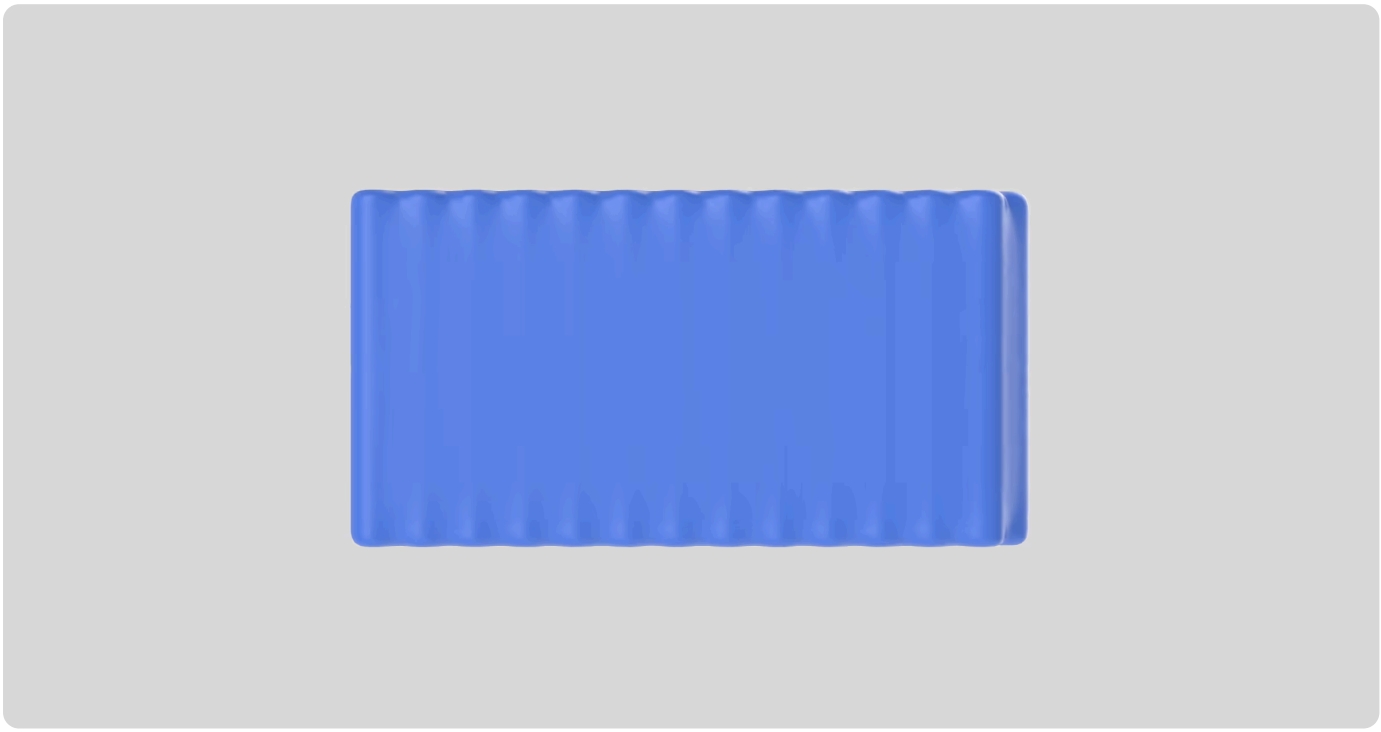
Internal battery RB (6.4V/78Ah) user manual

