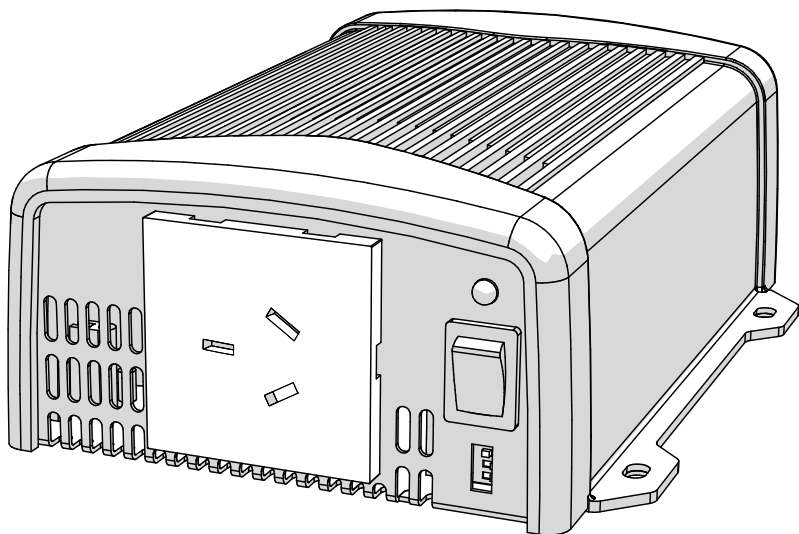




## RS Series 12V & 24V Inverters (350W model)



## RS SERIES INVERTERS (350W)

---

REDARC Pure Sine Wave Inverters produce a pure sine wave output. This means that the power output from a REDARC Pure Sine Wave Inverter is not only the same as the mains supply, it's often better!

### WARNINGS & SAFETY INSTRUCTIONS

---

**SAVE THESE INSTRUCTIONS** - This manual contains **IMPORTANT SAFETY INSTRUCTIONS** for the REDARC RS series 350W Pure Sine Wave Inverters.

**DO NOT OPERATE THE INVERTER UNLESS YOU HAVE READ AND UNDERSTOOD THIS MANUAL AND THE INVERTER IS INSTALLED AS PER THESE INSTALLATION INSTRUCTIONS. REDARC RECOMMENDS THAT THE INVERTER BE INSTALLED BY A SUITABLY QUALIFIED PERSON.**

#### **WARNING**

- 1. RISK OF ELECTRICAL SHOCK. DO NOT DISASSEMBLE THE INVERTER - THE INTERNAL CIRCUITRY CONTAINS HAZARDOUS VOLTAGES. ATTEMPTING TO SERVICE THE UNIT YOURSELF MAY RESULT IN ELECTRIC SHOCK OR FIRE AND WILL VOID THE UNIT WARRANTY.**
- 2. RISK OF ELECTRICAL SHOCK. DO NOT EXPOSE THE INVERTER TO RAIN, SNOW, SPRAY, BILGE OR DUST. DOING SO MAY RESULT IN DAMAGE TO THE INVERTER OR OTHER APPLIANCES INSTALLED IN THE SYSTEM OR RESULT IN ELECTRIC SHOCK OR FIRE.**
- 3. RISK OF ELECTRICAL SHOCK. OPERATION OF THE INVERTER WITHOUT A PROPER GROUND CONNECTION MAY RESULT IN AN ELECTRICAL SAFETY HAZARD. ENSURE PROPER GROUND CONNECTION IS MADE DURING INSTALLATION. FOR FIXED AND/OR TRANSPORTABLE (VEHICLE) INSTALLATIONS, INSTALL ACCORDING TO APPROPRIATE AS/NZS STANDARD.**
- 4. RISK OF ELECTRICAL SHOCK. BEFORE PROCEEDING, CAREFULLY CHECK THAT THE INVERTER IS NOT CONNECTED TO ANY BATTERIES AND THAT ALL WIRING IS DISCONNECTED FROM ANY ELECTRICAL SOURCES.**
- 5. DO NOT CONNECT THE OUTPUT TERMINALS OF THE INVERTER TO AN INCOMING AC SOURCE.**

#### **CAUTION**

1. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they are supervised or have been instructed on how to use the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
2. Do not operate the inverter with damaged or substandard wiring. Selecting the wrong cable or fuse size could result in harm to the installer or user and/or damage to the inverter or other appliances installed in the system. The installer is responsible for ensuring that the correct cable and fuse sizes are used when installing this inverter. Refer to section 2.2.4 for more information.
3. Ensure that all the DC connections are tight - torque to 2.8 Nm (1.5 ft-lbs). Loose connections could result in overheating and can be a potential hazard.
4. Some components in the inverter can cause arcs and sparks. Do not put batteries, flammable materials, or anything that should be ignition-protected around the inverter. Doing so may result in fire or explosion.

