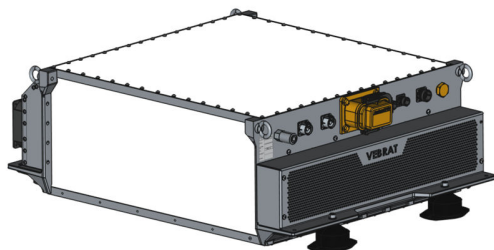


# DATASHEET K31 MODULE



**Lithium Fer Phosphate (LFP)  
Battery**  
**102.4 V, 304 Ah, 31.1 kWh**

MADE IN  
FRANCE



**Power your boat with an ultra-safe and light LiFePO<sub>4</sub> battery module.  
 Bureau Veritas-certified and scalable from 31 kWh to 3 MWh.**

## Main Features

- **Safe chemistry** – LiFePO<sub>4</sub> cells eliminate thermal runaway risk (no fire, no explosion).
- **Long life** – >4,000\* cycles at 80% DoD.
- **Lightweight** – Up to 30% lighter than similar capacity modules.
- **Scalable** – Series/parallel up to 128 modules.
- **Wide temperature range** – Direct cell-to-case thermal contact.
- **Marine-grade sealing** – Connectors IP67, fans IP68, case IP44.
- **ATEX** – Full certification on request.
- **Easy maintenance** – External fuse, detachable fans.
- **Vibration-resistant** – Shock-absorbing mounts.
- **Fire-safe materials** – UL 94-V0 plastics.
- **CAN bus** – Real-time monitoring.
- **Eco-friendly** – Cobalt- and nickel-free chemistry.

## Safety

- **Short-circuit protection** built into each K31 module.
- **Full system protection** (undervoltage, overvoltage, overcharge, overtemperature, residual current, precharge) when used with the PCU 600\*\*.
- **Hard-wired E-STOP:** hard-wired circuit ensures immediate shutdown, even in case of software failure.
- **Note:** To enable all protection features, the K31 must be operated with a PCU 600.

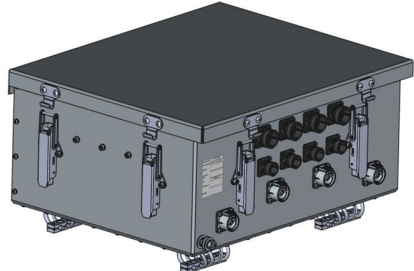
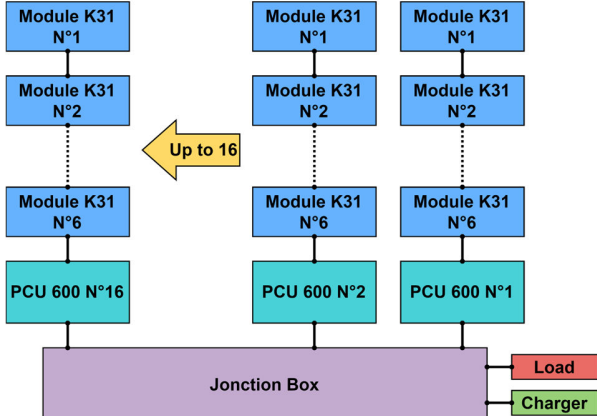
## Standards

- IEC 62619 & 62620
- IEC 60068 & IEC 60092-504
- IEC 61000 (EMC) & CISPR 16
- Bureau Veritas Certificate N:77041  
N:77040

## Technical Specification - K31 Module

| Parameter                          | One Module (1S)                              | 6 Modules (6S)                 | 12 Modules (6S2P) |
|------------------------------------|----------------------------------------------|--------------------------------|-------------------|
| Designation                        | K31                                          |                                |                   |
| Cell type                          | Lithium Fer Phosphate (LiFePO <sub>4</sub> ) |                                |                   |
| Max. number in series              | 6S                                           |                                |                   |
| Max. number in parallel            | 6S×16P                                       |                                |                   |
| Nominal voltage                    | 102.4 V                                      | 614.4 V                        | 614.4 V           |
| Capacity                           | 304 Ah                                       | 304 Ah                         | 608 Ah            |
| Total energy                       | 31.1 kWh                                     | 186.6 kWh                      | 373.2 kWh         |
| Usable energy                      | 28 kWh                                       | 168 kWh                        | 336 kWh           |
| C-rate continuous charge/discharge | 1C @ 25°C                                    |                                |                   |
| C-rate peak discharge              | 3C @ 25°C                                    |                                |                   |
| C-rate peak charge                 | 2C @ 25°C                                    |                                |                   |
| Dimensions L×W×H                   | 1030×758×350 mm                              | Depending on the configuration |                   |
| Charge time to 80% SOC             | 1h                                           |                                |                   |
| Charge temperature range           | 0°C to +65°C                                 |                                |                   |
| Discharge temperature range        | -35°C to +65°C                               |                                |                   |
| Specific energy                    | 141.3 Wh/kg                                  |                                |                   |
| Weight                             | 220 kg                                       | 1 320 kg                       | 2 640 kg          |
| Protection grade                   | IP44                                         |                                |                   |
| Communication                      | CAN bus                                      |                                |                   |
| Cooling                            | Pulsed air                                   |                                |                   |
| Mounting                           | Elastic                                      |                                |                   |
| Lifting rings                      | Yes                                          |                                |                   |

## Technical Specification - PCU 600\*\*

| Parameter             | Value                                                                          |  |
|-----------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Max. Voltage          | Up to 1000 V                                                                   |                                                                                      |
| Current               | 304 A                                                                          |                                                                                      |
| Operating temp.       | -40°C to +70°C                                                                 |                                                                                      |
| Weight                | 19 kg                                                                          |                                                                                      |
| Protection grade      | IP44                                                                           |                                                                                      |
| Dimensions L×W×H      | 500×415×267 mm                                                                 |                                                                                      |
| Modules per PCU       | Up to 6 modules (BV-certified), or 8 modules if certification is not required. |  |
| Max. PCUs in parallel | Up to 16 PCUs in parallel                                                      |                                                                                      |

\* Based on cell data. Module-level performance may differ.

\*\*The PCU 600 houses the master BMS and all key safety elements: main contactors, pre-charge circuit, voltage and current sensors, insulation fault detection.