

12V LiFePO4 battery monitor and top equalizer

The purpose of the monitor is to allow the use of 12V LiFePO4 batteries with improved confidence.

1. When all of the cell voltages are below 3.70 V the Warning output is off (open).
2. When a cell voltage exceeds 3.82 V a 0.4 A shunt operates across the cell and the Warning output is on (grounded).
3. When all of the cell voltages are below 3.90 V the Alarm output is off (open).
4. When a cell voltage exceeds 4.02 V the Alarm output is on (grounded).

Limit values: the quoted extremes reflect both component variation (± 0.03 V) and hysteresis (0.07 V).

Leakage: the monitor adds 15 μ A to the battery self-discharge rate of 40 μ A/Ah.

Robustness: a cell circuit sustains 7 V indefinitely; the monitor sustains 28 V indefinitely and 80 V during 5 s.