## WARNINGS AND SAFETY INSTRUCTIONS

---

5. Be extra cautious so as to reduce the risk of dropping a metal tool onto a vehicle battery. Doing so might cause the battery to spark or might short-circuit the battery or other electrical parts that may cause an explosion.
6. Remove personal metal items such as rings, bracelets, necklaces, and watches when working with a battery. A battery can produce a short-circuit current high enough to weld a ring or the like to metal, causing a severe burn.
7. If battery acid contacts your skin or clothing, remove the affected clothing and wash the affected area of your skin immediately with soap and water. If battery acid enters your eye, immediately flood the eye with running cold water for at least 10 minutes and seek medical assistance immediately.
8. NEVER smoke or allow a spark or flame in vicinity of battery. This may cause the battery to explode.
9. Batteries are capable of providing very large currents in the case of a short circuit. A fuse must be installed on the positive supply cable as close as practical to the battery. Failure to do so provides inadequate protection against fire in the case of a short circuit. Only use high quality copper cable and keep the cable length short, refer to section 2.2.4 for more information.

### **NOTICE**

1. Upon receipt, examine the box for damage. If you have found any damage on the box please notify the company you purchased this unit from.
2. Install the inverter in a well-ventilated area with reasonable clearance. Do not install the inverter in a zero-clearance compartment or obstruct the ventilation openings. Doing so may result in the inverter overheating and ultimately damage the inverter.
3. Depending on the user scenario, the AC output of the inverter may require a user installed breaker or fuse. In an AC output hardwire application, the AC socket will not be provided. The inverter incorporates AC short circuit protection.
4. Reverse Polarity connection will blow the internal fuse and may damage the inverter permanently and will void warranty.
5. Do not operate appliances that may feed power back into the inverter. Damage to the inverter may occur as a result.
6. RCDs may be fitted by a licenced electrician in installations using these inverters. These inverters, when installed according to the instructions in this manual, are categorised as EPB inverters. Neither active, nor neutral is referenced to ground and/or chassis within the inverter. An RCD will not trip when used with this inverter unless a (MEN) neutral to earth connection is implemented before the RCD. External connection of such should be determined as appropriate or not by the licenced electrician.
7. Ensure that the frequency output of the inverter matches the frequency requirements of all attached to the inverter. Attempting to use appliances that requires an AC frequency different to the inverter output may result in damage to your appliances.
8. All RS Series Inverters are suitable for indoor use only.

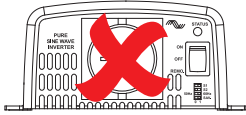
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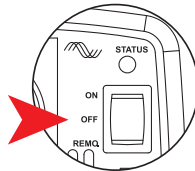
## 1.1 Quick Start Guide

- 1** Ensure no loads are connected to the Inverters AC Output.



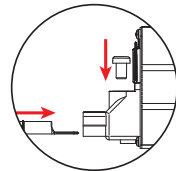
**Ensure all Loads are Disconnected**

- 2** Ensure that the Inverter Main Switch is set to the 'OFF' position.



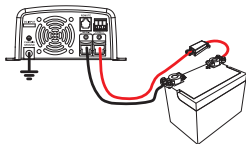
**Set Main Switch to 'OFF'**

- 3** Connect the DC cables to the Inverters DC Input Terminals.



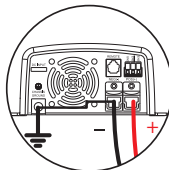
**Connect DC Cables**

- 4** Ensure that the cable is of adequate size and is protected by the correct sized fuse.



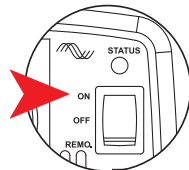
**Check cable and fuse size**  
(Refer section 2.2.4)

- 5** Connect Chassis Ground Terminal to Negative Input Terminal



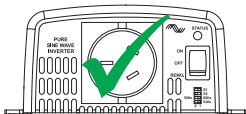
**Ensure unit is Grounded**

- 6** Switch the Inverter Main Switch to the 'ON' position.



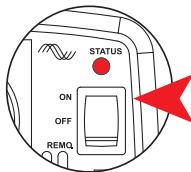
**Set Main Switch to 'ON'**

- 7** If the LED is 'Green' switch unit off & connect loads to the Inverter AC Output.



**Switch OFF and connect AC loads**

- 8** If the Inverter Status LED is not 'Green' please refer to section 2.1.3.



