

English



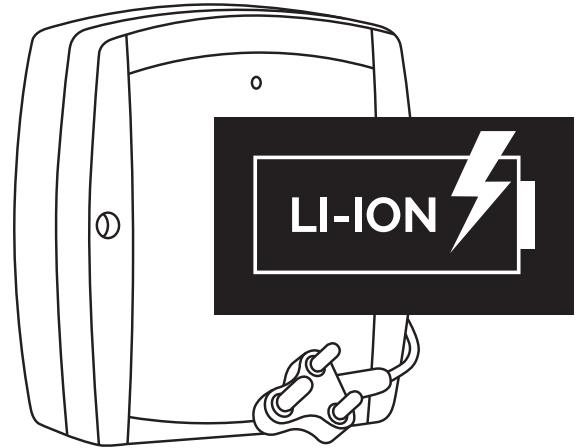
**Installation Instructions -  
For Service Persons Only**

**Model No: 3A\_LITHIUM**

**Product Description**

The device is a 12VDC-14VDC Power-supply charger unit designed to charge 12.8VDC 6AH & 8AH LITHIUM LIFE-PO4 batteries.

This unit can also be used in Emergency lighting applications or isolated battery back-up installations.



**Features**

- Digitally controlled current limited 2.4A / 1.8A output setable
- Jumper selectable Isolated output or Constant output
- Low voltage battery cut off below 10VDC
- AC Fail trigger output switches with a + Positive output
- Low battery trigger output below 11.6VDC
- Over Voltage cutoff protection above 15VDC
- 3A Resettable Fuse protection on DC output.
- Safety Fuse protection on AC input.
- 50mA Quiescent current on power failure.
- ABS UL94 HB flame resistant plastic enclosure.

**Technical Specifications:**

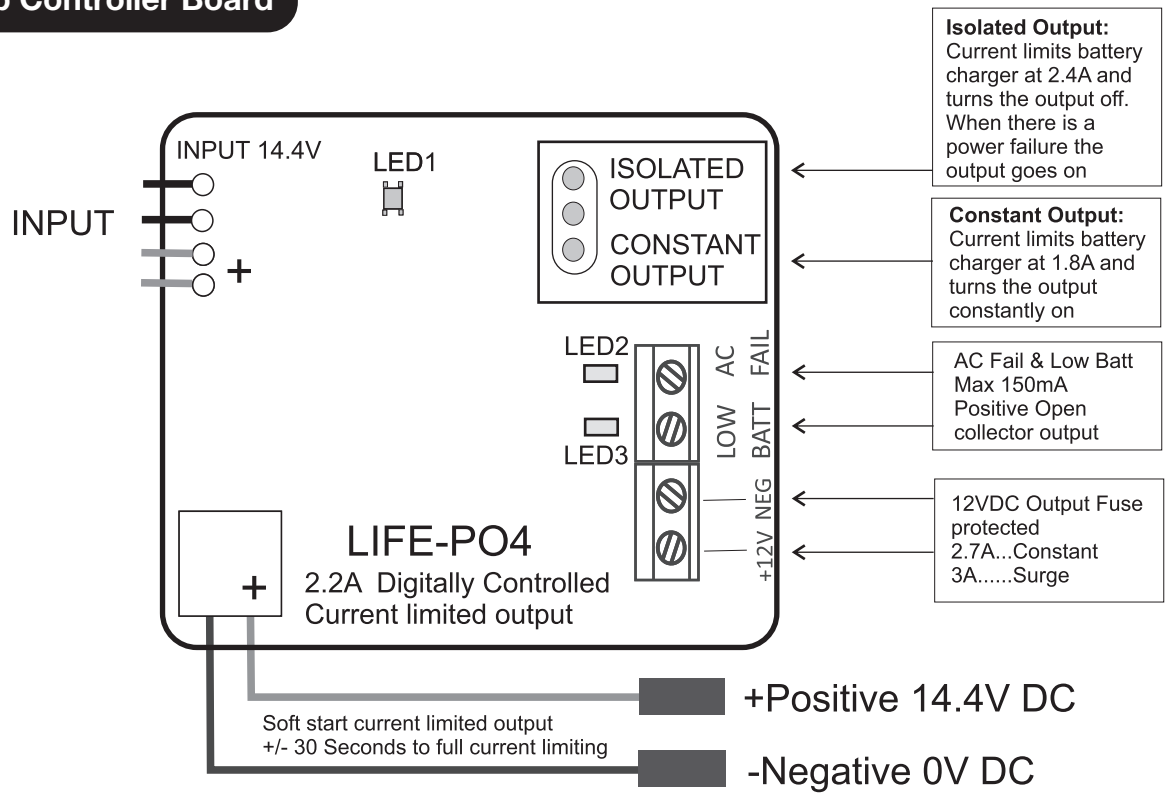
Model:	3A_LITHIUM
Housing colour and material:	White ABS
Input Voltage range:	110V - 240VAC 50Hz 0.5A
Output Voltage range setable:	12VDC - 15VDC
Charge Current:	1.8A / 2.4A @ 14.4VDC
Operating outside Temperature:	-3°C to 49°C
Dimension (lxbxh)	200 x 180 x 80mm
Gross weight:	0.805Kg