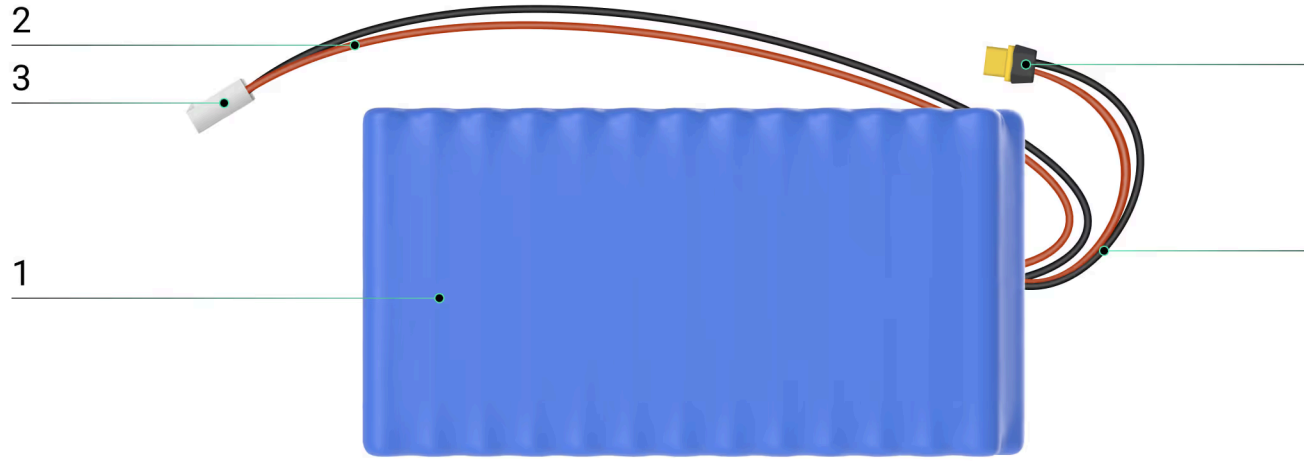
Updated September 9, 2026



Internal battery RB (6.4V/78Ah) is a rechargeable lithium iron phosphate ($LiFePO_4$) battery for powering the compatible hub.

Buy Internal battery RB (6.4V/78Ah)

Functional elements



1. Battery.
2. Cable for connecting the battery to the hub.
3. Connector for attaching the battery to the hub.
4. Charging cable.
5. Battery charging connector.

Compatible hubs

A compatible Ajax hub is required for the battery to operate.

Check device compatibility

Operating principle

Internal battery RB (6.4V/78Ah) is an internal rechargeable battery used to power Hub BP Jeweller (without casing). It can energize the hub both independently and as a backup power source when an external battery is used.

Selecting an installation site

When choosing an installation location, consider the factors that affect the battery operation:

- Operating temperature range.
- Permissible humidity level.

When the battery is not in use, storage temperature and humidity must comply with the permissible levels specified for the battery.

To extend the battery life, enable the **Battery power saver** mode.

The battery must be installed in a compatible Ajax casing.

Consider the placement recommendations when designing your Ajax system. Only professionals may design and install the security system. The list of recommended Ajax partners is available here.

Where not to install the battery

1. In places with high temperatures. For example, near heat sources, such as radiators, heaters, direct sunlight, etc. High temperatures may result in battery overheating, rapid self-discharge, damage to its components, or explosion and fire.
2. In places with high humidity. Moisture may corrode the contacts or cause a short circuit.
3. Near flammable materials. Never place the battery near flammable liquids or materials. Doing so increases the risk of fire or explosion, especially if a short circuit occurs.
4. In the Hub BP Jeweller casing.

Low temperatures may reduce battery capacity and shorten the battery life. The available battery capacity can be decreased to 30% of the nominal value when operating in extremely cold temperatures.

Preparing for installation

The battery is supplied partially charged, at about 30–50% of its capacity. Therefore, it must be fully charged before installation and connection to the hub. Otherwise, the hub's operating time may be reduced. Refer to the Recommended battery chargers and Storage conditions sections for more information.

Before installing Internal battery RB (6.4V/78Ah), ensure it is compatible with the hub. Also, read this manual and the hub user guide.

User manuals for Ajax hubs and other devices can be found on the Ajax Support page.

Do not deviate from the approved system design. Violating the basic installation rules and the recommendations in this manual may cause the battery to operate incorrectly.

Cable arrangement

When preparing to route cables, read and strictly follow the electrical and fire safety regulations in your region.

Installation and configuration

Before installation, charge the battery fully using a recommended battery charger. Otherwise, the hub's operating time may be reduced.

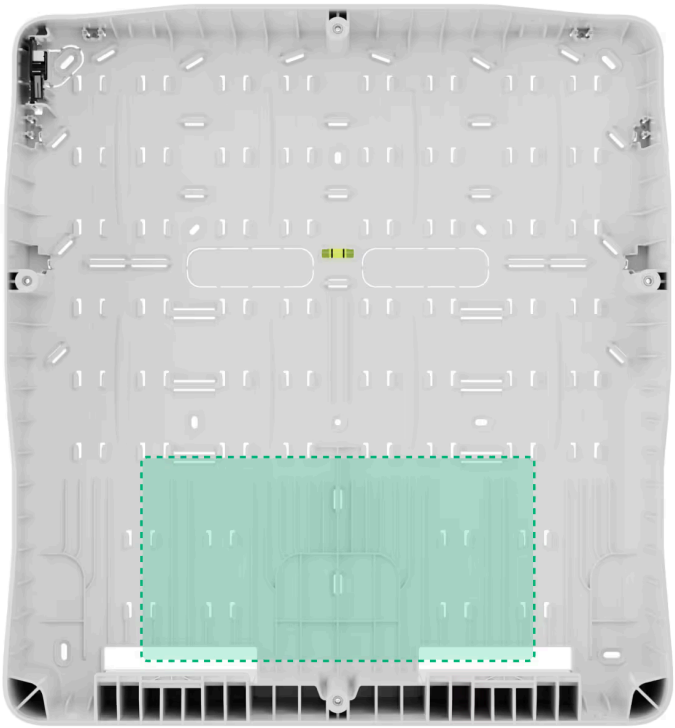
Ensure that you have selected the optimal location that meets the requirements in this manual. The battery must be installed into Case E (395) or Case D (430), which are sold separately.