**Refer to section 2.1.3**

1

INTRODUCTION

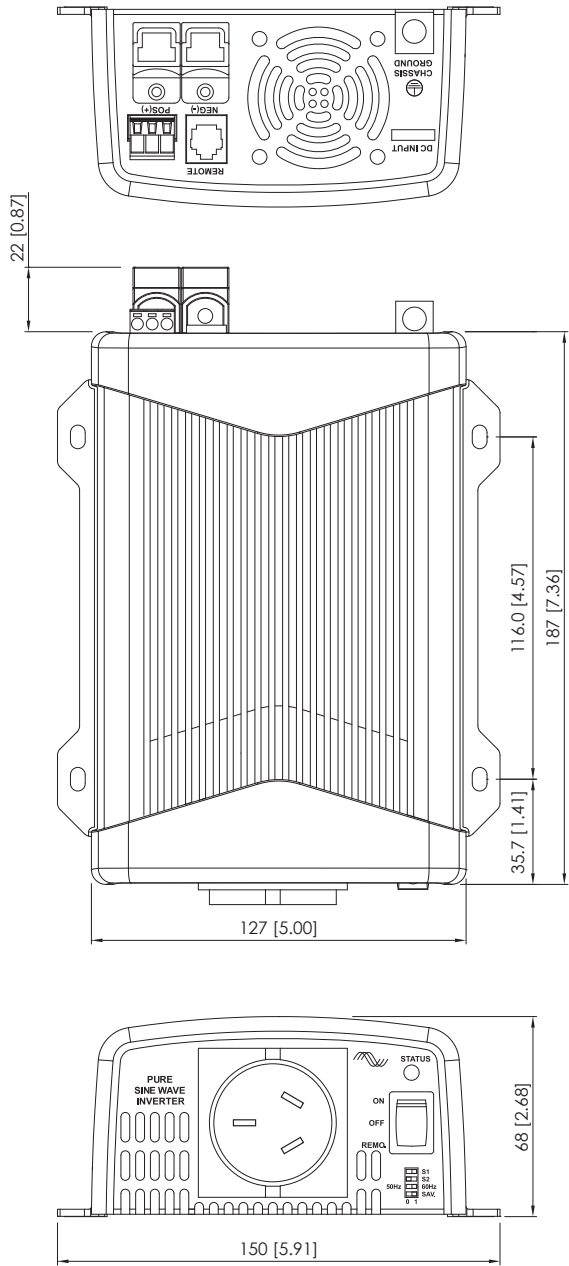
1.2

Specifications

|                                | R-12-350RS                                                                                                                                    | R-24-350RS   |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| Output Voltage                 | 200 / 220 / 230 / 240VAC ± 5%                                                                                                                 |              |
| Rated Power                    | 350W                                                                                                                                          |              |
| Max. Rated Input Current       | 44A                                                                                                                                           | 22A          |
| Surge Power                    | 700W                                                                                                                                          |              |
| Waveform                       | Pure Sine Wave (THD<3% @ VCD, linear load)                                                                                                    |              |
| Frequency                      | 50/60Hz ± 0.1%                                                                                                                                |              |
| Nominal Input Voltage          | 12VDC                                                                                                                                         | 24VDC        |
| Input Voltage Range            | 10.0~15.5VDC                                                                                                                                  | 20.0~31.0VDC |
| Efficiency (at rated VDC full) | 89%                                                                                                                                           | 90%          |
| No Load Power Consumption      |                                                                                                                                               |              |
| Power Saving mode              | <90mA                                                                                                                                         | <60mA        |
| No load standby                | <0.9A                                                                                                                                         | <0.5A        |
| Battery Low Shutdown           | 10V ± 0.25V                                                                                                                                   | 20V ± 0.5V   |
| Battery Low Alarm              | 10.5V ± 0.25V                                                                                                                                 | 21V ± 0.5V   |
| Battery Low Restart            | 12V ± 0.25V                                                                                                                                   | 24V ± 0.5V   |
| Battery High Alarm             | 15V ± 0.25V                                                                                                                                   | 30V ± 0.5V   |
| Battery High Shutdown          | 15.5V ± 0.25V                                                                                                                                 | 31V ± 0.5V   |
| Battery High Restart           | 14.5V ± 0.25V                                                                                                                                 | 29V ± 0.5V   |
| Protections                    | Overload / Short Circuit / DC Over or Under Voltage / Over Temp.                                                                              |              |
| Working Temperature            | -20°C~50°C (Derates to 60°C)                                                                                                                  |              |
| Storage Temperature            | -30°C~70°C                                                                                                                                    |              |
| Working Humidity               | Max 90% RH non-condensing                                                                                                                     |              |
| Safety & EMC                   | Certified EN 60950-1<br>Certified EN55022, EN 55024, EN 61204-3,<br>EN61000-3-2, -3-3, EN61000-6-1, -6-3,<br>IEC 61000-4-2, 3, 4, 5, 6, 8, 11 |              |
| Dimensions                     | 150x68x187 mm                                                                                                                                 |              |
| Weight                         | 1.6Kg                                                                                                                                         |              |
| Cooling                        | Load (53 ± 3%) and temperature (55 ± 5°C) control fan                                                                                         |              |
| Power Saving                   | If set - Active after 25 seconds with load < 20W                                                                                              |              |