**Warranty**

This product is sold subject to our standard warranty conditions and is warrantied against defects in workmanship for a period of 2 years.

**Customer Support line: +2711 462 5101 | E-mail: technical@sherlotronics.co.za**

# Top Controller Board

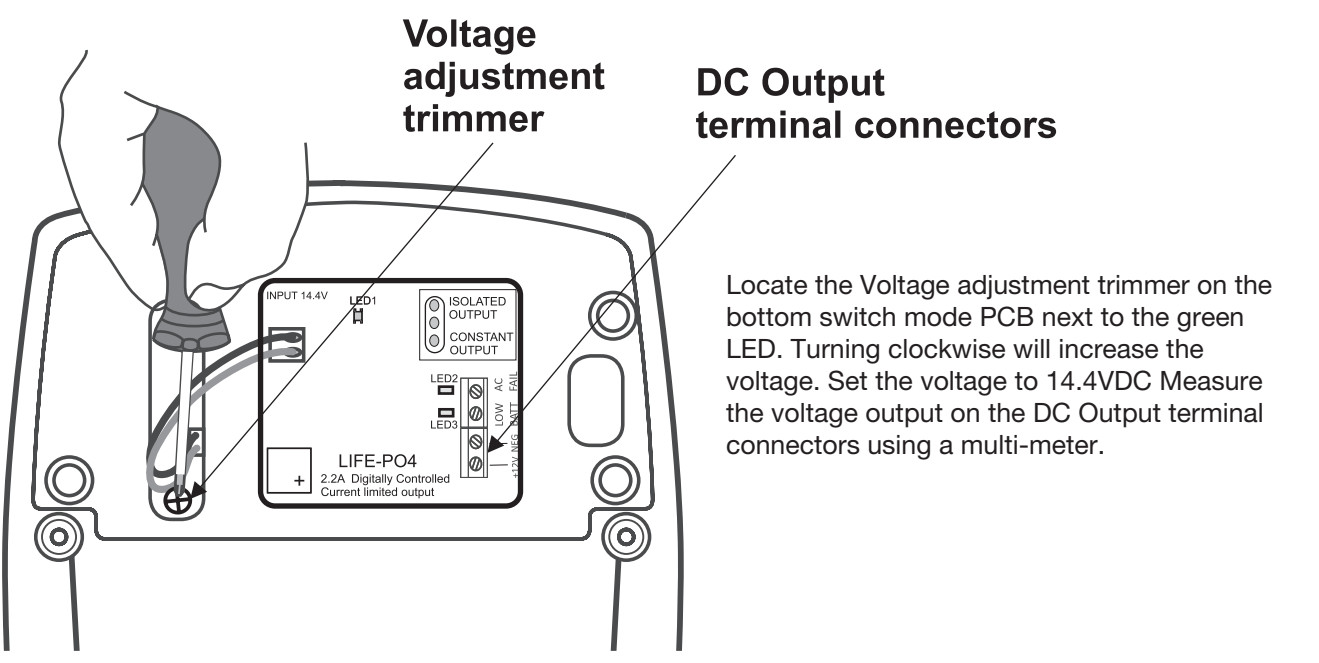


**i NOTE:**

Before connecting the Lithium battery, plug the unit into mains. Using a voltage meter measure volts across the Red (+) and Black (-) battery wires to check that the charge voltage is between 14.3VDC - 14.5VDC. The recommended battery charge voltage for LIFE-PO4 is 14.4VDC.

