



## Benefits

- Ultra-Quiet
- Power sensitive electronics without interference
- Rugged & Reliable
- Ensure years of safe and trouble free operation



## Military Option

Most of the products manufactured by Analytic Systems can be adapted for military use (Commercial Off The Shelf).

We provide four different levels of ruggedization; most often, a product in military use will use the extra-wide temperature range components to allow operation to -55 degrees Celsius.

The printed circuit boards are also protected against condensation and are enhanced with vibration protection that meets or exceeds MIL-STD810F, Method 514-3 and Cat-1 Proc 1. C.O.T.S. products are designed to meet EMC radiated and conducted emissions MIL-STD 461E.

All C.O.T.S. products are manufactured in accordance with IPC-A-610.

GSA Schedule

GSA Contract #GS-07F-5624R

# DC/AC Puresine Inverters

## IPS1000-MS C.O.T.S. Series Inverter

## Description

Computers are moving onto the battlefield at an ever increasing rate as more and more specialty software packages become available. However there is a major problem. Computers require clean, pure AC power to work reliably. If you power one from the same Military Genset that runs your heavy loads, you could damage it from surges and spikes generated by switching those loads.

If you power it from the same Inverter that runs a microwave and other electrical devices, similar problems occur, plus voltage dropouts from excessive loads on the inverter add to the problem. Also, most inverters produce 'Quasi-Sine Wave' AC, which often doesn't run computers very well. Complaints of noisy displays, cursors that move by themselves and more abound.

The IPS Series of 'Pure Sine Wave' Inverters are designed specifically for running computers and other electronics in rugged mobile and other off-grid locations.

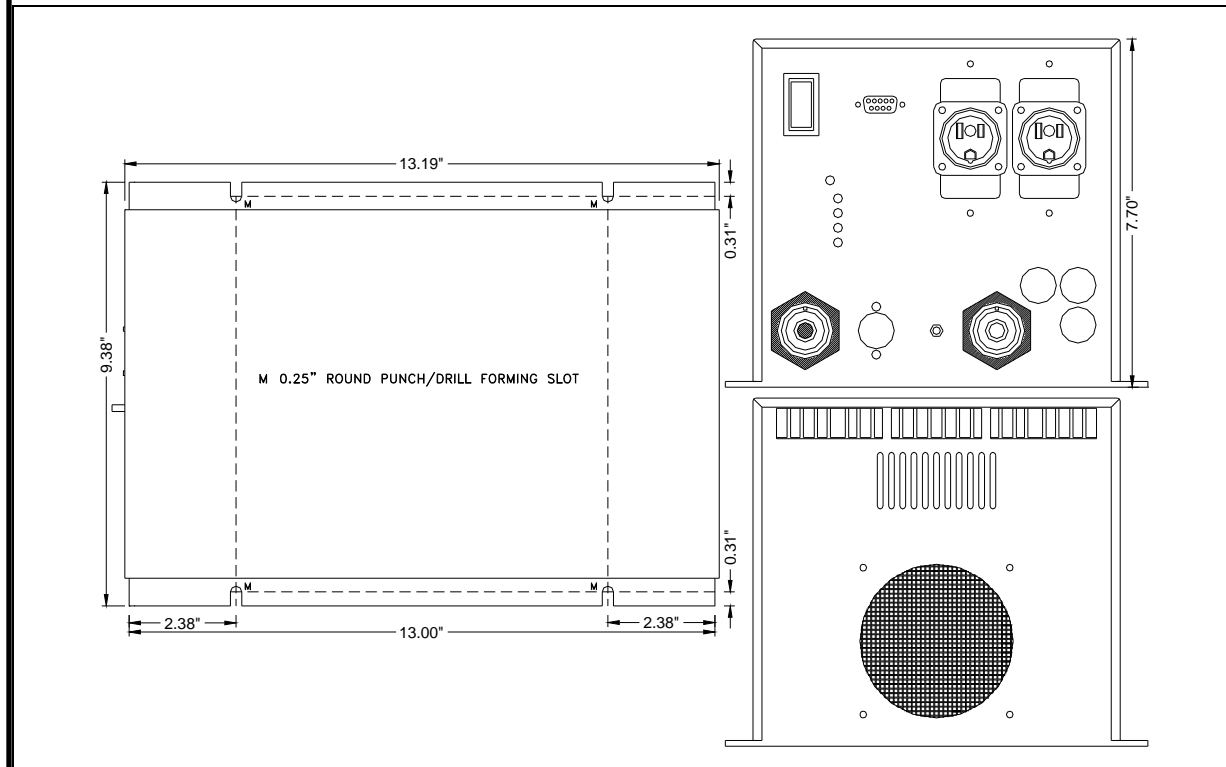
Two standard AC receptacles or a variety of customized MIL-SPEC Connectors provide for easy connection. Versions are available to operate from 12V, 24V, 28V, 32V, 48V, or 72 volt battery systems. The IPS1000 series of inverters carry a standard three-year warranty with an added 2 year extension available.

