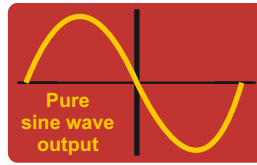


STERLING POWER

Pro Power SB (R)



EN60950-1
 EN55022: A2:2003 CLASS B
 EN55024:2003
 EN61000-3-2:2000
 EN61000-3-3:1995/A1:2001
 IEC61000-4-2:A2:2003
 IEC61000-4-3:20002/A1:2002
 IEC61000-4-4:2004
 IEC61000-4-6:A1:2004
 IEC61000-4-8:A1:2000

Pure Sine Wave Inverters 200W - 2200W 110V- 230VAC



Option 1

Twin socket
 UK and Euro Schuko



Option 2

1m AC cable pre-wired
 with RCD



Part No:
 SIB12(24)200
 SIB12(24)300
 SIB12(24)600
 SIB12(24)1000
 SIB12(24)1600
 SIB12(24)2200

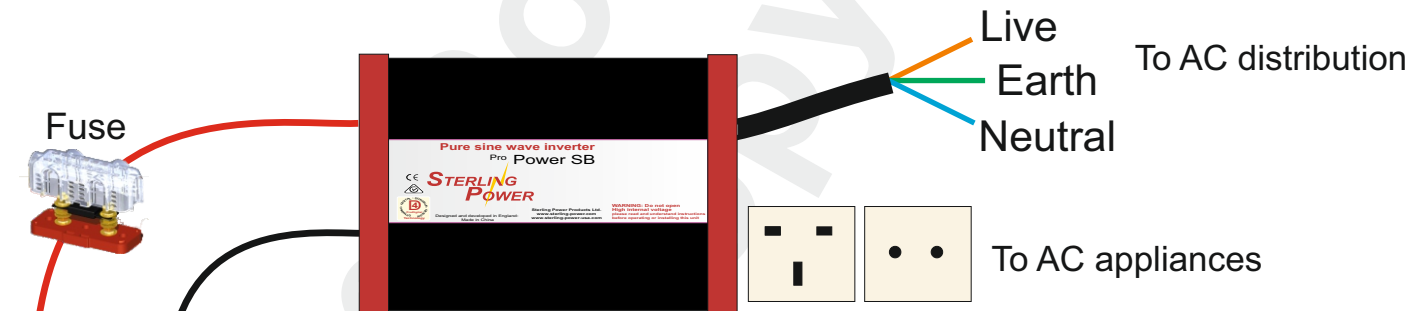
Part No:
 SIBR12(24)300
 SIBR12(24)600
 SIBR12(24)1000
 SIBR12(24)1600
 SIBR12(24)2200

ASIB121600
 ASIB241600

Optional
 remote control
 with 10 meter
 cable
 (Part No **SWR**)



Basic Installation



Simply connect the positive and negative terminal of the inverter to the 12V or 24V battery terminals (If you have a 200W model, there is a cigarette style plug). Use an appropriate fuse in the positive line. Connect the AC appliance to the AC socket or wire the cable up to the AC distribution panel. Then flick the on/off switch to turn on the inverter. Must have the appropriate DC voltage in order for the inverter to operate.

WARNING:

DO NOT OPEN UNIT | HIGH INTERNAL VOLTAGE | PLEASE READ AND UNDERSTAND THE INSTRUCTIONS PRIOR TO INSTALLING OR OPERATING THIS PRODUCT | SHOULD ONLY BE INSTALLED BY A QUALIFIED PERSON

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 V2.0 MAY 2018



RoHS
 compliant

www.sterling-power.com
www.sterling-power-usa.com

Warranty (2 years return to factory)

Contents

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Page 2	Legal and Safety - PLEASE READ <i>Inverter Specifications</i>
Page 3	Annotated Inverter Diagram <i>Inverter installation diagram</i> <i>Inverter installation procedure</i>
Page 4	Cable and Fuse sizes <i>Inverter voltage trips / thresholds</i> <i>Faults</i> <i>Optional Remote Control</i> <i>Customer Service and Warranty</i>

Legal and Safety

Using the Instruction Manual

This manual must be read throughout before installing this electronic device. Do not lose these instructions - keep them safe. The most up to date instructions can be found on the Sterling Power website. Please refer to the latest instruction manual before contacting Sterling. At Sterling, we endeavour to include all of the product information that we can think of into the manual.

