



samlexpower®

DC-AC Inverter
Pure Sine Wave
120 Watt

PST-12S-12A

Owner's
Manual

Please read this
manual BEFORE
installing your
Inverter

OWNER'S MANUAL | Index

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SECTION 1 | Introduction & General Safety

Introduction

Thank you for choosing to purchase a Samlex inverter. Our power inverters are designed to be your best companion at home, in the office and when travelling.

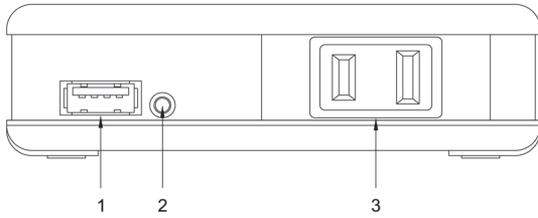
The inverter can be used to operate lap tops, portable electronics, most small TVs, VCRs, sound systems, small handy tools and other portable sensitive electronic products. This power inverter has a rated output of 120 Watts.

General Safety

Read these General Safety, Installation, and Operation Guidelines carefully before using your inverter.

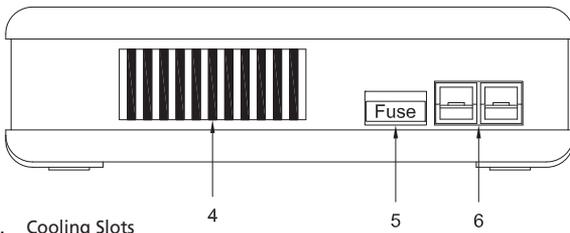
- Keep away from children.
- Never attempt to operate the inverter from any power source other than a 12 VDC power source.
- Make sure the power consumption of the appliance or equipment you wish to operate does not exceed 120W.
- When operating the inverter with a car or marine battery, start the engine every 30 to 60 minutes and let it run for approximately 10 minutes to recharge the battery.
- Do not use the inverter near any flammable gases or liquid.
- Do not expose the inverter to moisture.
- Avoid placing inverter near sources of heat or under direct sunlight.
- Make sure inverter is well ventilated during use. Keep a clear space of 10 cm around the inverter (Fig. 4).
- The inverter has no ON/OFF switch. It will switch on automatically after plugging into a 12V battery through the 12V plug adaptor. Unplug the inverter from the 12V power source when not in use, as it will drain 0.5A from the battery even if no load is connected.

SECTION 2 | Layout & Installation



1. USB Charger (5 VDC / 500mA)
2. LED Status Indicator
3. AC Outlet

Fig. 1: Front View



4. Cooling Slots
5. DC Fuse - 15A
6. Inlet Powerpole Connector

Fig. 2A: Rear View



7. Detachable DC Input Power Cord (2')
8. 12V Plug Adaptor for Battery Input
9. Ferrite Bead for Noise Suppression
10. Mating Powerpole Connector