Only a professional electrician may install the battery.

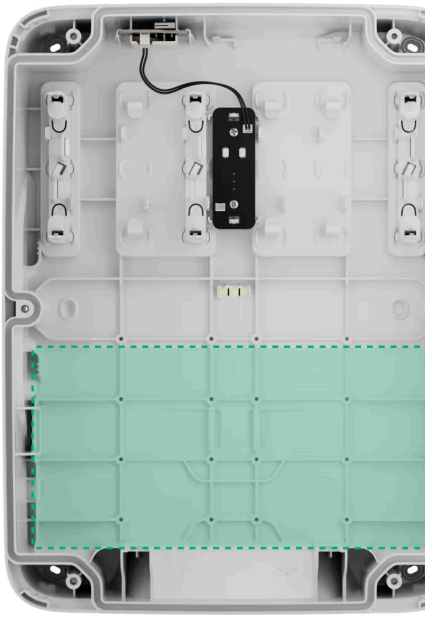
Installing the battery in the casing

Before installing the battery, read the user manuals of the compatible hub and Ajax Case. This will help you install the battery correctly and configure the hub settings.

1. Remove the casing lid.
2. Turn off the hub.
3. Install the battery in the compatible Ajax Case.



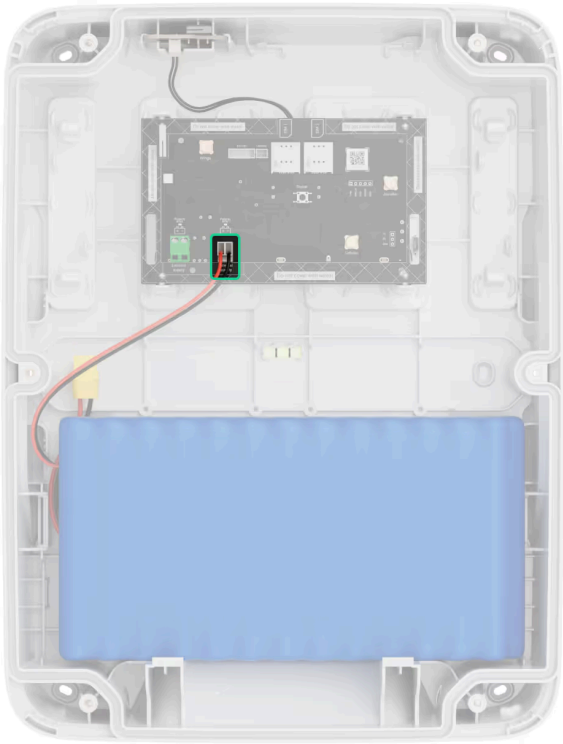
Case D (430)



Case E (395)

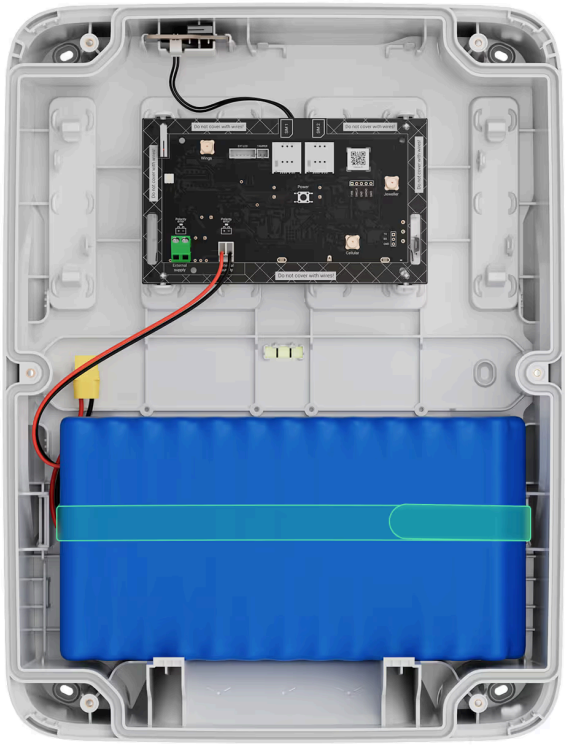
4. Locate the internal battery connector on the board.
5. Connect the battery to the board connector.

