



• **Wattuneed Lithium Battery 12.8 V 48 Ah** •

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|-----------------------------------|----------------------------|---|
| Electrical characteristics | Rated voltage | 12.8V |
| | Rated capacity | 48Ah |
| | Energy | 614.4Wh |
| | Life cycle management | > 2000 cycles at 0.2 C 80% DOD |
| | Month of self-discharge | <3% |
| | Load efficiency | >99% @0.2C |
| | Efficiency of the landfill | 96-99%@0.5C |
| Standard Charge | Charging voltage | 14,6 ± 0,2 V |
| | Charge Mode | CC/CV |
| | Charging current | 25A |
| | Max. Charging current | 50A |
| | Load break voltage | 14,6 ± 0,2 V |
| Standard discharge | Direct current | 50A |
| | Max. pulse current | 70A (<2s) |
| | Discharge cut-off voltage | 10V |
| | Depth of discharge | 90% DOD |
| Environnement | Charge Temperature | 0 °C to 55 (32F to 131F) @ 60 ± 25% relative humidity |
| | Discharge temperature | -20 °C to 60 (-4F to 140F) @ 60 ± 25% relative humidity |
| | Storage temperature | -20 °C to 45 (-4F to 113F) @ 60 ± 25% relative humidity |
| | IP Class | IP65 |
| Mechanics | Plastic box | ABS + PC (top cover can be removed for maintenance) |
| | Weight | 6.5 kg |
| | Dimensions | 229mm x 139mm x 209 mm |
| | Package size | 290mm x 190mm x 270mm |
| Applications | Installation | Parallel and series connection |
| | Control | Integrated Battery Management System (BMS). Independent voltage/voltage display (4S). |
| | Supervision | Surveillance Bluetooth, application smartphone |

• Advantages •



• *Longer service life*

Service life at 80% of the depth of discharge (DoD) ≥ 3000
 Lifetime at 50% of the depth of discharge (DoD) LiFePO₄ battery ≥ 4500
 The upper cover is removable, making it easy to maintain the battery.



• *Super-secure Lihtium technology (LifePO4)*

Stable chemical composition - LiFePO₄, no gas, no danger of explosion or fire.
 An integrated battery management system (BMS) prevents any failure in advance
 premature due to environmental influences or misuse.



• *Standard size design*

Perfect replacement of the AGM/GEL battery without changing the charging structure/
 original unloading.



• *Light weight*

More than half the weight reduction compared to the AGM/GEL battery.



• *Larger useful capacity*

Depth of discharge up to 90% depth of discharge, about 40% more than the AGM/GEL battery.



• *Wider operating temperature range*

Range -20°C...+60°C.



• *Low self-discharge*

Only about 3% per month for storage / non-use.



• *Monitoring of practical monitoring and maintenance*

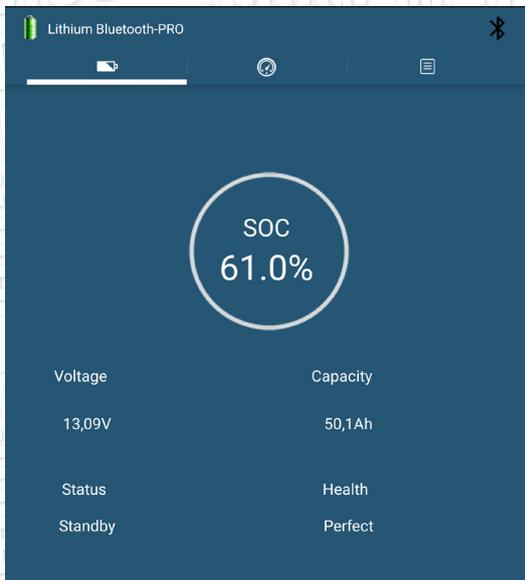
Dedicated smartphone application to monitor battery status via Bluetooth.
 The upper cover is removable, making it convenient for battery maintenance.



• *BMS protection*

Each W12V48Ah has a built-in battery management system that protects the battery from extreme cases. It displays the overall voltage of the charge/discharge current and the battery temperature.

• Mobile application •



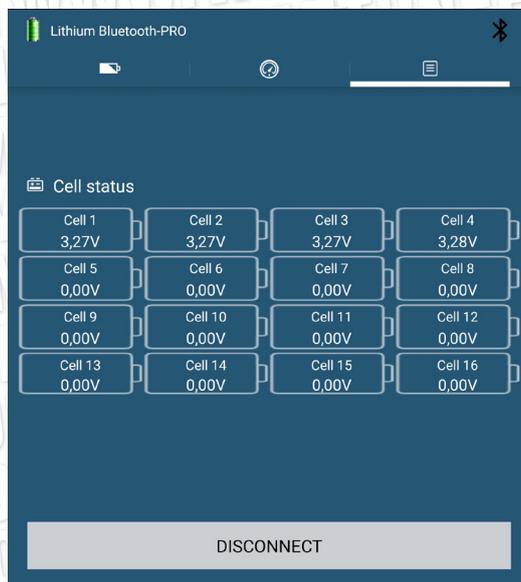
Home page

The application's home page displays all available information about the running battery.