Disconnect Mains power before wiring up the equipment to the unit.

The unit will create slight internal heat on all components including its battery. Ensure that the unit has adequate ventilation when selecting the installation location.

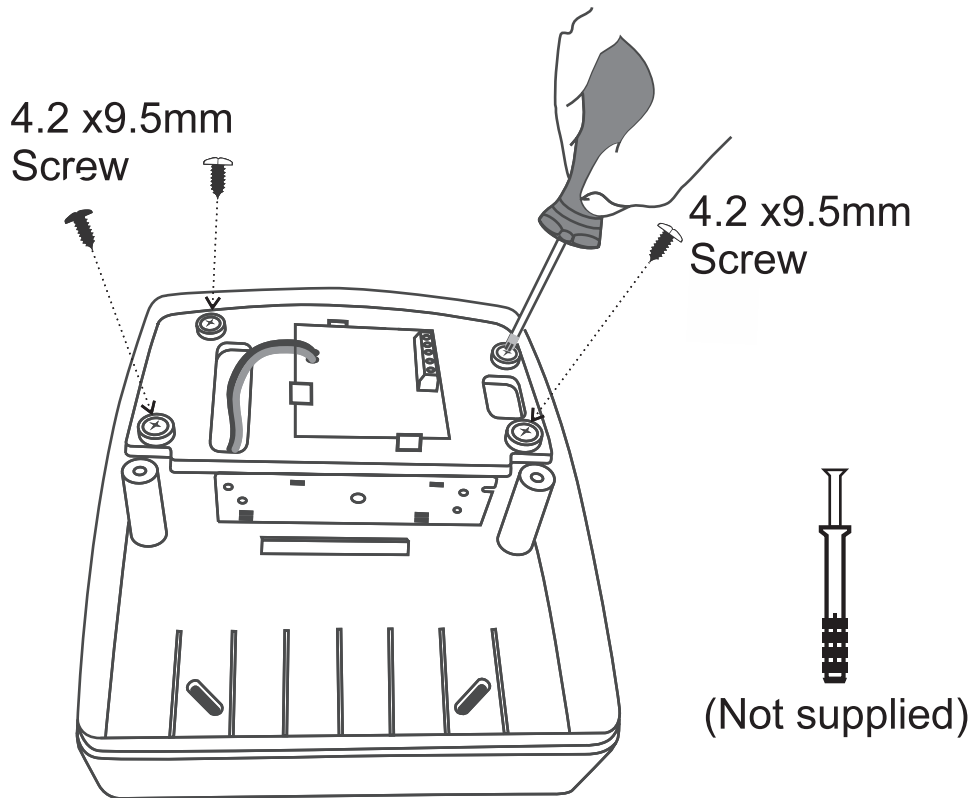


## Securing the plastic plate

The unit is supplied with a packet of screws.

The “Plastic plate” is not screwed down so that it is easy to open up the unit to run cables out of the box or to access the mains leads or the DC input wires.

