



## DC/AC Puresine Inverters

### IPS300-MS Series Inverter

#### 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

#### 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.

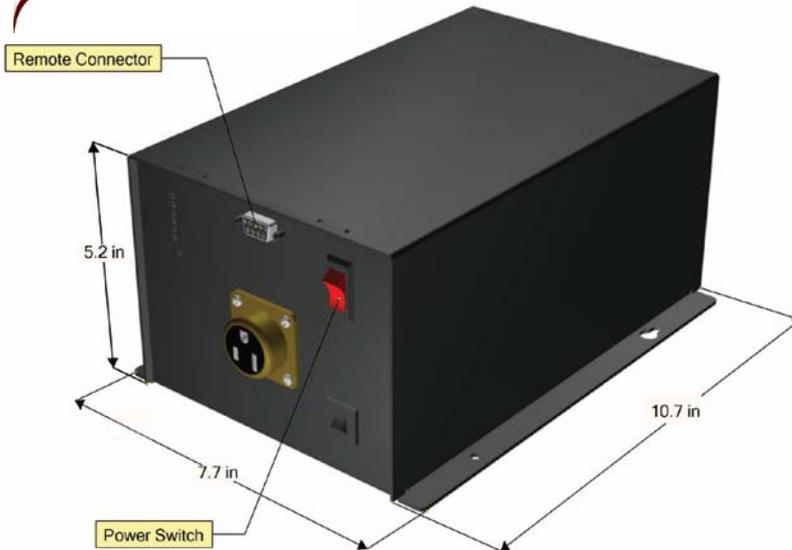
One standard AC receptacles or a variety of customized MIL-SPEC Connectors provide for easy connection. Versions are available to operate from 12V, 24V, 28V, or 32 volt battery systems. The IPS300 series of inverters carry a standard three-year warranty with an added two year extension available.

#### 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 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

# IPS300-MS Series DC/AC Inverter

## Specification



## Mechanical Specification

<b>Length</b>	10.7 in / 27.2 cm
<b>Width</b>	7.7 in / 19.6 cm
<b>Height</b>	5.2 in / 13.2 cm
<b>Clearance</b>	1 inch (2.5 cm) all around
<b>Material</b>	Marine Grade Aluminum
<b>Finish</b>	Black Anodize / Powder Epoxy Coat
<b>Fastenings</b>	All 18-8 Stainless Steel
<b>Weight</b>	12.0 lb / 5.5 kg
<b>Connections</b>	Standard Dual Decora Style AC Receptacle (Military Connectors available upon request)
<b>Warranty</b>	3 years (2 yr. extension avail.)
<b>Safety</b>	ABS 11-HS794404D-PDA

## Electrical (Input)

<b>Nominal (ip)</b>	12	24	32
<b>Actual (Vdc)</b>	10.5-16	20 - 30	30 - 40
<b>Input Amps (max)</b>	48	25	17
<b>Input Fuse (ATC)</b>	30A x 2	30A	20A

## Environmental Specification

<b>Operating Temp. Range</b>	-40° to +55°C @ maximum output (-55°C Available) Derate Linearly 2.5% per °C from 50°C to 85°C
<b>Humidity</b>	0 - 95°C Relative Humidity (non-condensing) with standard conformal coating
<b>Audible Noise</b>	Ø dB @ 3 ft (34.5 dB when fan operating)
<b>Typical Service Life</b>	> 10 yrs. (87,600 hrs)
<b>Isolation</b>	Input-Output & Output Case 1500VDC Input-Case 500VDC
<b>Vibration</b>	Designed to meet the Loose Cargo MIL-SPEC Requirement

## Electrical (Output)

<b>Output Nominal (op)</b>	110	220
<b>Output Volts (AC)</b>	115 ± 5 rms	220 ± 10 rms
<b>Output Amps</b>	2.50 cont. 3.33 peak	1.36 cont. 1.82 peak
<b>Output Frequency</b>	60.00 ± 0.01 Hz	50.00 ± 0.01 Hz
<b>Output Type</b>	Pure Sine Wave	
<b>Output Distortion</b>	< 5% at 300 Watts into 0.8 power factor load	
<b>Regulation (Line &amp; Load)</b>	< +/- 0.5%	
<b>Duty Cycle</b>	Peak 20% for 10 min max Continuous 100% for 24 hours per day	
<b>Efficiency</b>	> 80% @ Maximum Output	
<b>Ground Fault Current</b>	Max 5 mA between Neutral and Ground	
<b>Safety</b>	cETLus approved to CSA C22.2 & UL458 (Standard units only)	

Available From: