

MANUAL

LiFePO₄ BATTERY

JARO-NG SERIE



NMEA2000
- compatible -

- > JARO-NG120.12
- > JARO-NG180.12
- > JARO-NG60.24
- > JARO-NG90.24
- > JARO-NG60.36



2026

SPECIFICATIONS JARO-NG BATTERIES

Parameter	NG120.12	NG180.12	NG60.24	NG90.24	NG60.36
Battery chemistry	LiFePO ₄	LiFePO ₄	LiFePO ₄	LiFePO ₄	LiFePO ₄
Capacity Ah	120Ah	180Ah	60Ah	90Ah	60Ah
Capacity Wh	1536Wh	2304Wh	1536Wh	2304Wh	2304Wh
Nominal voltage	12,8V	12,8V	25,6V	25,6V	38,4V
Recommended maximum charge current	100A	100A	75A	75A	50A
Maximum charge current	125A	125A	100A	100A	75A
Charge voltage	14,6V	14,6V	29,2V	29,2V	43,8V
Float voltage	13,6V	13,6V	27,2V	27,2V	40,8V
Balancing start voltage	3,2V				
Maximum balancing current	1A				
Maximum number of batteries in parallel *	8				
Maximum number of batteries in series	3	3	not permitted	not permitted	not permitted
Maximum discharge current (3 sec)	225A	225A	150A	150A	100A
Maximum continuous discharge current	125A	125A	90A	90A	80A
Recommended maximum discharge current	100A	100A	75A	75A	70A
Discharge cut-off voltage	11,5 - 11,8V	11,5 - 11,8V	23 - 23,6V	23 - 23,6V	34 - 35V
Short-circuit protection	450A				
Charge temperature range **	-20 to +45°C				
Discharge temperature range	-20 to +45°C				
Dimensions (L x W x H)	332 x 175 x 230mm				
Weight without box	16,5kg	22,4kg	16,5kg	22,4kg	22,4kg
Recommended storage temperature	-10 - +30°C				
Self-discharge (sleep mode) ***	71 weeks	107 weeks	36 weeks	53 weeks	36 weeks
RS485-interface	Micro-C male 4 pin				
NMEA2000-interface	Micro-C male 5 pin				
Ingress protection	IP65				
Certification	CE, UL / UN38.3				
When not in use	Recharge the battery at least every 3 months until the charger stops if the battery is not being used				

* Each battery must be protected by its own fuse ** From -20°C to 0°C with internal heating
 *** Maximum storage time before recharging when stored fully charged

What makes this battery special

- > A+ grade LiFePO₄ cells, CE, UL / UN38.3 certified
- > Automatic heating system with temperature control
- > Active cell balancing, up to 10 times faster than conventional passive systems
- > Automatic BMS sleep control to reduce self-discharge
- > NMEA2000 interface for direct communication with chart plotters and fish finders
- > Battery internally equipped with a stainless-steel cage embedded in resin for extreme robustness
- > IP65 water and dust resistant
- > Bluetooth monitoring via the JAROCELLS App, suitable for series and parallel monitoring
- > 5-year no-nonsense warranty



Congratulations on your purchase of this Next Generation High Performance battery pack



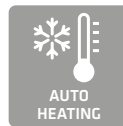
The latest communication options, including NMEA 2000 as standard on every battery. Seamless integration with onboard systems for real-time monitoring.



Gets the most out of a compact battery pack with exceptional performance. Extremely robust, resistant to shocks and vibrations, and suitable for engine starting on both 12V and 24V systems.



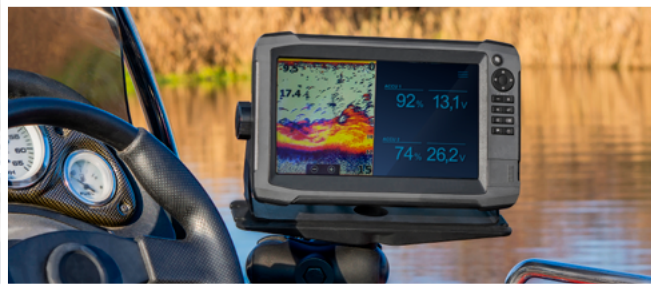
Advanced active balancing brings the battery cells into balance very quickly: up to 10 times faster than conventional systems. This extends service life and significantly reduces the risk of malfunctions.



Automatic cell heating allows the battery to be safely charged at temperatures below freezing, without performance loss or damage.



Fully water- and dust-proof housing (IP65), equipped with the latest waterproof BMS technology. Ideal for marine and outdoor applications.



JAROCELLS APP

General

All information available inside the battery regarding state of charge, current consumption, voltage, temperature, etc. is provided via a wireless Bluetooth connection and can be read using our JAROCELLS App on an Android or Apple device. The main advantage of the App is that the battery status and performance can be monitored in real time without installing additional instruments.

