

## 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  $\pm 15\%$   
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  $\pm 2\%$  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 45°C  
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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