

Chapter 1 Installation



This product should be installed by a qualified electrician.

1.1 Box Contents

- Super Solar Inverter (SSL series)
- USER MANUAL
- Bag Containing connection items, ie:
 - Four terminals and casings
 - One solar connectors and Two terminals

1.2 Location

The product must be installed in a dry and well-ventilated area, as close as possible to batteries. There should be a clear space of at least 20 cm around the appliance for cooling.



Excessively high ambient temperature will result in the following

- Reduced service life
- Reduced charge current
- Reduced peak capacity or shutdown of the inverter

Never position the appliance directly above the batteries.

Vertical SSL series is suitable for wall mounting. The back and the bottom of the enclosure has holes for wall mounting purposes, read page VIII and IX. Horizontal SSL series is suitable for table mounting. The bottom of the enclosure has the holes for table mounting purposes, read page X.

The appliance can be mounted horizontally as well as vertically; vertical mounting is preferable. The vertical position offers optimum cooling.



The interior of the product must remain accessible after installation. Ensure the AC and DC input cables are fitted with fuses and circuit breakers. Try and keep the distance between the product and battery to a minimum in order to minimize cable voltage losses.



For safety purpose, this product should be installed in a heat-resistant environment if it is used with equipment where a substantial amount of power is to be converted. You should prevent the presence of e.g. chemicals, synthetic components, curtains or textiles, etc. in the immediate vicinity.

1.3 Requirements

- Screwdrivers for removing the lower-front panel and connecting AC loads.

- 2 battery cables (maximum length 6 meters)
- Including battery terminals and cable ends.
- Insulated box spanner (13 mm) for securing the DC terminal nuts.
- Three-wire cable for AC cabling.

1.4 Connection of Battery Cables

In order to fully utilize the full capacity of the product, batteries with sufficient capacity and battery cables with sufficient cross section should be used, please see table:

Model Item	KI-1500SSL-12V	KI-1500SSL-24V	KI-3000SSL-12V	KI-3000SSL-24V
Recommended battery capacity (Ah)	200~700	100~400	400~1200	200~700
Recommended cross section (mm ²)(0~6m)	50 mm ²	38 mm ²	80 mm ²	50 mm ²

Remark: Internal resistance is the important factor when working with low capacity batteries. Consult your supplier.

Procedure:

Proceed as follows to connect the battery cables:



Use an insulated box spanner in order to avoid shorting the battery.

Avoid shorting the battery cables:

- Undo the four screws at the lower-front panel of the enclosure and remove the panel.
- Connect the battery cable: the + (red) on the right and the – (black) on the left. Please see page 3-4 and 3-5.
- Don't reverse the (+) and (-) of the battery. This may cause internal damage.
- Tighten the connections after positioning the fastening items supplied with product.
- Secure the nuts tightly in order to reduce the contact resistance as much as possible.

1.5 Connection of AC Cabling



The enclosure must be grounded for safety purpose. An earth screw has been fitted at the bottom side of the enclosure.

The terminal block can be found at lower-front panel of the enclosure: The shore or mains (AC IN) cable must be connected to AC IN terminals, use a three-wire cable and a cross section of 4~10 mm².

Procedure:

Proceed as follows to connect the AC cables.

- The AC output cable can be connected directly to terminal block containing the word “AC OUT”. The terminal points are indicated clearly. From left to right: “G” (earth), “N” (neutral), and “L” (phase).
- The AC input cable can be connected to the terminal block containing the word “AC IN”, the terminal points are indicated clearly from left to right “L” (phase), “N” (neutral), and “G” (earth).



The current which is switched through to the output (AC OUT) is not fused. External fuses or current limiters have to be installed.

1.6 Optional Connections

A number of operational connections are possible:

1.6.1 Second Battery

The “SSL series” has a connection for charging a starter battery.

For connection, see page 3-4 and 3-5.

1.6.2 Voltage Sense

Two sense wires may be connected to compensate possible battery cable losses during charging. Use wires of at least 0.75 mm². For connection, see page 3-4 and 3-5.

1.6.3 Battery Temperature Sensor (BTS-3)

The battery temperature sensor supplied with the product may be used for temperature compensated charging, see page 3-4 and 3-5.

The sensor is insulated and must be mounted on the batteries minus pole.

1.6.4 3 Sets of Auxiliary Relay (RY1, RY2, RY3) Output

The “SSL series” provides 3 sets of Auxiliary Relays for users to connect to other appliances or to output the alarm signals. 3 sets of relays can be programmed for respective function. (E Group Constants) and can be practically applied which is one of the greatest features.

1.7 Grounding

When the input voltage of the SSL series is not switched through, the neutral of “AC OUT” is connected to ground by means of a relay. This function can be disabled by constant B2-07 (B2-07=0 Disconnect)

1.8 Remote Control Panel (RCP-3)

The product can be operated remotely from remote port with the aid of a remote control panel. For connection of a remote control panel, see page 3-1.

Note: The display panel and operation flow of the remote control panel is exactly the same as the upper-front display panel.