## Features

- Pure Sine Wave - 120 VAC / 60 Hz fully regulated output, exactly the same as household AC
- Ultra-quiet, low EMI design
- Extra heavy input filtering to eliminate interference with other equipment sharing the same batteries
- Crystal controlled for precise frequency ( $\pm 0.01$  Hz)
- State-of-the-art MosFet technology and unique "**Soft-Start**" circuitry for reliable operation
- Short Circuit Protection
- Current Limiting
- Overload Protected
- Illuminated ON-OFF switch for positive indication of proper operation
- Built to the Q-Base Quality System Standard
- Over-temperature protected
- Low voltage warning and shutdown circuitry to protect the batteries
- Transformer type output to protect computers and other sensitive equipment from surges and spikes
- Over voltage and over temperature warning and shutdown circuitry to protect the inverter
- Thermostatically controlled fan
- One or two AC receptacles for easy connection of up to four devices (Various Mil Connectors Available as options)
- Isolated input for positive or negative ground operation
- Diagnostic LEDs and Audible Alarms

# IPS1000-MS Series DC/AC Inverter Charger

## Mechanical Diagram



## Specification

### Electrical (Input)

Nominal (ip)	12	28	48
Actual (Vdc)	10.5-16	20 - 40	40 - 80
Input Amps (max)	179	94	47
Input Fuse (ATC)	40A x 5	25A x 4	25A x 2

### Environmental Specification

Operating Temp. Range	-40° to +50°C @ maximum output (-55°C Available) Derate Linearly 2.5% per °C from 50°C to 85°C
Humidity	0 - 95°C Relative Humidity (non-condensing) with standard conformal coating
Audible Noise	34.5 dB @ 3 ft
Typical Service Life	> 10 yrs. (87,600 hrs)
Isolation	Input-Output & Output Case 1500VDC Input-Case 500VDC (1500VDC for 40V Input)
Vibration	Designed to meet MIL-STD 810F, Method 514-3, Cat-I Proc I

### Electrical (Output)

Output Nominal (op)	110	220
Output Volts (AC)	115 ± 5 rms	220 ± 10 rms
Output Amps	8.7 cont. / 13.0 peak	4.5 cont. / 6.8 peak
Output Frequency	60.00 ± 0.01 Hz OR	50.00 ± 0.01 Hz
Output Type	Pure Sine Wave	
Output Distortion	< 5% at 1000 Watts into 0.8 power factor load	
Regulation (Line & Load)	< +/- 0.5%	
Duty Cycle	Peak 20% for 10 min max Continuous 100% for 24 hours per day	
Efficiency	> 80% @ Maximum Output	

### Mechanical Specification

Length	13.0 in / 33.0 cm
Width	9.0 in / 22.9 cm
Height	7.8 in / 19.8 cm
Clearance	1 inch (2.5 cm) all around
Material	Marine Grade Aluminium
Finish	Black Anodize / Powder Epoxy Coat
Fastenings	All 18-8 Stainless Steel
Weight	30 lb / 13.6 kg
Connections	Standard Dual Decora Style AC Receptacles (Military Connectors available upon request)
Warranty	3 years (2 yr. extension avail.)

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