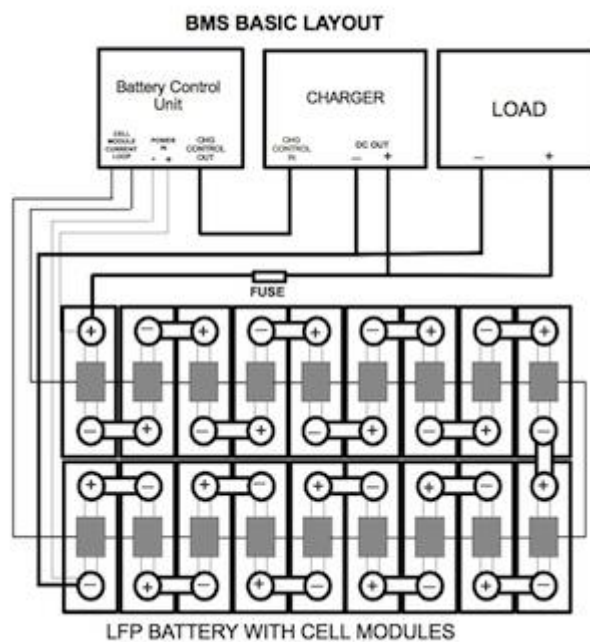


# Datasheet

## Cell Balancer

Lithium Iron Phosphate (LFP) batteries are not inherently self-balancing the way that Lead Acid batteries are. They can also be damaged by over-charge and over-discharge. Electronic control is essential.



The heart of the BMS is the analog cell balancer/monitor module. Simple and elegant.

A battery consists of two or more cells. There is one cell module for each cell in a battery. The cell modules perform the function of balancing and monitoring the cells.

The System is a unique one wire system that connects each cell module to the next. This provides two ends that interface back to a master unit which controls charge and discharge if there is a problem with one cell.

## Features

Epoxy Encapsulated to prevent moisture and dust interference. Also keeps out bugs, dropped spanners, loose cables, nuts and fingers!

Gold plated cell terminal connectors for perfect connection and professional looks.

One wire link between cell modules. We developed this system.

Low profile, does not even protrude above terminal bolts.

Up to 2A shunt current capacity.

No heat buildup when regulating, no bulky hot resistors.

Small footprint the actual circuit is the size of a postage stamp! Does not interfere with mounting hardware.

Low power consumption  $<3\text{mA} \Rightarrow$  3+ years to drain a 100Ah idle cell.

Reverse polarity protected.

Internal fuse to prevent cell damage from incorrect installation.

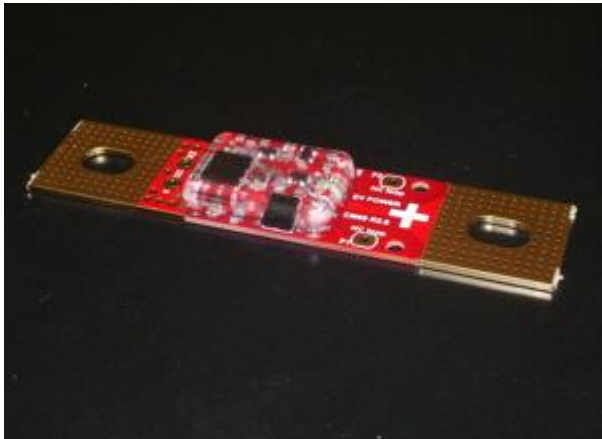
Suitable for LiFePO<sub>4</sub> cell chemistry.

A cell module can operate as a standalone shunt regulator or in combination with other modules to monitor and balance a LiFePO<sub>4</sub> battery with any number of cells.

Connecting the signal output from a cell module in series with other cell modules and a master unit provides complete battery protection from overcharge and over-discharge.

The above photograph shows the quiescent current draw of our V8 cell module at 3.3V. **At this rate it takes 10+ years to drain a 180Ah cell.** Of course it will never overdischarge the cell because it switches off at about 2.6V.

