

Input Voltage
24V, 48V, 110V, 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
1500Vdc input to chassis
3000Vdc input to output
2250Vdc output to chassis
Floating output

Standards
Designed to meet
C22.2 No. 107.1 - 01,
UL 458 and EN 60950-1

EMI
EN 55022 Class A
with margins

Output Voltage
115Vac/2.6A continuous,
60Hz or 400Hz; or
230Vac/1.3A continuous 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
Better than ± 2% 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 reset in case of insufficient cooling

Output Overvoltage Protection
Output voltage is limited by internal DC bus voltage

Efficiency
Input voltage dependent
Typically 80% at full load

Operating Temperature Range
-40 to +70°C cold-plate temperature for full specification

Temperature Drift
0.03% per °C over operating temperature range

Cooling
Conduction cooling via base plate to customer chassis or heat-sink

Environmental Protection
Full encapsulation with thermally conductive silicon potting compound with UL94V-0 flammability rating.
Meets environmental criteria as requested in MIL-810 C, D

Shock/Vibration
IEC 61373 Cat 1 A&B

Humidity
5 - 95% non-condensing

MTBF
150,000 hours at 45ºC
Demonstrated MTBF is significantly higher

Indicators
None

Control Input
None
Remote shutdown or enable as an option

Alarm Output
None
Output fail alarm (Form C) as option

Package/Dimensions (W x H x D)
P600: 155 x 72 x 269mm
(6.1" x 2.8" x 10.6") including terminal block and flanges
Mounting holes are clear

Weight
3.4 kg (7.5 lb)

Connections
12-pole barrier type terminal block with 3/8" spacing

RoHS Compliance
Fully 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	GND ⏚	NOT USED	NOT USED	NOT USED	–	–	+	+
1	2	3	4	5	6	7	8	9	10	11	12

Please note that the above specifications set only generic guidelines for the design. Customizing and enhancements are possible. Please contact us with your specific requirements.

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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