Observe the polarity. If the battery is connected incorrectly, it will not power the hub, and the connector can be damaged.



⚠ The battery cable should not lie on or under the hub board, as this may impair communication between the hub and connected devices.

6. Secure the battery in the casing with the hook-and-loop fastener (included in the Case D (430) and **Case E (395)** complete sets). Do not tighten the fastener too much, as this may damage the board and cell contacts inside the battery.

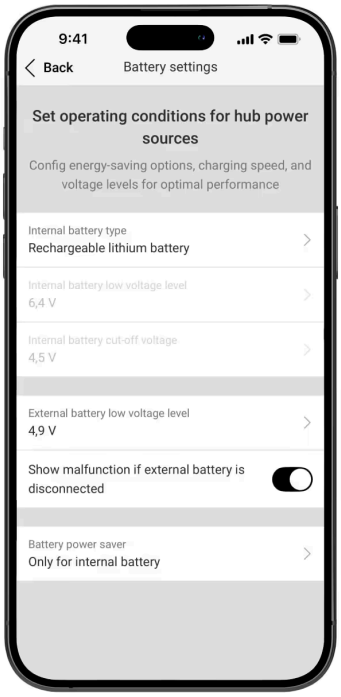


7. Turn on the hub.
8. Close the casing lid.
9. Select the battery type in the hub settings.
10. Check the battery connection state in an Ajax app.

Configuring the battery

After installing the battery, select the correct hub settings in the Ajax PRO app.

1. Select the required space or object.
2. Go to the **Devices** tab.
3. Select the hub from the list.
4. Go to its **Settings**.
5. Go to the **Service** menu.
6. Go to the **Battery settings** menu.
7. Select the **Rechargeable lithium battery** option for the **Internal battery type** setting.
8. Configure other battery settings if necessary.
9. Tap **Back** to save the settings.



States

The hub states include information about the battery connection status. They can be found in Ajax apps:

1. Go to the **Devices** tab.
2. Select the hub from the list.

Maintenance

Internal battery RB (6.4V/78Ah) is rechargeable and maintenance-free.

Recommended battery chargers

Before using the battery charger, carefully read the manufacturer’s instructions. They contain guidance on safe use and recommended parameters.

The complete set includes a cable adapter for connecting the battery to the charr

When charging the battery, use the **temperature sensor** recommended by the manufacturer of the corresponding charger.

List of recommended battery chargers for Internal battery RB (6.4V/78Ah)

Manufacturer	Model	Full battery charge time	Notes
SkyRC	Ultimate Duo 400W	7 hours	Supports simultaneous charging of two batteries.
SkyRC	iMAX B6mini	16 hours	
SkyRC	iMAX B6AC V2	16 hours	
ToolkitRC	M6DAC	7 hours	Supports simultaneous charging of two batteries.
HTRC	T240 DUO	10 hours	Supports simultaneous charging of two batteries.
EV-PEAK	C1-XR	10 hours	
Hitec	RDX1 Mini	7 hours	

If the battery has been fully discharged by the hub, some chargers (for example, Ultimate Duo 400W) may not detect it immediately. In this case, apply a short pre-charge (e.g., 7.2 V with a current limit of 100 mA for about 10 seconds) to restore normal operation.

Note that some battery chargers may display a message such as “Connect error, check main port”, “Main port disconnected”, “Battery disconnect”, or similar when charging is complete. This behaviour is expected and does not indicate a problem with the battery or affect its operation.

The battery can also be charged using a regulated DC bench power supply with adjustable voltage and current limits.

Charging profile and recommended parameters for the battery charger

Parameter	Value
Battery type	$LiFePO_4$
Maximum charge current	15 A
TVC (Terminal Voltage Control)	7.2 V⎓ (3.6 V⎓ per cell)
Temperature cutoff	+45 °C
Cell configuration	2S

Storage conditions

The battery should be stored in a cool, dry, and well-ventilated place at a temperature not exceeding +45 °C. The battery should be charged to about 30–50% of its capacity. These conditions are necessary to reduce battery degradation.

To prevent capacity loss due to overdischarge, recharge the battery no later than 6 months from the QA date indicated on the packaging sticker (MM.YYYY).

Technical specifications

All technical specifications

Compliance with standards

Contacting technical support

If the battery does not operate properly, we recommend contacting Ajax technical support first. In most cases, technical issues can be resolved remotely.

- email
- Telegram



Need help?

Explore the full potential of an Ajax system through detailed manuals, articles, tools, and FAQs. For immediate assistance, our AI-powered chatbot and professional technical support team are available 24/7.

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Video surveillance solution
Integration with Yale smart locks
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