1.3

Dimensions

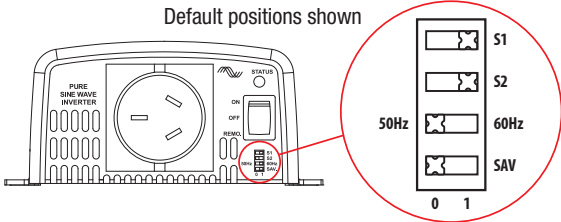


⚠ WARNING

RISK OF ELECTRICAL SHOCK. DO NOT DISASSEMBLE THE INVERTER - THE INTERNAL CIRCUITRY CONTAINS HAZARDOUS VOLTAGES. ATTEMPTING TO SERVICE THE UNIT YOURSELF MAY RESULT IN ELECTRIC SHOCK OR FIRE AND WILL VOID THE UNIT WARRANTY.

### 2.1 Front Panel Operation

The R-12-350RS and R-24-350RS are members of the most advanced line of mobile AC power systems available. To get the most out of the power inverter, it must be installed and used properly. Please read the instructions in this manual before installation and operating.



#### 2.1.1 Main Switch

The 3 stage switch is for turning ON or OFF and selecting Remote mode  
Set the power switch to the “ON” position. The inverter will perform self-diagnosis and the LEDs will display various colours.  
Set the power switch to the “OFF” position. The inverter will stop and all LEDs will turn off.

#### 2.1.2 Function Switch

Power saving, Output frequency and Output voltage settings can be controlled using the dipswitches found on the AC output end of the inverter.

##### 2.1.1.1 Output voltage

| Output Voltage | Switch 1 | Switch 2 |
|----------------|----------|----------|
| 200VAC         | 0        | 0        |
| 220VAC         | 0        | 1        |
| 230VAC         | 1        | 0        |
| 240VAC         | 1        | 1        |

##### 2.1.1.2 Output Frequency

| Frequency (Hz) | Switch 3 |
|----------------|----------|
| 50Hz           | 0        |
| 60Hz           | 1        |

##### 2.1.1.3 Power saving

| Power Saving Mode | Switch 4 |
|-------------------|----------|
| On                | 1        |
| Off               | 0        |

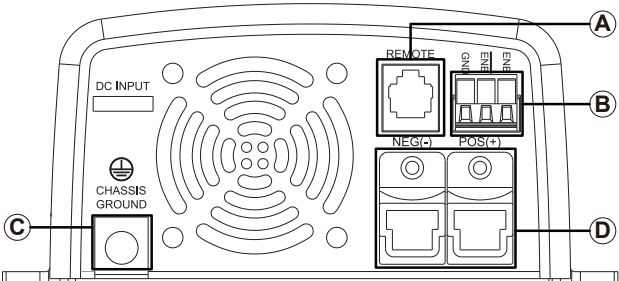
2.1.3

Indicator LED

| Status                                                                         | LED Signal                                                                                                  |
|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Power On/Normal                                                                | <div>Green</div>                                                                                            |
| Saving Mode<br>(Enters Power Save Mode after 30 seconds)                       | <div>Green</div> <div>Green</div> <div>Green</div>                                                          |
| Output over load (100-115%)<br>(Shutdown after 30 seconds and restart 4 times) | <div>Red</div>                                                                                              |
| Output Short Circuit<br>(Shutdown after 2 seconds and restart 4 times)         | <div>Red</div>                                                                                              |
| Over Temperature                                                               | <div>Red</div> <div>Red</div> <div>Red</div> <div>Red</div>                                                 |
| Shutdown High Battery                                                          | <div>Red</div> <div>Red</div> <div>Red</div> <div>Red</div> <div>Red</div> <div>Red</div>                   |
| High Battery                                                                   | <div>Orange</div> <div>Orange</div> <div>Orange</div> <div>Orange</div> <div>Orange</div> <div>Orange</div> |
| Low Battery<br>(5 short beeps every 15 sec)                                    | <div>Orange</div> <div>Orange</div> <div>Orange</div>                                                       |
| Shutdown Low Battery                                                           | <div>Red</div> <div>Red</div> <div>Red</div>                                                                |

2.2

Rear panel operation



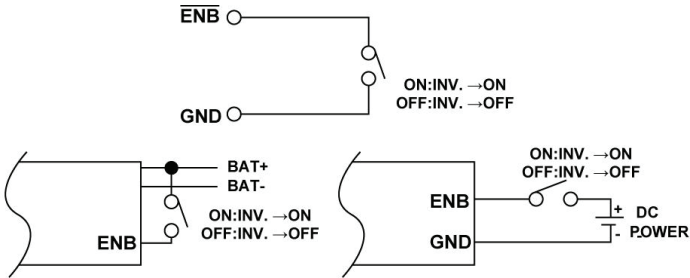
**2.2.1   Remote Port (RJ-11)   Ⓐ**

The RS Series inverter can be used with the REMOTE-RS remote controls. To enable use, the main switch on the inverter must be set to the “REMOTE” position.