Installation of the electronic device must be carried out by a qualified and trained personnel only. The personnel must be familiar with the locally accepted guidelines and safety measures.

Sterling Power's warranty statement

A comprehensive warranty statement is provide at the back of the instruction manual. A comprehensive warranty statement can also be found on sterling-power.com.

Copyright and plagiarism

Copyright © 2018 Sterling Power. All rights reserved. Reproduction, transfer, distribution or storage of part or all of the contents of this document is strictly prohibited. If you wish to use all of this document, or excerpts from it, Sterling Power must be contacted.

Liability

Sterling Power can not accept liability for:

- consequential damage due to use of this device
- possible errors in the manuals and the results thereof

Device modification

Please do not modify the device unless you have been instructed to do so by Sterling Power, directly. Product modification shall be done at Sterling, when needed. Warranty shall be voided if personal attempts are made to modify the device, without Sterling's approval.

Use the inverter only:

- For DC to AC conversion.
- With fuses protecting the AC/DC cables.
- In a well ventilated, dry, dust-free and condensation free environment.
- When instruction manual has been read through.

Transport and storage

Ensure that the mains supply and battery leads are disconnected.

No liability can be accepted for damage in transit once equipment has been unpackaged. Store the product in a dry environment, between -20°C to 60°C.

Refer to the battery manufacturer's manual for information on transportation, stowage, charge rates, recharging and battery disposal.

General maintenance and repair

The device must be switched off during maintenance and all cables removed from the direct feed to or from the unit. It must also be protected against unexpected switching off. Remove battery connections and ensure unit is off. If repair is required, only use original parts.

General safety and installation precautions

WARNING: these units are heavy, do not lift unassisted.

- Check that your model is correct - 110V / 230V and 12V / 24V?
- The orientation of the unit it **not** critical.
- Place as close to the house / domestic batteries as possible.
- Ensure Inverter is off when installing.
- Disconnect AC wires whilst installing
- Connect AC output to Residual Circuit Breaker (RCD) and current overload trips.
- When installing the DC cables, connect to the inverter first, then via a fuse on the positive cable, connect both cables to the battery terminals.
- Sterling recommend Multi Core Tri rated AC cable.
- Install device in well ventilated space. Do not expose device to: Rain, snow, spray, moisture, pollution, condensation.
- Do not cover or obstruct ventilation openings.
- Device connects to common negative. Common negative must be earthed.
- In case of fire use a fire extinguisher suitable for electric fires.
- Ensure reverse polarity and short circuiting is avoided - to prevent damage to battery.
- Protect DC and AC wires with the appropriate sized fuse.
- Check cabling annually- fix where needed.
- Avoid contact with device with damp hands on DC side.
- Ensure the device is adequately and securely mounted to prevent the unit from displacement.
- Use a professional to install device.
- Select the correct battery chemistry profile before turning the unit on.
- Turn the unit on before turning on the AC appliances connect to it.

Battery safety

Excessive charge or discharge and high voltages can cause serious damage to batteries. Never exceed the recommended limits. If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters the eye(s), immediately flood the eye(s) with running cold water for 20 minutes and seek medical attention. Give extra care to not drop metal tools or jewellery on to the battery terminals as short circuiting can take place.

Refrain from charging battery up to 4 hours prior of installation to avoid the formation of explosive gases.

Safety Symbols



**CAUTION
WARNING**



EXPLOSION

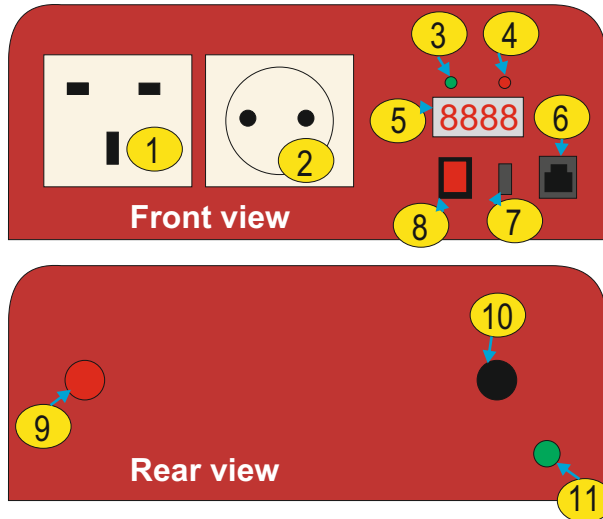
- **Example - WARNING. Never use the device in situations where there is danger of gas / dust EXPLOSION or potentially flammable products.**