Fig. 2B: DC Input Cord

SECTION 2 | Descriptions

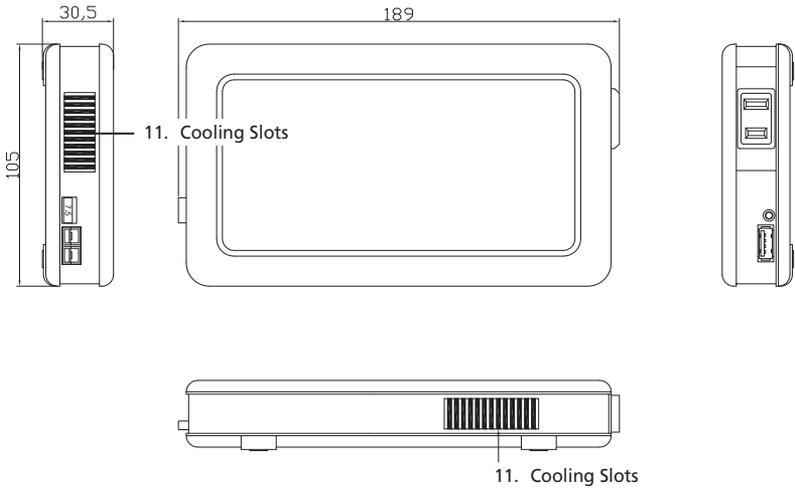


Fig. 3: Plan, Elevations and Dimensions

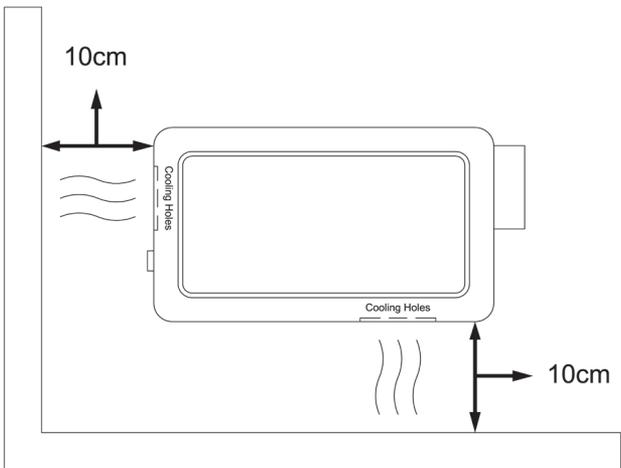


Fig. 4: Installation Clearances

SECTION 3 | Operation Guidelines

Operation

- A detachable 2' DC input power cord (7, Fig. 2B) has been provided.
- This unit does not have a power ON/OFF switch. The unit will switch on automatically as soon as 12 VDC power is fed from the battery through the 12V plug adaptor (8, Fig. 2B).
- Connect the detachable DC input power cord (7, Fig. 2B) by sliding the mating Powerpole connector (10, Fig. 2B) into the DC inlet Powerpole connector (6, Fig. 2A).
- Plug in the 12V plug adaptor (8, Fig. 2B) of the DC input cord into the 12V outlet of the battery supply.
- When the LED Status Indicator (2, Fig. 1) is GREEN, the inverter's AC Outlet (3, Fig.1) and USB port (1, Fig.1) will have voltage outputs.
- Insert plug of your electrical appliance into the AC Outlet (3, Fig. 1) of the inverter.
- Remove the inverter from the 12V outlet when not in use. This will prevent unnecessary drain from the battery.

The inverter is protected against the following abnormal conditions:

Overload and short circuit on the AC output side

- If the load exceeds 120W, the output voltage will start dropping, but the unit will not shut down.
- The LED Status Indicator (2, Fig.1) will remain GREEN.
- The output voltage waveform will be distorted and will not have pure sine waveform, but will be clipped at top and bottom and will look like a square waveform.
- There will be excessive RF noise.
- The unit will reset automatically once the overload is removed.

Over temperature due to fan failure or due to lack of cool replacement air

- The unit will shut down if temperature of hot spot inside the unit $> 105^{\circ}\text{C}$. The LED Status Indicator (2, Fig. 1) will turn ORANGE.
- The unit will reset automatically on cooling.

Low DC Input Voltage

- The unit will shut down if DC input voltage is < 10 VDC.
- The LED Status Indicator (2, Fig. 1) will turn ORANGE.
- The unit will reset automatically when the voltage rises to 11.5 VDC.

SECTION 3 | Operation Guidelines

High DC Input Voltage

- The unit will shut down if DC input voltage > 16.5 VDC.
- The LED Status Indicator (2, Fig. 1) turns ORANGE.
- The unit will reset automatically when voltage is < 16.5 VDC.

Over Voltage On USB Port

- USB output is shut down if USB output > 6.2 VDC.
- The LED Status Indicator (2, Fig. 1) will be OFF or RED.