| Pin Number | Signal Description (1) |                                    |
|------------|------------------------|------------------------------------|
| 1          | Reserved               | --                                 |
| 2          | GND                    | Same Polarity as Battery Negative  |
| 3          | Reserved               | --                                 |
| 4          | Reserved               | --                                 |
| 5          | RMT                    | Remote controller panel (positive) |
| 6          | Reserved               | --                                 |

**2.2.2   Remote Control Green Terminal   Ⓑ**

| Pin Number | Terminal Description |
|------------|----------------------|
| 1          | GND                  |
| 2          | Enable- (ENB)        |
| 3          | Enable+ (ENB)        |



**NOTICE**

- Before Installing - Make sure that the inverter main switch is at “OFF” position
- Before using the remote function, make sure the main switch is set to “REMOTE”
- Use 20-24AWG cable to connect the remote control terminals

**2.2.3   Chassis Ground   Ⓒ**

Always connect chassis ground to battery negative. Use 1.5mm<sup>2</sup> or more.

**⚠ WARNING**

**RISK OF ELECTRICAL SHOCK. OPERATION OF THE INVERTER WITHOUT A PROPER GROUND CONNECTION MAY RESULT IN AN ELECTRICAL SAFETY HAZARD. ENSURE PROPER GROUND CONNECTION IS MADE DURING INSTALLATION. FOR FIXED AND/OR TRANSPORTABLE (VEHICLE) INSTALLATIONS, INSTALL ACCORDING TO APPROPRIATE AS/NZS STANDARD.**

2.2.4

DC Input Connection

D

Prior to installation:

- DC Supply cables should be as short as possible (no longer than the values in table 2.2.4.1)
- The size of the cable should be thick enough to maintain a voltage drop of less than 2% when carrying the maximum input current. This will help prevent frequent low-input voltage warnings and shutdown.
- The following sizes of cables and fuses are recommended for connection of the supply batteries to inverter, see table 2.2.4.1 below for suitable cable sizing for your installation.
- Ensure lugs suitable to the selected cable size and to the inverter terminals are used, refer to table 2.2.4.2 below for suitable lug size with reference to your chosen cable size.

Table 2.2.4.1 - Recommended Cable & Fuse Sizing

| Cable Length | 12V Models                       |                                | 24V Models                       |                                |
|--------------|----------------------------------|--------------------------------|----------------------------------|--------------------------------|
|              | Cable Size mm <sup>2</sup> (AWG) | Inline Fuse Rating (A)<br>Midi | Cable Size mm <sup>2</sup> (AWG) | Inline Fuse Rating (A)<br>Midi |
| 0 - 1m       | 13 (6)                           | 50                             | 6 (10)                           | 30                             |
| 1 - 2m       | 13 (6)                           | 50                             | 6 (10)                           | 30                             |
| 2 - 3m       | 21 (4)                           | 50                             | 8 (8)                            | 30                             |
| 3 - 4m       | 27 (3)                           | 50                             | 8 (8)                            | 30                             |
| 4 - 5m       | x                                | x                              | 13 (6)                           | 30                             |
| 5 - 6m       | x                                | x                              | 13 (6)                           | 30                             |

Fuse ratings are suitable to these recommended cable sizes.

2.3

Protection features

| Model      | DC Input (VDC) |            |               |            |            | Over Temperature Protection |         |
|------------|----------------|------------|---------------|------------|------------|-----------------------------|---------|
|            | Over Voltage   |            | Under Voltage |            |            | Shut-down                   | Restart |
|            | Shutdown       | Restart    | Alarm         | Shutdown   | Restart    |                             |         |
| R-12-350RS | 15.5±0.25V     | 14.5±0.25V | 10.5±0.25V    | 10.0±0.25V | 12.0±0.25V | 83±5°C                      | 53±5°C  |
| R-24-350RS | 31.0±0.5V      | 29.0±0.5V  | 21.0±0.5V     | 20.0±0.5V  | 24.0±0.5V  |                             |         |

Note: The specifications are subject to change without notice

### 3.1 Mounting

The power inverter should be used in an environment that meets the following requirements:

1. Dry – Do not allow water to drip on or enter into the inverter.
2. Cool – Ambient air temperature should be between 0°C and 40°C, the cooler the better.
3. Safe – Do not install the inverter in a battery compartment or other areas where volatile fumes may exist, such as fuel storage areas or engine compartments.
4. Ventilated – Keep the inverter at a distance (at least 25mm) away from surrounding objects. Ensure the ventilation shafts on the rear and the bottom of the unit are not obstructed.
5. Dust – Do not install the inverter in a dusty environment where the dust can be inhaled into the unit when the cooling fan is working.
6. Fused – A fuse must be fitted between the battery and the Inverter.
7. Close to batteries – Avoid excessive cable lengths however the unit should not be installed within 300mm or in the same compartment as a battery.
8. Use the recommended wire lengths and sizes (see section 2.2.4).
9. Do not mount the inverter where it will be exposed to the gasses produced by the battery. These gasses are very corrosive, and prolonged exposure will damage the inverter.