Please use the Qty 4:- Self tapper screws that are provided to screw the plastic plate securely to the “Plastic base” Only do this once you have run the cables out of the bottom of the plastic base and mounted the unit onto a secure wall using three (3) x M6 x 42 Nail in anchor or similar.



## LED1 Indication

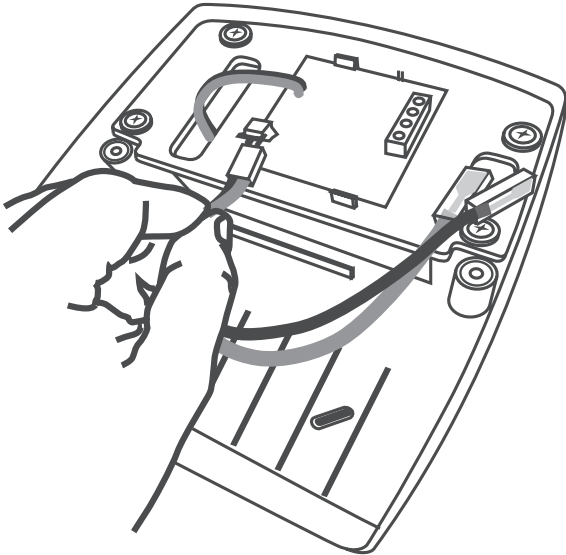
RED	Power failure condition.
OFF	Power failure condition. The battery Voltage reached under 10V & so the unit switched off.

## LED2 Indication

GREEN	Power is on & the unit is charging the battery
ORANGE	Power failure condition. The battery Voltage is above 12V
RED	Power failure condition. The battery Voltage is below 11.6V and is almost depleted
RED FLASHING	Over Voltage protection. Input is above 15VDC. The Charger is turned off to protect the battery.
OFF	Power failure condition. The battery Voltage reached under 10V & so the unit switched off.

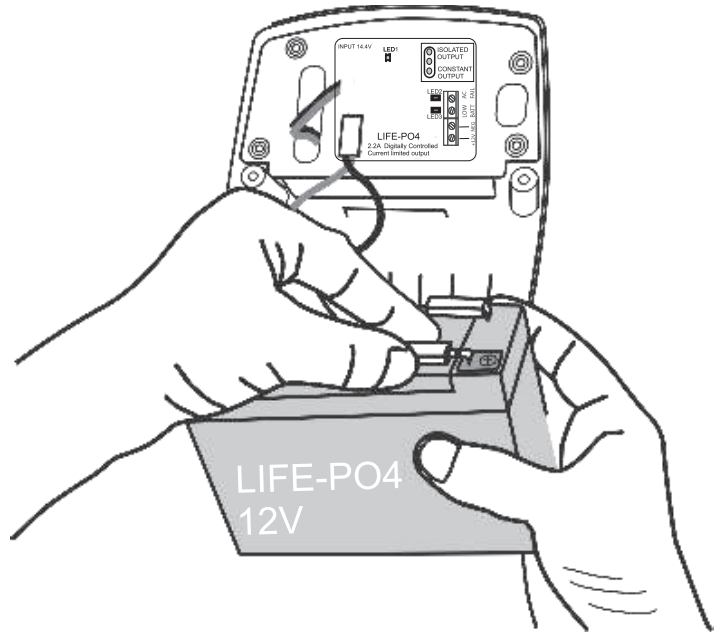
## Battery Lead Plug

You can easily unplug the red/black battery leads if you wish to install or remove a battery from the unit. The Plug can only fit in one direction. Negative (Black wire) is the first wire from the left side.



## Installing the Battery

With the AC power off, plug the Negative (Black) & Positive (red) wires to the battery and then insert the battery into the battery compartment. If you test the current been drawn on an ammeter, please note that the charger output has a soft start program so it will slowly increase the current to the battery stepping up over a 30 second period. We call this our soft start which protects the charger from a sudden surge to the appliance that is wired up to this battery charger.