Specifications

Model ->	SIB12(24)200	SIB(R)12(24)300	SIB(R)12(24)600	SIB(R)12(24)1000	SIB(R)12(24)1600	SIB(R)12(24)2200
Cont. Power (W)	200	300	600	1000	1600	2200
Peak Power (W)	200	300	600	1200	2000	3000
DC fuse (A)	30 (15)	50 (30)	80 (40)	150 (80)	200 (100)	300 (150)
Cable (mm2)	3.5 (2.5)	5.0 (3.5)	14.0 (8.0)	20.0 (10.0)	40.0 (20.0)	70.0 (35.0)
Input (VDC)	10.5V - 15.5V (21.0V - 31.0V)					
Output (VAC)	230VAC +/- 10%					
USB port	5V 2A					
Digital display	Input voltage and Power Output in Watts					
Output wave	Pure Sine Wave					
Distortion	<5%					
Efficiency	>85%					
No Load Quiescent Current	0.95A					
Low voltage alarr	11.0V (22.0V)					
Low voltage trip	10.5V (21.0V)					
High voltage trip	15.5V (31.0V)					

Option 1

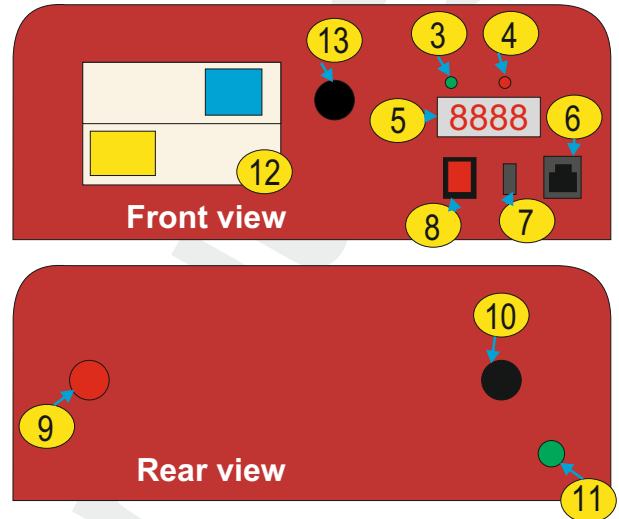
Standard inverter with dual sockets.
UK socket and Euro Schuko



- 1) UK socket
- 2) Euro socket
- 3) Power LED Green, **on** when inverter is Live.
- 4) Fault LED Red, if **on** there is a fault.
- 5) LED display
P = Power (W).
U = Voltage (input DC) = +/- 0.2V