#### **⚠ WARNING**

**RISK OF ELECTRICAL SHOCK. DO NOT EXPOSE THE INVERTER TO RAIN, SNOW, SPRAY, BILGE OR DUST. DOING SO MAY RESULT IN DAMAGE TO THE INVERTER OR OTHER APPLIANCES INSTALLED IN THE SYSTEM OR RESULT IN ELECTRIC SHOCK OR FIRE.**

### 3.2 Ventilation Fan

The fan is load controlled and will engage when the AC Power Consumption reaches a certain level. Ensure that the fan is not obstructed and is at a distance of at least 25mm from surrounding objects.

#### **NOTICE**

**Install the inverter in a well-ventilated area with reasonable clearance. Do not install the inverter in a zero-clearance compartment or obstruct the ventilation openings. Doing so may result in the inverter overheating and ultimately damage the inverter.**

**3.3      DC wiring connections**

**⚠ WARNING**

**RISK OF ELECTRICAL SHOCK. BEFORE PROCEEDING, CAREFULLY CHECK THAT THE INVERTER IS NOT CONNECTED TO ANY BATTERIES AND THAT ALL WIRING IS DISCONNECTED FROM ANY ELECTRICAL SOURCES.**

**DO NOT CONNECT THE OUTPUT TERMINALS OF THE INVERTER TO AN INCOMING AC SOURCE.**

DC supply cables should be kept as short as possible whilst still adhering to the above installation requirements (ideally less than 1.8m / 6ft). Cables should be of an adequate size to handle the required currents.

Cables which are not of adequate size (too thin) will result in Voltage drop and poor performance of the inverter (such as poor surge capability, low-input voltage warnings and shutdowns). As the supply cable increases in length or reduces in size (gets narrower) the voltage drop will increase.

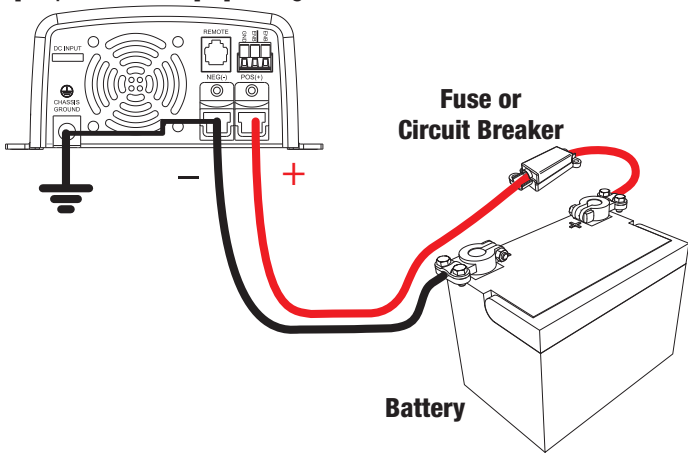
**⚠ CAUTION**

**Batteries are capable of providing very large currents in the case of a short circuit. A fuse must be installed on the positive supply cable as close as practical to the battery. Failure to do so provides inadequate protection against fire in the case of a short circuit. Only use high quality copper cable and keep the cable length short, refer to section 2.2.4 for more information.**

**NOTICE**

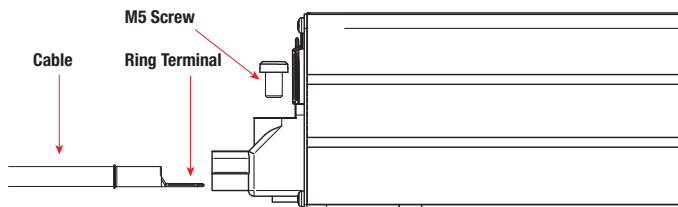
**Reverse polarity connection will blow the internal fuse and may cause permanent damage to the inverter.**

Before making the DC wiring connections, the main switch (page 7) must be set to “OFF”. Connect the DC input terminals to an appropriate battery supply or other DC power source. Power source [ + ] is positive and [ - ] is negative.



#### ⚠ CAUTION

Ensure that all the DC connections are tight - torque to 2.8 Nm (1.5 ft-lbs). Loose connections could result in overheating and can be a potential hazard.



#### ⚠ CAUTION

Do not operate the inverter with damaged or substandard wiring. Selecting the wrong cable or fuse size could result in harm to the installer or user and/or damage to the inverter or other appliances installed in the system. The installer is responsible for ensuring that the correct cable and fuse sizes are used when installing this inverter. Refer to section 2.2.4 for more information.

### 3.4 AC Safety Grounding

#### NOTICE

Depending on the user scenario, the AC output of the inverter may require a user installed breaker or fuse. The inverter incorporates AC short circuit protection.

