

# 12,8V & 25,6V Lithium SuperPack batteries

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## Integrated BMS and safety switch

The SuperPack batteries are extremely easy to install, needing no additional components. The internal switch will disconnect the battery in case of over discharge, over charge or high temperature.

## Abuse proof

A lead-acid battery will fail prematurely due to sulfation:

- If it operates in deficit mode during long periods of time (i.e. if the battery is rarely, or never at all, fully charged).
- If it is left partially charged or worse, fully discharged.

A Lithium-Ion battery does not need to be fully charged. Service life even slightly improves in case of partial charge instead of a full charge. This is a major advantage of Li-ion compared to lead-acid.

The SuperPack batteries will cut-off the charge or discharge current when the maximum ratings are exceeded.

## Efficient

In several applications (especially off-grid solar), energy efficiency can be of crucial importance.

The round-trip energy efficiency (discharge from 100% to 0% and back to 100% charged) of the average lead-acid battery is 80%.

The round-trip energy efficiency of a Li-ion battery is 92%.

The charge process of lead-acid batteries becomes particularly inefficient when the 80% state of charge has been reached, resulting in efficiencies of 50% or even less in solar systems where several days of reserve energy are required (battery operating in 70% to 100% charged state).

In contrast, a Li-ion battery will still achieve 90% efficiency even under shallow discharge conditions.

## Can be connected in parallel

The batteries can be connected in parallel. Series connection is not allowed.

Use in upright position only.



Lithium SuperPack	12,8/20	12,8/60	12,8/100	12,8/200	25,6/50
Chemistry	LiFePO4				
Nominal voltage	12,8V				25,6V
Nominal capacity @ 25°C	20Ah	60Ah	100Ah	200Ah	50Ah
Nominal capacity @ 0°C	16Ah	48Ah	80Ah	160Ah	40Ah
Nominal energy @ 25°C	256Wh	768Wh	1280Wh	2560Wh	1280Wh
Cycle life @ 80% DoD and 25°C	2500 cycles				
<b>CHARGE and DISCHARGE</b>					
Max. cont. discharge current*	30A	30A	50A	70A	50A
Peak discharge current (10 sec)	80A	80A	100A	100A	100A
End of discharge voltage	10V				20V
Charge voltage, absorption**	14,2V – 14,4V				28,4V – 28,8V
Charge voltage, float	13,5V				27V
Max. cont. charge current	15A	30A	50A	70A	50A
<b>OPERATING CONDITIONS</b>					
Parallel configuration	Yes, unlimited				
Series configuration	No				
Operating temperature	Discharge: -10°C to +50°C Charge: +5°C to +45°C				
Storage temperature	-40°C to +65°C				
Max. storage time when fully charged	1 year ≤ 25°C		3 months ≤ 40°C		
Humidity (non-condensing)	Max. 95%				
Protection class	IP 43				
<b>OTHER</b>					
Power connection (threaded inserts)	M5	M6	M8	M8	M8
Dimensions (LxWxH) mm	181 x 77 x 167	229 x 138 x 213	330 x 171 x 220	520 x 269 x 208	330 x 171 x 220
Weight	3,5kg	9,5kg	14kg	21kg	14kg
* The battery may disconnect when a load with a high input capacitance is connected, such as an inverter. The battery will however retry and connect after approximately 10 seconds.					
**The absorption period should preferably not exceed 4 hrs. A longer absorption period may slightly reduce service life.					