The device is intended to ONLY Charge 12VDC Lithium LIFE-PO4 batteries with a max capacity ampere hour rating of 10A/H. A bigger battery may result in the battery taking too long to charge.

**THE SOCKET OUTLET SHOULD BE INSTALLED NEAR THE EQUIPMENT AND SHALL BE EASILY ACCESSIBLE**

## Approvals

This product is approved for use in residential, commercial and light Industrial environment and complies with the essential protection requirements of the R&TTE Directive 1999/EC on the approximation of the laws of the member states.

## Pending Certifications

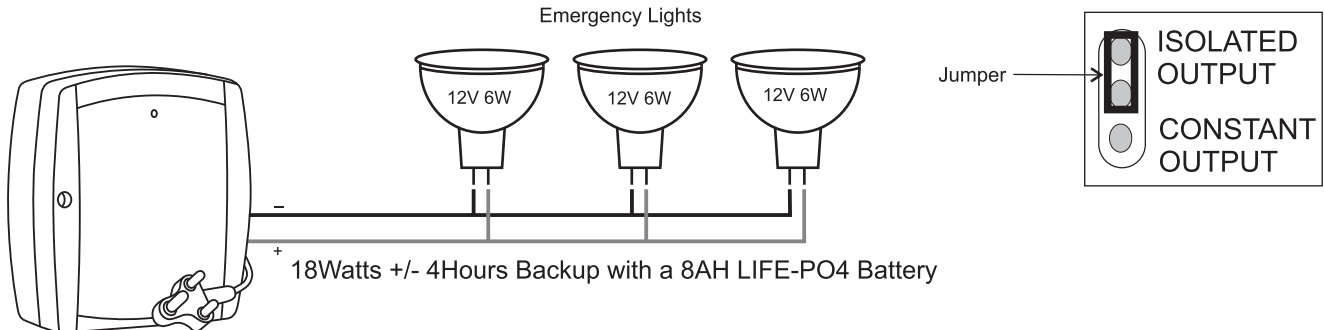
EN 55022:2010  
EN 55024:2010  
EN 6100-3-2:2006+A1:2009 + A2:2009  
EN 6100-3-3:2008  
EN 62368-1: 2014+A11:2017  
IEC 623681-1:2014 (second edition)



## Emergency Lighting Applications

You can set the unit up for a emergency lighting installation. Set the jumper to Isolated output. This will set the unit to only output DC voltage to the emergency lights when the 220VAC power fails.

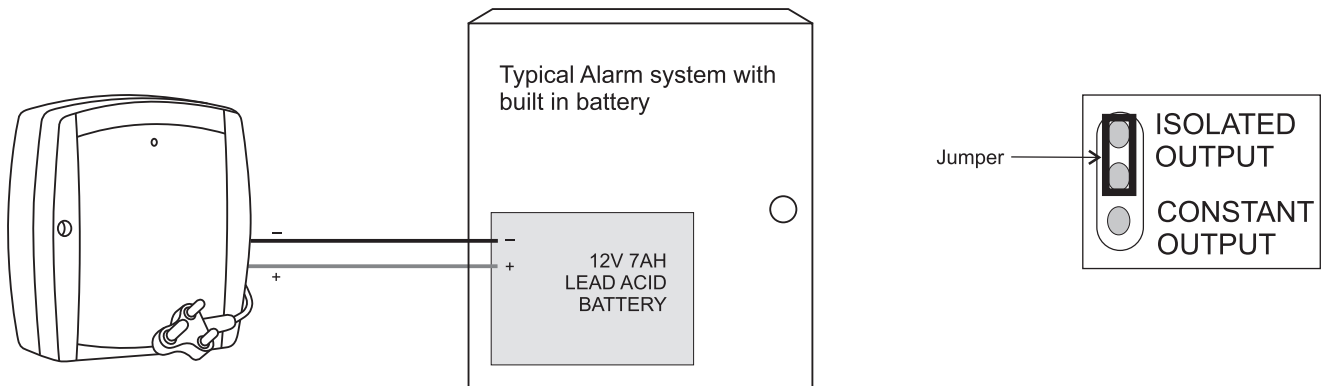
When 220VAC power is restored the emergency lights will automatically turn off. This function also sets the battery charger to current limit to 2.4A. So the battery should charge within 5 hours.