## CM60 Cell Module

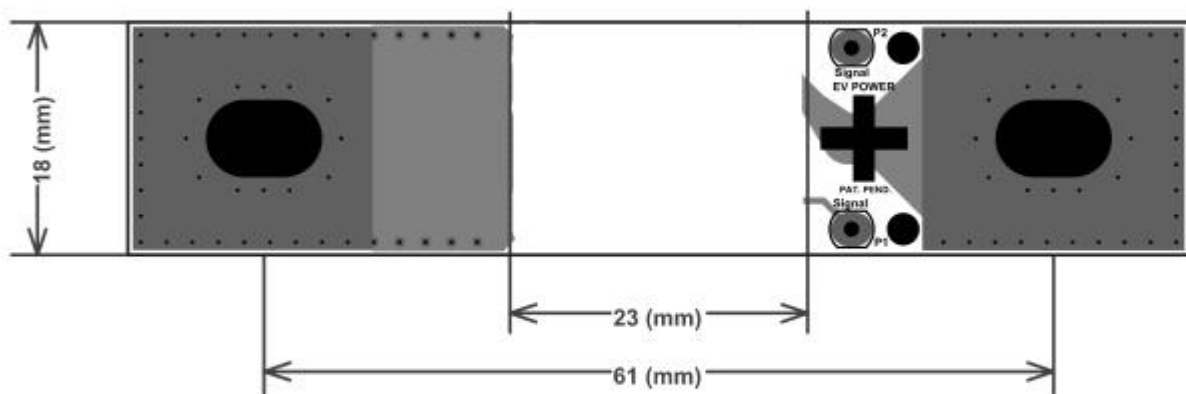


BMS-CM060

LiFePO4 Battery Management Cell module suitable for cells with 60-63mm terminal spacing and an M6 bolt.

800 mA shunt bypass capacity.

## CM60 Cell Module



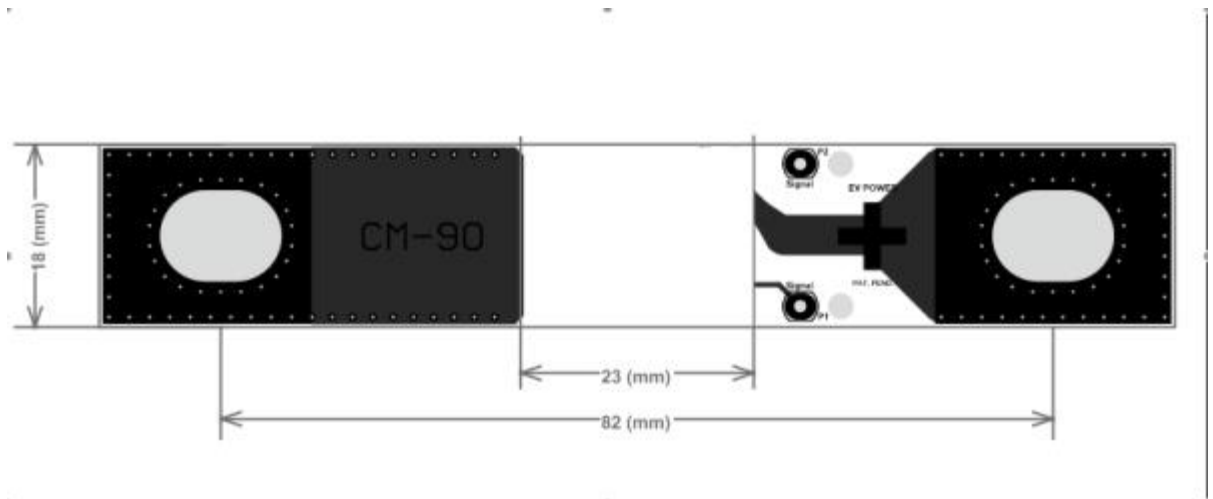
## CM90 Cell Module



### BMS-CM090

LiFePO4 battery management cell module for cells with 81-83mm terminal spacing. M8 terminal bolt.

800mA shunt bypass capacity.