RCDs may be fitted by a licenced electrician in installations using these inverters. These inverters, when installed according to the instructions in this manual, are categorised as EPB inverters. Neither active, nor neutral is referenced to ground and/or chassis within the inverter. An RCD will not trip when used with this inverter unless a (MEN) neutral to earth connection is implemented before the RCD. External connection of such should be determined as appropriate or not by the licenced electrician.

The AC output ground wire should be connected to the grounding point of the connected loads (for example, a distribution panel ground bus). If in doubt, consult a licensed electrician.

#### Residual Current Devices (RCD)

Certain installation codes and/or government regulations requiring the installation of an RCD must be done by a licensed electrician.

### 3.5 Maintenance

Very little maintenance is required to keep the inverter operating correctly. The exterior of the inverter should be cleaned periodically with a damp cloth to prevent accumulation of dust and dirt. At the same time, tighten the screws on the DC input terminals. Turn the unit OFF before cleaning.

# 4 TWO YEAR PRODUCT WARRANTY

Over the last three decades our company has established a reputation as the power conversion specialist.

A 100% Australian-owned company, we have met the needs of customers in transport and other industries through exciting, innovative thinking.

We believe in total customer satisfaction and practice this by offering our customers:

- Technical advice free of jargon and free of charge
- Prompt turnaround of orders throughout Australia and globally
- Friendly, personalised, professional service and product support

In the unlikely event that a technical issue arises with a REDARC product, customers are encouraged to initially contact the REDARC Technical Support Team on (08) 8322 4848 or [power@redarc.com.au](mailto:power@redarc.com.au) for prompt and efficient diagnosis and product support.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

The benefits of this Warranty are in addition to other rights and remedies available at law in respect of the Products and shall not derogate from any applicable mandatory statutory provisions or rights under the Australian Consumer Law.

REDARC Electronics Pty Ltd and the REDARC Trust trading as REDARC Electronics ("REDARC") offers a warranty in respect of its Products where the Products are purchased from an authorised distributor or reseller of REDARC by a person ("Purchaser"), on the terms and conditions, and for the duration, outlined below in this document ("Warranty").

1. In this Warranty, the term **Products** means:

- 1.1 all products manufactured or supplied by REDARC (excluding its solar products which are covered by REDARC's Solar Product Warranty); and
- 1.2 any component of or accessory for any product in clause 1.1 manufactured or supplied by REDARC.

**Offer and duration of product warranties**

2. REDARC warrants that its Products will be free, under normal application, installation, use and service conditions, from defects in materials and workmanship affecting normal use, for **2 years** from the date of purchase (**Warranty Period**).
3. Where a Product malfunctions or becomes inoperative during the Warranty Period, due to a defect in materials or workmanship, as determined by REDARC, then subject to further rights conferred by the Australian Consumer Law on the Purchaser, REDARC will, in exercise of its sole discretion, either:
  - 3.1 repair the defective Product;
  - 3.2 replace the defective Product; or
  - 3.3 provide a refund to the Purchaser for the purchase price paid for the defective Product,without charge to the Purchaser.
4. The warranty given by REDARC in clause 3 covers the reasonable costs of delivery and installation of any repaired or replaced Products or components of Products to the Purchaser's usual residential address notified to REDARC, together with the reasonable costs of removal and return of any Products determined by REDARC to be defective.
5. If the Purchaser incurs expenses of the nature referred to in clause 4 in the context of making a claim pursuant to this Warranty that is accepted by REDARC, the Purchaser will be entitled to claim for reimbursement of those expenses which REDARC determines, in exercise of its sole discretion, to be reasonably incurred, provided that the claim is notified to REDARC in writing at the postal address or email address specified in clause 21 and includes:
  - 5.1 details of the relevant expenses incurred by the Purchaser; and
  - 5.2 proof of the relevant expenses having been incurred by the Purchaser.

**Exclusions and limitations**

6. This Warranty will not apply to, or include any defect, damage, fault, failure or malfunction of a Product, which REDARC determines, in exercise of its sole discretion, to be due to:
  - 6.1 normal wear and tear or exposure to weather conditions over time;
  - 6.2 accident, misuse, abuse, negligence, vandalism, alteration or modification;
  - 6.3 non-observance of any of the instructions supplied by REDARC, including instructions concerning installation, configuring, connecting, commissioning, use or application of the Product, including without limitation choice of location;
  - 6.4 failure to ensure proper maintenance of the Product strictly in accordance with REDARC's instructions or failure to ensure proper maintenance of any associated appliances or machinery;
  - 6.5 repairs to the Product that are not strictly in accordance with REDARC's instructions;
  - 6.6 installation, repairs or maintenance of the Product by, or under the supervision of, a person who is not a qualified auto electrician or technician, or if non-genuine or non-approved parts have been fitted;
  - 6.7 faulty power supply, power failure, electrical spikes or surges, lightning, flood, storm, hail, extreme heat, fire or other occurrence outside the control of REDARC;
  - 6.8 use other than for any reasonable purpose for which the Product was manufactured;
  - 6.9 any indirect or incidental damage of whatever nature outside the control of REDARC.
7. Warranty claims in respect of a Product must be made in writing to REDARC at the postal address or email address specified in clause 21 within the Warranty Period. Such claims must include the following:
  - 7.1 details of the alleged defect or fault and the circumstances surrounding the defect or fault;
  - 7.2 evidence of the claim, including photographs of the Product (where the subject of the claim is capable of being photographed);
  - 7.3 the serial number of the Product, specified on the label affixed to the Product; and
  - 7.4 proof of purchase documentation for the Product from an authorised distributor or reseller of REDARC, which clearly shows the date and place of purchase.The return of any Products without the prior written instructions of REDARC will not be accepted by REDARC.

