Congratulations you have purchased one of the most advanced solar/ battery monitoring systems in the world. This high quality power system will give you many hours of enjoyment and light. Please read the manual carefully to understand your system and get the maximum benefits from your system.

Installation Instructions:

Contents of the box.

Inside you will find the following:

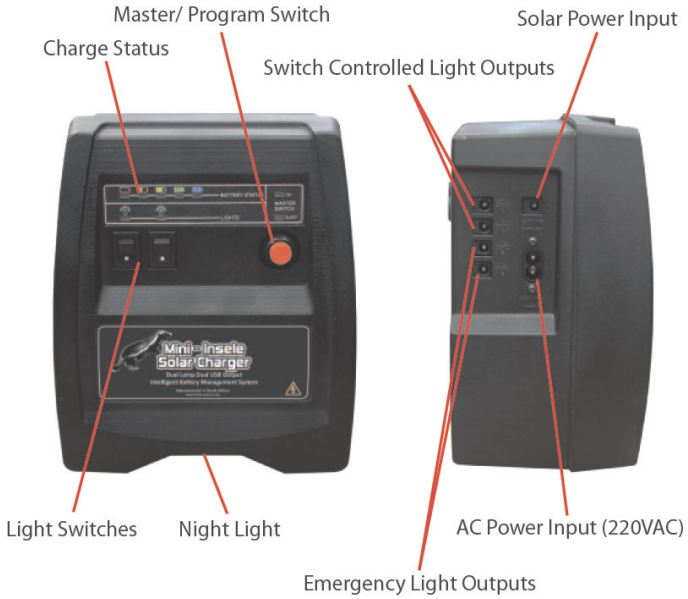
- 1x Mini-Insele Unit
- 2x LED Home Lights
- 1x Installation Kit
- 1x Power Cord

Installing the Mini-Insele Unit

The Mini-Insele Unit should be placed in an easily accessible area where the power cord or cord from the optional solar panel and lights can reach. The area should be cool, not in direct sunlight or be exposed to water. (rain, steam, damp etc.)

System Operation

The following diagrams illustrate all cable connection points, switches and mounting points.



Blue " " light flashing indicates that the battery is being charged.
Green " " light on indicates that the battery is fully charged.
Yellow " " light flashing indicates that the battery is three quarters charged.
Amber " " light flashing indicates that the battery is at half charge.
Red " " light flashing indicates that the battery is almost flat/ empty.

Note: It is normal for the system to fluctuate between different charge levels indication.

Each light switch has it's own indication light, if the white light is on it means the lamp output 1 & 2 are live. Lamp switches and outputs are marked 1 to 4 where 1 & 2 are user selectable (via the switches) and 3 & 4 are automatic back up lights, which trigger on normal power failure.

USB ports have a 2A max output (2x 1A or 1x 2A) and are compatible with most major cellphone and tablet brands that charge via a USB cable.

Cable Routing

Route the power cord from the power outlet to the Mini-Insele Unit.
The various lights will be routed from the Mini-Insele Unit to their needed positions.
Cables must have a drip loop before connecting to the unit to avoid condensation entering the unit along the cable.

Other devices such as cellphones and tablets can be plugged directly into the unit for charging.

Be careful not to break or bundle the cables as this can lead to electricity loss and shorts causing a system failure.

Functions

- The unit has a **AUTO-ON** function on output 3 & 4, this means that the unit will automatically turn on when normal power is lost, unless it is **SLEEP MODE**.
- To turn **ON** the unit press the power button once.
- To turn **OFF** the unit press the power button once (function does not operate when in backup lighting mode).
- To turn **OFF** the backup lights on output 3& 4, enter **SLEEP MODE** however this will turn off the entire system. To enter **SLEEP MODE**, press the power button for 4 seconds. The sleep mode lamp will flash, and after 2 minutes the unit will shut down and enter **SLEEP MODE.**
- To exit **SLEEP MODE** before the unit shuts down hold down the power button for 4 seconds.
- **DUAL MODE LED LAMPS** Switch on the light once for **FULL BRIGHTNESS**, flick the switch off and on again to enter **DIM** mode. Flick the switch off and on again to return to **FULL BRIGHTNESS**.

Warnings

- Do not allow any liquids to spill on the battery charger.
- Note that this unit contains no user serviceable parts and disassembly will void your warranty.
- Do not connect any 220V AC appliances to the charger (eg kettles, stove, iron, fridge)
- Do not connect any other power source to the input except for the compatible AC/DC (18-22V 2A) PSU adapter (input DC ONLY!) or optional Solar Panel.
- 12VDC System ONLY, no other voltages allowed
- Do not cut, join or extend the supplied cables.
- Keep the battery control unit away from direct heat eg stove, candles
- Do not use battery pack outside where it is exposed to direct sunlight, wind or rain.

Testing and Troubleshooting

The system should work as follows:

- When the power cord is plugged in and normal power is available the charge LED should be on.
- When the battery is fully charged and the power cord is unplugged or normal power is not available the USB ports and lamps will remain on.

Should you be experiencing any problems please follow the steps below:

- Check all connections to ensure that they are secure and free from debris.
- If none of the indicating lights are lit, the system may have gone into battery protection mode and has shut down. Please recharge the system to restore full functionality.
- If all instructions are done as per this manual and the unit is still not functioning please contact your installer.

Maintaining the System

The system is low maintenance. However please take note of the following:

- The batteries expected life span is 3 years, with proper care is can last up to 7 years. Should the battery stop functioning correctly please contact the unit supplier to find out where to buy a replacement battery at www.insele-solar.co.za. Replace the battery in the Backup Light Unit. Remember to disconnect the PSU! Be aware that abuse of the system will shorten the battery life span.

Warranty

The Mini-Insele Unit has a 24 month warranty.

FAQ

Q: What Battery is supplied with this kit?
A: A 12V 7.2AH AGM battery (Long Life)

Q: When will the Blue indicating light illuminate?
A: When the power cord is plugged in and normal power is available.

Q: Will the Mini-Insele overcharge my battery?
A: No, the charge controller ensures that a steady charge is supplied to the battery and will not overcharge the battery.

Q: Can the battery be over discharged and damaged during normal use?
A: No, the charge controller monitors the battery and if it reaches the minimum allowable level it will disengage the battery to protect it from damage.

Q: How long does the battery last?
A: The battery will last in excess of 12 hours from full charge with 2 lamps burning at full brightness.

Q: How long does the battery take to charge?
A: The battery take approximately 5 hours to charge fully

Installed by:

Name:_____

Tel: _____

Date: _____

Mini - Insele Solar Charger

Dual Lamp Dual USB Output
Intelligent Battery Management System

Manufactured in South Africa
www.insele-solar.co.za

Installation Instructions and Operations Manual