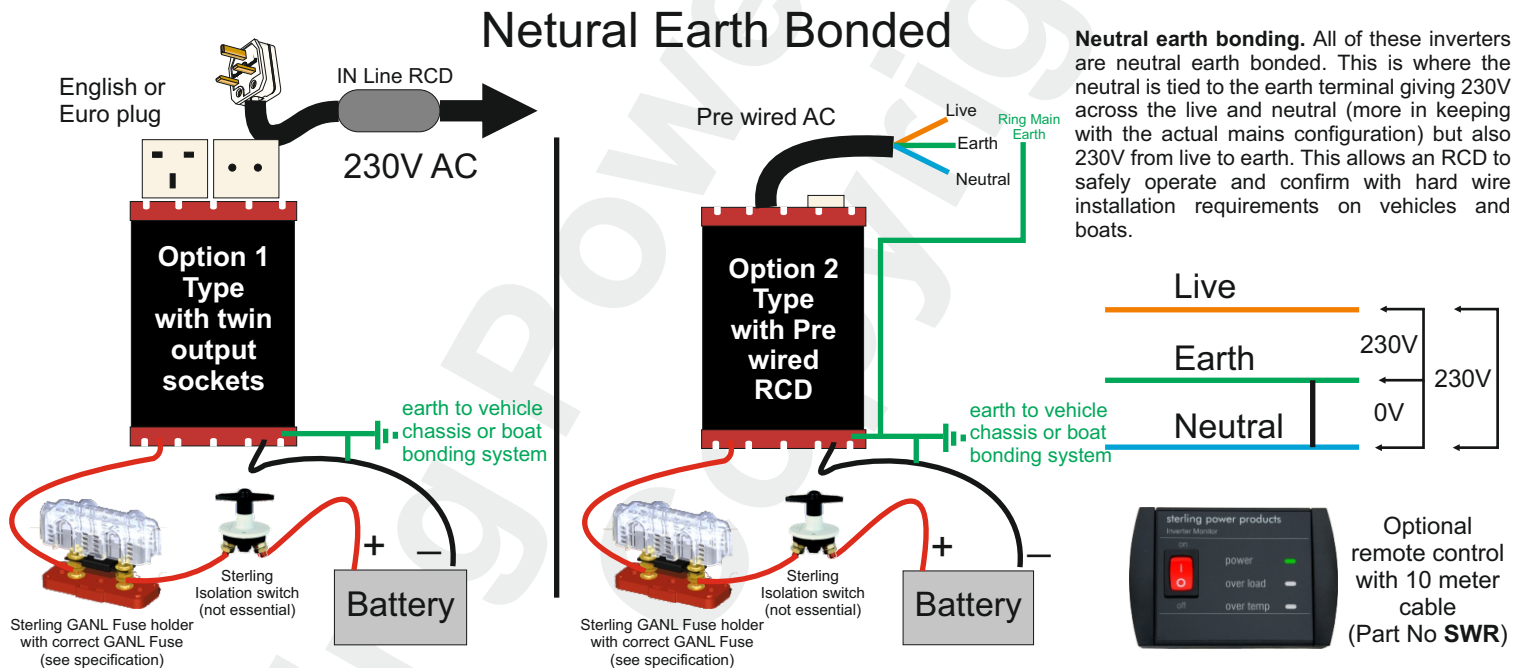
Option 2

Pre-fitted 30 mA RCD Model. AC cable Pre-wired



- 6) Remote control (optional)
- 7) USB charger
- 8) On / off (remote control)
- 9) Positive cable or positive connector in larger units
- 10) Negative cable or negative connector in larger units
- 11) Earth to chassis
- 12) Residual Current Breaker (earth trip)
- 13) Pre-wired AC output cable

Installation



Neutral earth bonding. All of these inverters are neutral earth bonded. This is where the neutral is tied to the earth terminal giving 230V across the live and neutral (more in keeping with the actual mains configuration) but also 230V from live to earth. This allows an RCD to safely operate and confirm with hard wire installation requirements on vehicles and boats.

All electrical installations should be carried out by a professional electrician, any doubts about installing this should be addressed to us as soon as possible. Do not install this unit if you are not competent to do so, high voltages are involved and have the potential to kill you. Ensure the inverter has the correct voltage (DC and AC) and the correct power (W) for your vehicle / boat before installing.

Installation for twin socket models:

- 1) Fit in a cool dry well ventilated space as close to the battery bank as possible.
- 2) Ensure at least 2 of the 5 mounting supports are screwed to the bulkhead.
- 3) Where cable is not supplied (1000-1600W units) or, cable requires extending, ensure the cable is large enough to deal with the cable runs.
- 4) Install DC cable fuse into each installation fuse size per unit in specification.
- 5) **It is good safety sense to use in conjunction with a RCD.**
- 6) Secure the unit in position, fit DC fuse and isolation switch (not essential) as required.
- 7) **Do not reverse the DC cables.** Connect the red cable to the positive terminal and the black cable to the negative terminal of the battery, reverse polarity could destroy the unit and would not be covered under warranty.

8) In the event of this unit being installed into a ring main or extension power circuit. The output voltage of this unit must never be on your AC system at the same time as the 230V external mains line. If the output voltage is to be used on a ring mains system, a suitable two-pole crossover switch must be used. Failure to do this shall result in the destruction of this unit even if switched off - this shall not be covered under warranty.

9) Only use products that are within the ability of the inverter to operate them, also, take into account overload requirements, e.g. fridges.

Installation for RCD version models - similar to twin socket:

This is a more dangerous product to install due to the 230V flying lead and should be installed by a professional electrical engineer. **Make sure the product is switched off and the RCD is also switched off. Ensure the naked AC fly lead is connected first before the DC. If the DC is connected this lead will become live if not switched off, this is high voltage AC and could kill.**

› Cable and Fuse sizes

Model	DC fuse (A)	DC Cable (mm ²)
SIB12(24)200	30 (15)	3.5 (2.5)
SIB(R)12(24)300	50 (30)	5.0 (3.5)
SIB(R)12(24)600	80 (40)	14.0 (8.0)
SIB(R)12(24)1000	150 (80)	20.0 (10.0)
SIB(R)12(24)1600	200 (100)	40.0 (20.0)
SIB(R)12(24)2200	200 (150)	70.0 (35.0)

Cable and fuse sizes are just recommendations. Every 3 metres double the thickness of the cable. Keep cable runs as short as possible. Fuses are recommended to protect the DC cabling, not to protect our inverter.

