

# 12,8V Lithium SuperPack batteries

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End of life – see other datasheet for the new Lithium SuperPack battery range

## Integrated BMS and safety switch

The SuperPack batteries are extremely easy to install, not needing any 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.

## 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	LSP 12,8/50	LSP 12,8/100	LSP 12,8/200
Chemistry	LiFePO4		
Nominal voltage	12,8V		
Nominal capacity @ 25°C	50Ah	100Ah	200Ah
Nominal capacity @ 0°C	40Ah	80Ah	160Ah
Nominal energy @ 25°C	640Wh	1280Wh	2560Wh
Cycle life @ 80% DoD and 25°C	2500 cycles		
<b>CHARGE and DISCHARGE</b>			
Max. cont. discharge current	45A	50A	70A
Peak discharge current (10 sec)	80A	100A	100A
End of discharge voltage	10V		
Charge voltage, absorption**	14,2V – 14,4V		
Charge voltage, float	13,5V		
Max. cont. charge current	35A	50A	70A
<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)	M8	M8	M8
Dimensions (LxWxH) mm	197 x 165 x 170	330 x 171 x 235	520 x 269 x 220
Weight	6,5kg	15kg	30kg
**The absorption period should preferably not exceed 4 hrs. A longer absorption period may slightly reduce service life.			