Downloading and installing the JAROCELLS App

- > The JAROCELLS App is available for Android and Apple smartphones.
- > Download and install the JAROCELLS App from the Google Play Store or the App Store. During installation, several permissions will be requested, such as access to location data.



IMPORTANT: Accept all requested permissions during installation. This is necessary to find and connect nearby batteries via Bluetooth. Without these permissions, the App will not work.

Connecting to the JAROCELLS battery

- > Open the JAROCELLS App on your smartphone.
 - NOTE:** The battery must be within a range of <6 metres of your device.
- > The App automatically scans for available batteries nearby. The detected batteries immediately appear in a list on your screen.
- > Tap the name of the battery you want to connect to.
- > The App connects and displays the current data of the selected battery.

Available information

- > Once you have connected to your battery, the basic information appears on the screen. In the centre you see the battery state of charge (the percentage, also called “State of Charge”). At the top left you see the voltage and the current consumption, and at the top right you see the remaining battery capacity.



Changing the battery name

You can assign each battery a unique name of up to 18 characters. This makes it easy to keep an overview.

- > Connect to the battery and tap the **settings icon** (the cogwheel “Setting”) at the bottom of the screen.
- > Enter password **123456** and confirm.
- > Tap “**Modify the name**”. Enter the new name (max. 18 characters) and confirm your choice.
- > The battery will now be visible under the new name.

Using the emergency button (reserve energy)

The battery has a reserve amount of energy that you can use if the battery has shut down because it is empty. When you activate this function, power is available for **5 minutes** each time. Need more time afterwards? You can activate the function again. Note: the reserve energy is limited.

To activate the reserve energy:

- > Select the correct battery in the JAROCELLS App.
- > Tap the **settings icon** (cogwheel “Setting”) at the bottom of the screen.
- > Enter code **123456** and confirm.
- > Tap the “**Force start**” button. The battery will now supply power for 5 minutes.





Displaying batteries in series or parallel in the App

In the JAROCELLS App it is possible to display batteries that are connected in parallel or in series as such.

- > At the top of the home screen, tap **IN PARALLEL** or **IN SERIES**. Plus symbols will appear behind the available batteries.
- > Tap the batteries you want to combine. The screen changes immediately: you will now see the data of the individual batteries as well as the combined capacity and voltage. See the example shown of two batteries connected in parallel.

Automatic heating

At temperatures below freezing (0°C), the battery can be discharged normally, but must not be charged directly. To allow charging during frost conditions, the battery is equipped with automatic heating.

How it works:

When you connect the charger to a battery that is too cold, the charger's energy is first used to warm the battery internally. As soon as the cells have reached the correct temperature, the heating stops and the charging process starts automatically. You do not need to adjust any settings yourself.



NMEA2000 AND RS485 INTERFACE



NMEA2000
-compatible-

NMEA2000 interface (single battery)

The NMEA2000 connector is located on top of the battery and is a 5-pin Micro-C male connector.

- > Connect the battery to the NMEA2000 network using a **spur cable** (drop cable).
- > On your chart plotter, open the **Data** menu and select **Battery**.
- > Then choose **Battery 1** and select the data you want to display, such as State of Charge (SOC), voltage or current.
- > The chart plotter will now display the current values.

TIP: Most chart plotters offer the option to display this data as an overlay on the chart or depth screen. Please refer to your chart plotter manual.

NMEA2000 interface (multiple batteries)

When using multiple batteries in one network, each battery must be assigned a unique number in order to be recognised correctly.

- > Connect the batteries to the network.
- > Open the JAROCELLS App and select the battery you wish to configure as the second battery.
- > Tap the Settings icon (cogwheel "**Setting**") at the bottom of the screen and enter code **123456**.
IMPORTANT: Only change the prescribed settings. Adjusting other parameters may compromise battery safety.
- > At the top of the screen, select **Battery Parameters**.
- > At the **Slave board** setting you will see value "1". Press **Set** and change this to "2".
- > Close the app. The battery will now be recognised on the connected chart plotter(s) as **Battery 2**.
- > Repeat this procedure for a third or fourth battery, entering the next value each time (3, 4, etc.).

RS485-interface

The RS485 connector is the 4-pin Micro-C male connector on top of the battery.

- > Application: This connector is primarily intended for connecting a host computer for programming purposes.
- > Compatibility: Certain instruments with an RS485 interface can be connected, depending on the device type and communication protocol used.
- > Pin assignment: • Pin 3: Connection A (Data +)
• Pin 4: Connection B (Data -)

SAFETY INSTRUCTIONS

General

- > Follow all instructions in this manual and keep it for future reference.
- > Work on the battery may only be carried out by qualified personnel. A damaged battery must not be used.
- > Keep the battery out of reach of children.
- > The battery is intended for general use as a power supply for non-critical equipment.
- > For example, the battery must not be used for medical applications unless risks have been thoroughly assessed.
- > The battery may be used for light propulsion systems as well as for powering stationary equipment.