## Multiple Battery Backup Applications

Its recommended to set the unit as an Isolated output when connecting to Alarm system that already has got a battery installed. By doing this you will protect both batteries from external charge voltages. When

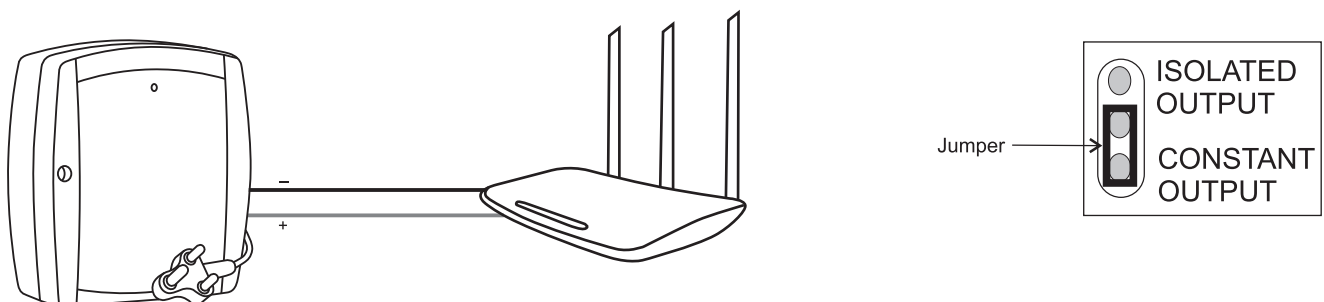
220VAC power fails then both batteries will discharge together uniformly. When power is restored the LIFE-PO4 battery will disconnect itself from the Alarm system and charge back up.



## Constant Power Output Application

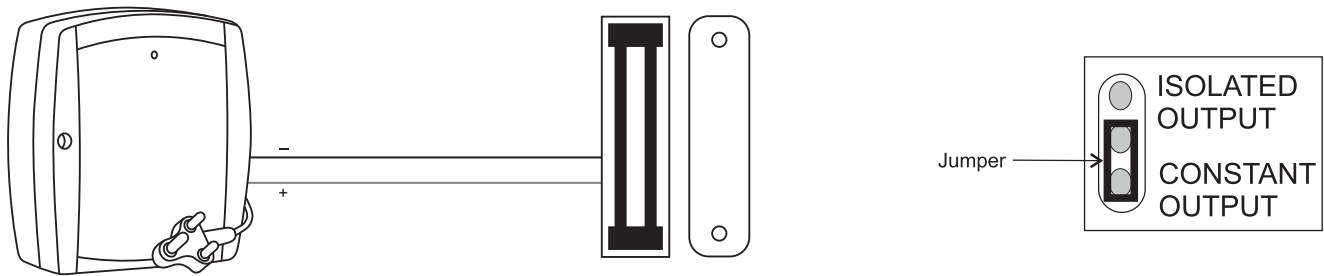
Its recommended to set to Constant Output when the unit is the primary power source and battery back-up such as connecting to a Wi-fi Router or a CCTV Camera system. This function sets the unit to current

limit the battery charger to 1.8A, so the battery will charge a bit slower than the Isolated setting around 6 hours



## Constant battery backup for magnetic door lock

Set the unit up as an Constant output when connecting to a magnetic door lock system. Battery charge current will be set to 1.8A



## Multiple Battery Backup Applications

Set the unit up following the diagram below when connecting to more than one power supply and you require a Constant output on the system such as a CCTV camera system.

