

Standard Specifications

DC to AC "Pure Sine Wave" Power Inverter

1 SCOPE

This specification describes the minimum requirements of a DC to AC pure sine wave power inverter capable of operating in a heavy duty, high vibration, truck mounted application.

2 GENERAL DESCRIPTION

The inverter shall be industrial grade, UL Listed, capable of inverting DC Voltage to AC Voltage. The inverter shall produce a pure sine waveform consistent with operating any 120 VAC, 60 HZ single phase equipment within the inverter's power rating.

3 CONSTRUCTION/DESIGN

3.1 Overall construction to be of corrosion resistant aluminum with a powder coated finish further improving corrosion resistance.

3.2 To ensure adequate clearance, overall dimensions must not exceed 15" in length, 8.2" in width, 7.5" in height, and weigh no more than 29 lbs.

3.3 To ensure the highest reliability:

- The design shall incorporate a 60 Hz steel transformer rather than a high frequency ferrite transformer.
- The chassis design shall incorporate a thermally controlled fan.

3.4 To reduce vibration related failures, components shall be firmly affixed to chassis anchor points. Because of its overall weight, the transformer shall be mounted on a horizontal plane to the chassis and anchored at all four corners.

3.5 Unit shall incorporate the following standard features.

- AC receptacle with GFCI protection
- 16 bit, 16 MHz microprocessor control
- Remote ON/OFF switch hookup
- Automatic low battery shutdown at 10.5 VDC (with in-rush delay)
- Automatic electronic short circuit/overload protection
- Automatic high temperature shutdown
- LED Indication of Inverter Power, Low Battery, Overload, and High Temperature

4 PRODUCT QUALITY

The manufacturer shall be ISO 9001:2008 Registered.

Standard Specifications Continued

5 OPERATIONAL SPECIFICATIONS

- Input Current: Up to 120 amps DC
- Input Voltage: 10.5-20 VDC
- Output Voltage: 120 \pm 5% VAC
- Output Waveform: Pure sine wave, less than 5% THD typical
- Output Frequency: 60 Hz \pm 0.05%
- Output Power: 1200 Watts, Continuous
- Output Current: Up to 10 amps AC
- Peak Output: 21 amps AC
- Efficiency: Up to 88%

6 PRODUCT SAFETY

Product shall be UL and CUL Listed for land vehicle use, and comply with OSHA requirements.

7 PRODUCT SUPPORT

The manufacturer shall offer for sale, a complete family of support products designed to meet the duty cycle requirements of the application. The manufacturer will supply technical and design support as needed at no additional charge.

8 WARRANTY

- 8.1 Standard Warranty: The manufacturer shall offer a standard warranty period of four full years from the in-service date, covering parts and factory labor at no charge.
- 8.2 Advanced Replacement: The manufacturer shall submit a written advanced replacement program of two years. This program will provide ground service shipment of a replacement unit should an inverter failure occur.

9 REPAIR

Manufacturer shall guarantee repair of defective out of warranty inverters within one week.

10 PRODUCT REFERENCE

The unit shall be a Dimensions™ model DSI-12/1200N or approved equal.