AC cable extension - use 1.0mm² three core flex. Same for each model.

› Inverter voltage thresholds

Input (VDC)	10.5V - 15.5V (21.0V - 31.0V)
Output (VAC)	230VAC +/- 10%
Low DC voltage alarm	11.0V (22.0V)
Low DC voltage trip	10.5V (21.0V)
High DC voltage trip	15.5V (31.0V)

› Faults

FAULT	LED status	Alarm	AC output	Reset procedure
Inverter on (no faults)	● On solid			N/A
Low input V warning	● On solid ● x1	on	on	charge up batteries to raise voltage - alarm stops
Low input V trip	● x1	on	off	charge up batteries to raise voltage - switch off then on
High input voltage	● x2	off	off	reduce input voltage - switch off then on
Overload / Short Circuit	● x3	off	off	reduce AC load / remove short - switch off then on
Over temp shutdown	● x4	on	off	Inverter temp must reduce - switch off then on

└ x = quick flash(es), then 2 second pause, then quick flash(es) - this continues until fault is ameliorated.

› Customer Service & Warranty

Your 100 % satisfaction is our goal. We realise that every customer and circumstance is unique. If you have a problem, question, or comment please do not hesitate to contact us. We welcome you to contact us even after the warranty and return time has passed.

Product Warranty:

Each product manufactured by Sterling Power comes with at least a 2 year limited factory warranty. Certain Products have a warranty period of time greater than 2 years. Each product is guaranteed against defects in material or workmanship from the date of purchase. At our discretion, we will repair or replace free of charge any defects in material or workmanship that fall within the warranty period of the Sterling Power product. The following conditions do apply:

- **The original receipt or proof of purchase must be submitted to claim warranty. If proof cannot be located a warranty is calculated from the date of manufacture.**
- **Our warranty covers manufacture and material defects. Damages caused by abuse, neglect, accident, alterations and improper use are not covered under our warranty.**
- **Warranty is null and void if damage occurs due to negligent repairs.**
- **Customer is responsible for inbound shipping costs of the product to Sterling Power either in the USA or England.**
- **Sterling Power will ship the repaired or warranty replacement product back to the purchaser at their cost.**

If your order was damaged in transit or arrives with an error, please contact us ASAP so we may take care of the matter promptly and at no expense to you. This only applies for shipping which was undertaken by

› Optional Remote Control (part no. SWR)



Remote control operation: Remove all AC power appliance from the output of the inverter. Switch the on/off switch on the main inverter to the off position. Ensure the remote control switch is in the off position. Insert the remote control unit into the remote socket on the front of the inverter. The switch on the remote control is now the one in charge (keep the local control switch off).

ProLight

our company and does not apply for shipping organised by yourself. Please do not throw out any shipping or packaging materials. All returns for any reason will require a proof of purchase with the purchase date. The proof of purchase must be sent with the returned shipment. If you have no proof of purchase call the vendor who supplied you and acquire the appropriate documentation.

To make a claim under warranty, call our customer care check telephone numbers on www.sterling-power.com or www.sterling-power-usa.com. We will make the best effort to repair or replace the product, if found to be defective within the terms of the warranty. Sterling Power will ship the repaired or warranty replacement product back to the purchaser, if purchased from us.

Please review the documentation included with your purchase. Our warranty only covers orders purchased from Sterling Power. We cannot accept warranty claims from any other Sterling Power distributor. Purchase or other acceptance of the product shall be on the condition and agreement that Sterling Power USA LLC and Sterling Power LTD shall not be liable for incidental or consequential damages of any kind. Some states may not allow the exclusion or limitation of consequential damages, so, the above limitations may not apply to you. Additionally, Sterling Power USA and Sterling Power LTD neither assumes nor authorizes any person for any obligation or liability in connection with the sale of this product. This warranty is made in lieu of all other obligations or liabilities. This warranty provides you specific legal rights and you may also have other rights, which vary from state to state. This warranty is in lieu of all other, expressed or implied.