8. Without limiting any other clause in this Warranty, REDARC has the right to reject any Warranty claim made by a Purchaser pursuant to this Warranty where:
  - 8.1 the Purchaser does not notify REDARC in writing of a Warranty claim within the Warranty Period;
  - 8.2 the Purchaser does not notify REDARC in writing of a Warranty claim within 1 month of becoming aware of the relevant circumstances giving rise to the claim, so that any further problems with the Product are minimised;
  - 8.3 the serial number of the Product has been altered, removed or made illegible without the written authority of REDARC;
  - 8.4 the Purchaser is unable to provide proof of purchase documentation in accordance with clause 7.4 or evidence that the Product was properly installed and removed (if relevant), and that proper maintenance has been performed on the Product, by, or under the supervision of, a qualified auto electrician or technician, in accordance with the instructions of REDARC.
9. If the Product is found to be working satisfactorily on return to REDARC or upon investigation by REDARC, the Purchaser must pay REDARC's reasonable costs of testing and investigating the Product in addition to shipping and transportation charges. Where REDARC is in possession of the Product, the Product will be returned to the Purchaser on receipt of the amount charged.
10. Any replaced Products or components of Products shall become the property of REDARC.
11. REDARC may, in exercise of its sole discretion, deliver another type of Product or component of a Product (different in size, colour, shape, weight, brand and/or other specifications) in fulfilling its obligations under this Warranty, in the event that REDARC has discontinued manufacturing or supplying the relevant Product or component at the time of the Warranty claim, or where such Product or component is superior to that originally purchased by the Purchaser.

**Other conditions of Warranty**

12. If the Purchaser acquired a Product for the purpose of resupply, then this Warranty shall not apply to that Product.
13. In particular, the sale of a Product via an online auction, online store or other internet website by a party that is not an authorised distributor or reseller of the Product will be deemed to be a resupply within the meaning of the Australian Consumer Law and will render this Warranty void, as REDARC has no control over the storage, handling, quality or safety of Products sold by such persons.
14. A Purchaser shall only be entitled to the benefit of this Warranty after all amounts owing in respect of the Product have been paid.
15. While REDARC warrants that the Products will be free from defects in materials and workmanship in the circumstances set out in this Warranty, to the maximum extent permitted by law REDARC does not warrant that the operation of the Products will be uninterrupted or error-free.
16. To the maximum extent permitted by law, REDARC's determination of the existence of any defect and the cause of any defect will be conclusive.
17. Spare parts or materials for the Products are guaranteed to be available for a period of at least 2 years after purchase of the Products.
18. The agents, officers and employees of any distributor or reseller of the Products and of REDARC are not authorised to vary or extend the terms of this Warranty.
19. REDARC shall not be responsible or liable to the Customer or any third party in connection with any non-performance or delay in performance of any terms and conditions of this Warranty, due to acts of God, war, riots, strikes, warlike conditions, plague or other epidemic, fire, flood, lightning, hurricane, changes of public policies, terrorism and other events which are beyond the control of REDARC. In such circumstances, REDARC may suspend performance of this Warranty without liability for the period of the delay reasonably attributable to such causes.
20. If a clause or part of a clause in this Warranty can be read in a way that makes it illegal, unenforceable or invalid, but can also be read in a way that makes it legal, enforceable and valid, it must be read in the latter way. If any clause or part of a clause in this Warranty is illegal, unenforceable or invalid, that clause or part is to be treated as removed from this Warranty, but the rest of this Warranty is not affected.

**REDARC's contact details**

21. REDARC's contact details for the sending of Warranty claims under this Warranty are:

REDARC Electronics Pty Ltd  
23 Brodie Road (North), Lonsdale SA 5160  
Email: [power@redarc.com.au](mailto:power@redarc.com.au)  
Telephone: +61 8 8322 4848



**Free technical assistance!**

please contact

REDARC Electronics

23 Brodie Road North, Lonsdale SA

(08) 8322 4848

[power@redarc.com.au](mailto:power@redarc.com.au)

[www.redarc.com.au](http://www.redarc.com.au)

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