Overall voltage

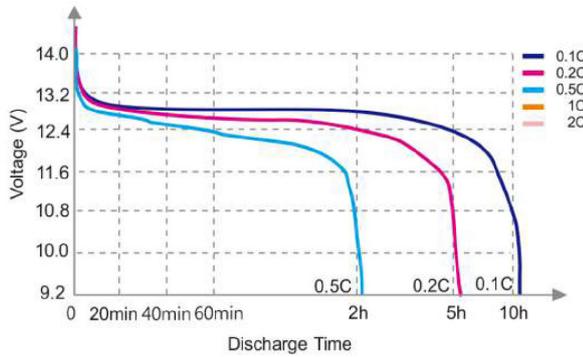
Display of the overall voltage of the charge/discharge current, the battery temperature and the number of cycles.



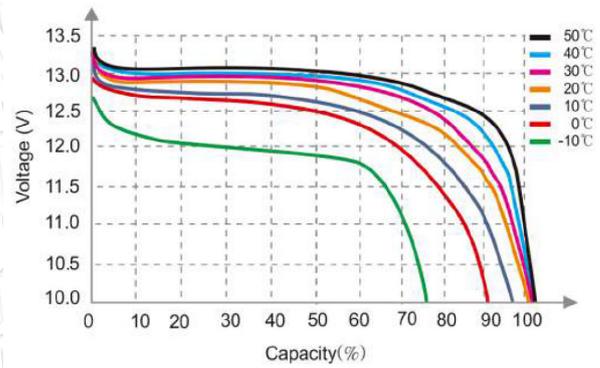
Battery status

On this tab you can find the status of each cell from the application. (Here 4 elements in series).

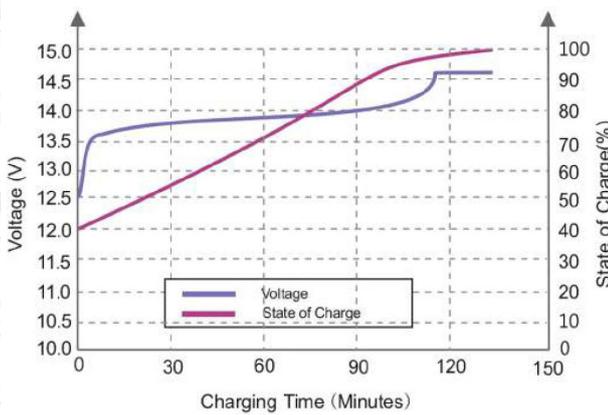
Different flow curve (25°C)



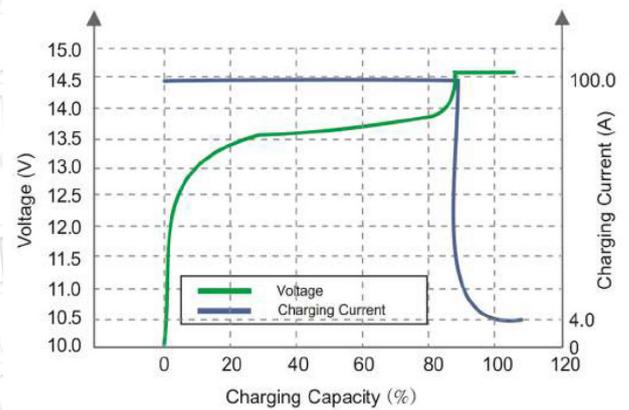
Different discharge temperature curve (0.5C)



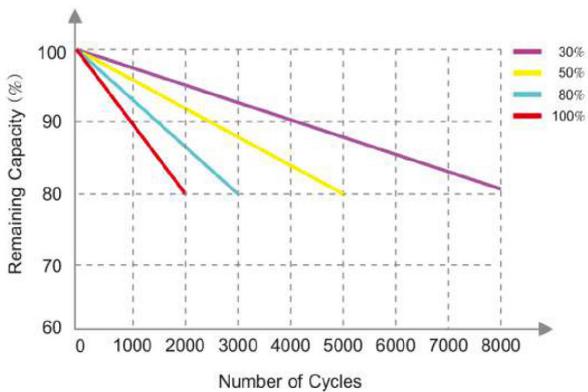
State of charge curve (0.5C, 25°C)



Load characteristics (0.5C, 25°C)



Life time curve different from the DOD discharge cycle (0.5C)



Self-discharge curve with different temperature