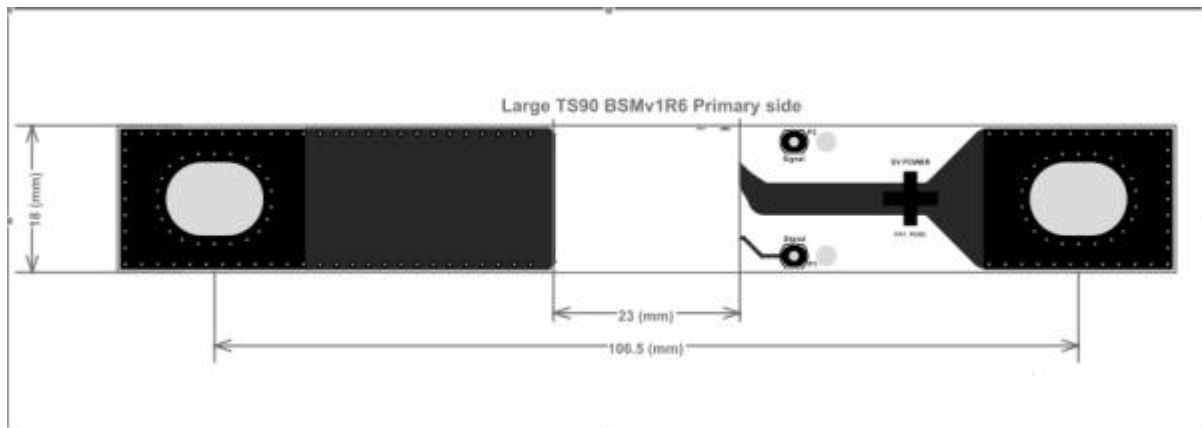
## CM180 Cell Module



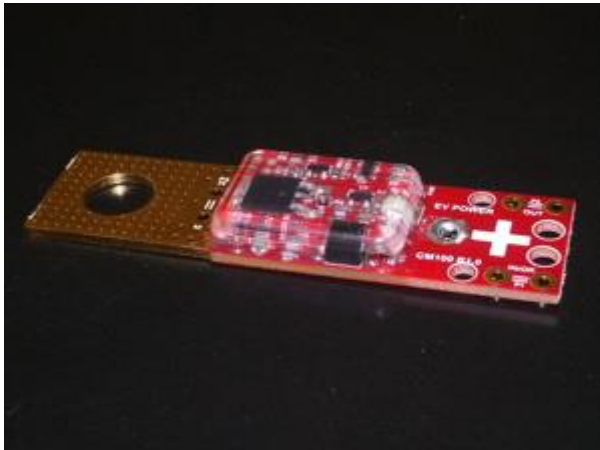
## BMS-CM180

LiFePO4 battery management cell module for cells with 105.5-107.5mm terminal spacing.  
M8 terminal bolt.

up to 1000mA shunt bypass capacity.



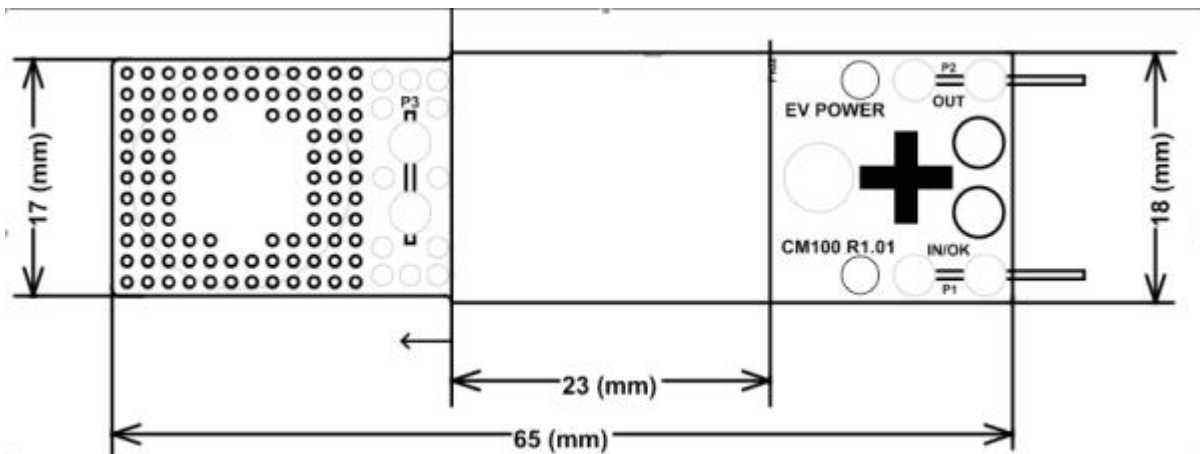
### CM100 Cell Module



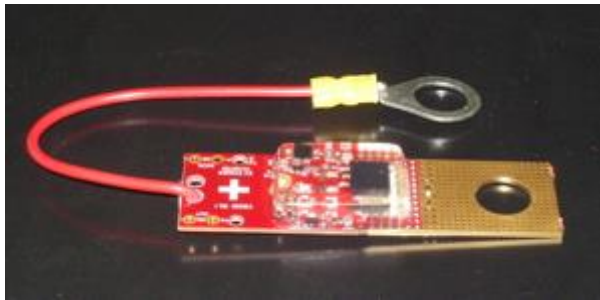
#### BMS-CM100

LiFePO4 Cell module for cells with terminal spacing 70-150mm and with an M6 or M8 terminal bolt.

1 amp shunt bypass capacity.



## CM400 Cell Module



## BMS-CM400

Battery Management Cell module suitable for cells with 100- 300mm terminal spacing.

- M12-M14 Bolt size hole.
- Shunt regulation capacity up to 2 Amps.
- Fly lead and ring terminal attached, 250mm bolt spacing.
- Can also be used on other brands of LiFePO4 cells.
- Signal line PCB holes are for soldered one wire connection but spade terminals can also be supplied.