Risk of explosion and fire

- > The battery terminals are live. Do not place conductive materials on the battery and do not wear personal metal objects such as jewellery or watches when working on the battery.
- > Do not allow the battery to come into contact with fire or place it near heat sources.
- > Use and store the battery on a non-flammable, heat-resistant and non-conductive surface.
- > Avoid moisture and water as much as possible. Store the battery in a dry environment.
- > In case of fire, use a foam (Class D) or CO₂ extinguisher.

Safety and protection

- > Never disassemble the battery. The battery contains electrolytes and electrolyte vapours that are harmful to health. Avoid contact. In case of bodily contact, rinse immediately with water and consult a doctor.
- > Prevent damage to the battery. A damaged battery must no longer be used.
- > A damaged or deformed battery is unusable and must be disposed of as chemical waste.
- > Avoid mechanical shock such as dropping, striking or bending. Never cut or drill into the housing. Do not apply pressure to the battery or terminals.
- > Avoid direct contact with the battery terminals.
- > Use a charger suitable for LiFePO₄ and operating within battery specifications.

Instructions for connecting the batteries

- > Use cables of sufficient cross-section. Take into account required current load and cable length.
- > Series connection is permitted **only** for 12V batteries and a maximum of three of the same type. Ensure batteries are fully charged individually before connecting in series.
- > Up to eight batteries may be connected in parallel. When connecting in parallel, each battery must be fitted with a fuse rated equal to the maximum current specification of one battery.

Charging and discharging

- > Check mains voltage before connecting the battery charger.
- > Only charge using supplied cables. Extending charging cables may cause slow or incomplete charging because the charger may no longer detect battery voltage correctly.
- > Charge only in a dry, non-flammable environment.
- > Use only chargers suitable for LiFePO₄.
- > Do not charge with damaged cables. Check before charging.
- > Use the charger in a dry environment. The charger must not come into contact with moisture unless waterproof.
- > Rapid temperature changes may cause condensation. If this occurs, wait until the charger is dry and at ambient temperature (not applicable to waterproof chargers).
- > A JARO NG battery cannot be overcharged and will not be damaged by complete discharge.
- > 12V JARO NG batteries connected in series may only be charged when they have equal state of charge $\pm 10\%$. Otherwise charge separately and reconnect afterwards.
- > During discharge ensure current remains within specifications. Install sufficient battery capacity to avoid operating outside limits. Although the battery shuts down at high current, this occurs only after a delay to allow peak currents. Repeated overcurrent reduces battery life.
- > Self-discharge is 3–5% per month. With connected equipment this will increase. Check voltage regularly. Recharge when below 12.8V (25.6V for 24V or 38.4V for 36V). Keep connected until charger stops or leave connected if charger has float mode.
NOTE: The SOC (State of Charge) meter in the JAROCELLS App is based on the Coulomb principle. Measurement is accurate but must be recalibrated after more than 14 days of inactivity. After long storage recharge before use; the app recalibrates to 100% and remains accurate for 14 days.
- > If the battery is unused for long periods, disconnect equipment.
- > JARO NG batteries may be charged in frost conditions. Automatic heating first warms the battery before charging starts. A charged battery can be discharged safely down to -20°C .
- > Recharge fully discharged batteries within 24 hours. Remaining energy is minimal and undervoltage may be reached quickly due to self-discharge and internal electronics.
- > Even if not fully discharged, recharge at least every three months to recalibrate internal measurements.



Warning for parallel or series operation

- > Batteries must be at equal state of charge before connecting in parallel or series.
- > Never replace one battery in a partially discharged parallel bank with a fully charged one. Charge all separately first.
- > Series connection follows same rules as parallel (12V only, max three).
- > Batteries in series may be charged simultaneously by multiple chargers only if charger negatives are isolated. Consult supplier if unsure.
- > Do not connect more than three 12V batteries in series. 24V and 36V batteries must **not** be connected in series.

Transport warnings

- > Transport batteries in original packaging or equivalent protective packaging.
- > Secure batteries during transport.
- > Avoid mechanical shock.

WARRANTY

- > Warranty period is five years.

Warranty conditions

- > Warranty applies only under normal use within specifications.
- > Proof of purchase required.
- > Warranty limited to repair or replacement. Consequential damage excluded.
- > Complaints handled reasonably within liability limits.

Liability

- > Beyond product warranty, JAROCELLS B.V. accepts no liability.
- > Only direct damage is compensated. Consequential damage and personal injury excluded.
- > Buyer must take all measures to prevent damage.
- > Compensation limited to insurer payout or invoice value.

- > Liability and warranty are excluded in cases of:

- External events such as lightning strike
- Use of unsuitable chargers
- Incorrect installation or use
- Repairs or modifications by third parties
- Water ingress
- When used with visible defects such as deformation, burning smell, loose parts, etc.



We've got the power



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NEXT GENERATION BATTERY PACKS