

# LITHIUM SUPERPACK

12,8V & 25,6V Lithium SuperPack, with integrated BMS and safety switch.



Litio SuperPack



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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.

## SPECIFICATIONS

|                                      |                                            |                 |                 |                 |                 |
|--------------------------------------|--------------------------------------------|-----------------|-----------------|-----------------|-----------------|
| Lithium SuperPack                    | 12,8 / 20                                  | 12,8 / 60       | 12,8 / 100      | 12,8 / 200      | 25,6 / 50       |
| Chemistry                            | LiFePO4                                    |                 |                 |                 |                 |
| Nominal voltage                      | 12,8 Vdc                                   |                 |                 |                 | 25,6 Vdc        |
| Nominal capacity @25°C               | 20 Ah                                      | 60 Ah           | 100 Ah          | 200 Ah          | 50 Ah           |
| Nominal capacity @0°C                | 16 Ah                                      | 48 Ah           | 80 Ah           | 160 Ah          | 40 Ah           |
| Nominal energy @25°C                 | 256 Wh                                     | 768 Wh          | 1280 Wh         | 2560 Wh         | 1280 Wh         |
| Charge and Discharge                 |                                            |                 |                 |                 |                 |
| Max. Cont. discharge current *       | 30 A                                       | 30 A            | 50 A            | 70 A            | 50 A            |
| Peack discharge current (10 sec)     | 80 A                                       | 80 A            | 100 A           | 100 A           | 100 A           |
| End of discharge voltage             | 10 V                                       |                 |                 |                 | 20 V            |
| Charge voltage, absorption **        | 14,2 - 14,4 V                              |                 |                 |                 | 28,4 - 28,8 V   |
| Charge voltage, float                | 13,5 V                                     |                 |                 |                 | 27 V            |
| Max. cont. charge current            | 15 A                                       | 30 A            | 50 A            | 70 A            | 50 A            |
| Operating Conditions                 |                                            |                 |                 |                 |                 |
| Parallel configuration               | Yes, unlimited                             |                 |                 |                 |                 |
| Series configuration                 | No                                         |                 |                 |                 |                 |
| Operating temperature                | Discharge: -10 to 50 °C, Charge 5 to 45 °C |                 |                 |                 |                 |
| Storage temperature                  | -40 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                                      |                 |                 |                 |                 |
| Other                                |                                            |                 |                 |                 |                 |
| Power Connection                     | M6                                         | M6              | M8              | M8              | M8              |
| Dimensions (l x w x h) 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                               | 3,5 Kg                                     | 9,5 Kg          | 14 Kg           | 31 Kg           | 14 Kg           |

\* 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.

## DOWNLOADS

CATÁLOGO GENERAL 2020



Catalogo-Bornay-0520.pdf

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