Operational conditions indicated by the LED Status Indicator (2, Fig. 1) are given in the following table:

LED STATUS INDICATOR	INVERTER & USB STATUS	
LED is OFF	AC output is available: No USB power No AC output: 15A input side fuse is blown	
GREEN	USB normal	
ORANGE	Inverter shut down due to:	USB normal
RED	<ul style="list-style-type: none">- Over temperature- Low DC input voltage- High DC input voltage	No USB power

Cooling

- The inverter has a temperature controlled fan for cooling.
- The fan will start once the temperature of the hot spot inside the unit exceeds 70°C. The fan may not be running all the time.
- Place the unit in a cool, well ventilated space that has adequate cool replacement air (Fig. 4).

SECTION 3 | Technical Specifications

PARAMETER	PST-12S-12A
AC Output Power - Continuous	120W
AC Output Power - Surge	120W
AC Output Voltage	120V+/-3%
AC Output Frequency	60Hz +/-1%
AC Output Wave Form	Pure Sine Wave
AC Output Total Harmonic Distortion	< 3%
DC Input Voltage Range	10V~ 16.5V
Maximum efficiency	88%
DC Input No Load Current	<0.5A
DC Input Current, Maximum	15A
Dimension (L x W x H) (mm / inches)	189 x 105 x 30.5 mm / 7.44 x 4.13 x 1.20 inches
Weight (kg / lbs)	0.453 kg / 1.0 lb
Fan	Temperature Controlled
USB Power	5V +/-0.1V /500mA
Protections	<p>Short circuit / overload: Output voltage drops but does not shut down. Auto-reset.</p> <p>Over temperature: Shuts down when internal hot spot is > 105°C. Auto-reset.</p> <p>Low DC input voltage: Shuts down at < 10V. Auto-reset at 11.5V.</p> <p>High DC input voltage: Shuts down at > 16.5V. Auto reset at < 16.5V.</p> <p>High DC output of USB port: Shuts down USB port at > 6.2 VDC.</p>
Safety Compliance	EN 60950-1
E Mark	10R-03 9956 
EMI Compliance	EN 55024: 1998 + A1; 2001 + A2; 2003 EN 55022 : 2006
EMC Compliance	EN 61000-3-2 : 2006 EN 61000-3-3 : 1995+A1 : 2001+A2 : 2005  

SECTION 4 | Warranty

2 YEAR LIMITED WARRANTY

PST-12S-12A manufactured by Samlex America, Inc. (the “Warrantor”) is warranted to be free from defects in workmanship and materials under normal use and service. The warranty period is 2 years for the United States and Canada, and is in effect from the date of purchase by the user (the “Purchaser”).

Warranty outside of the United States and Canada is limited to 6 months. For a warranty claim, the Purchaser should contact the place of purchase to obtain a Return Authorization Number.

The defective part or unit should be returned at the Purchaser’s expense to the authorized location. A written statement describing the nature of the defect, the date of purchase, the place of purchase, and the Purchaser’s name, address and telephone number should also be included.

If upon the Warrantor’s examination, the defect proves to be the result of defective material or workmanship, the equipment will be repaired or replaced at the Warrantor’s option without charge, and returned to the Purchaser at the Warrantor’s expense. (Contiguous US and Canada only)

No refund of the purchase price will be granted to the Purchaser, unless the Warrantor is unable to remedy the defect after having a reasonable number of opportunities to do so. Warranty service shall be performed only by the Warrantor. Any attempt to remedy the defect by anyone other than the Warrantor shall render this warranty void. There shall be no warranty for defects or damages caused by faulty installation or hook-up, abuse or misuse of the equipment including exposure to excessive heat, salt or fresh water spray, or water immersion.

No other express warranty is hereby given and there are no warranties which extend beyond those described herein. This warranty is expressly in lieu of any other expressed or implied warranties, including any implied warranty of merchantability, fitness for the ordinary purposes for which such goods are used, or fitness for a particular purpose, or any other obligations on the part of the Warrantor or its employees and representatives.

There shall be no responsibility or liability whatsoever on the part of the Warrantor or its employees and representatives for injury to any persons, or damage to person or persons, or damage to property, or loss of income or profit, or any other consequential or resulting damage which may be claimed to have been incurred through the use or sale of the equipment, including any possible failure of malfunction of the equipment, or part thereof. The Warrantor assumes no liability for incidental or consequential damages of any kind.

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