

1000VA, Low-profile, Conduction Cooled Sine Wave Inverter for Industrial and Harsh-Environment Applications CSI 1KP Series

- Fully encapsulated modules
- Highly ruggedized
- Conduction cooling
- Sinusoidal output voltage
- Full electronic protection
- Field-proven design topology



This unit is comprised of internal modules which are fully encapsulated in thermally conductive MIL-spec silicon rubber compound to ensure resistance against shock, vibration, moisture, humidity, salt, fog, dust, and insects. The cooling is solely by conduction. It delivers 1000VA sine wave output voltage. Suitable for a wide range of applications, the CSI 1KP features full electronic protection, high efficiency and low output noise. 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 components with established reliability results in a high demonstrated MTBF. The CSI 1KP is manufactured at our plant under strict quality control. Versions for railway applications are also available.

SPECIFICATIONS

Input Voltage
24V, 36V, 48V, 125V, 250VDC
±15% are standard
Consult factory for other inputs

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
1500Vdc Input to chassis
3000Vdc Output to chassis
Output neutral is connected to chassis internally

Standards
Designed to meet
C22.2 No. 107.1 - 01,
UL 458 and EN60950

EMI
EN 55022 Class A
as a minimum

Output Voltage
115Vac/8.7A continuous at
60Hz or 400Hz, or
230Vac/4.35A continuous at
50Hz, with grounded neutral.
Isolated floating output optional
Consult factory for other output requirements

Output Wave Form
Sinusoidal

Total Harmonic Distortion
Less than 5% at full load

Line Regulation
Better than 0.5%

Load Regulation
Maximum ±6% from no load
to full load.
A ±2% load regulation option is
available

Load Crest Factor
Maximum 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.
Thermal shutdown with automatic
recovery in case of
insufficient cooling

Output Overvoltage Protection
140/280V by internal supply
voltage limiting

Efficiency
Input voltage dependent
Typically 78% at full load

Operating Temperature Range
- 25° C to +60° C cold-plate
temperature

Temperature Drift
0.05% per °C over operating
temperature range

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

Environmental Protection
Fully encapsulated internal
modules

Humidity
5 - 95% non-condensing or
condensing

MTBF
Min. 160,000 hours at 45°C
Demonstrated MTBF significantly
higher

Indicators
None

Control Input
None
Option: Remote inhibit

Alarm Output
Option: output fail alarm (Form C)

Package/Dimensions
F 31: 483 x 67 x 355 mm
(19" x 2.6" x 14") including
terminal blocks and flanges.
Mounting holes are clear.

Weight
12.5 Kg (28 lb)

Connections
Input/output: compression-type
terminal block
(Phoenix SMKDS 5/3-9,6)

RoHS Compliance
Fully compliant

Warranty
Two years subject to application
within good engineering practice

Enhancements to these general specifications can be accommodated upon request. 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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