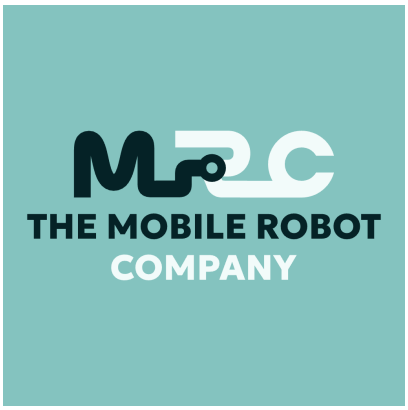

The Mobile Robot Company

Knowledge Center — Charging Safety · 2026-08-04

https://info.mobilerobot.com/safety-compliance/safety-functions/charging-safety

Charging Safety

Charging the J1600 is covered by a certified safety function: the **charging-current relay**, rated **Performance Level b (PL b)**. This page collects the safety-relevant facts about the battery and both charging methods.

The battery

Parameter	Value
Battery	24 V, 200 Ah
Chemistry	Lithium iron phosphate (LiFePO4)
Charging rate	About 47 percentage points per hour
Transport testing	UN Manual of Tests and Criteria, subsection 38.3 (UN 38.3)
Regulatory coverage	Regulation (EU) 2023/1542 — Batteries Regulation

LiFePO4 chemistry (https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/) is part of the vehicle's industrial-use design, alongside its certified safety architecture. The battery is tested to UN 38.3 (https://info.mobilerobot.com/safety-compliance/certificates/battery-un-38-3-documentation/), the standard transport-safety test series for lithium batteries.

Charging-current relay

The charging-current relay is one of the nine certified safety functions on the Performance levels (https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) table. It governs the charging current path between charger and vehicle.

Manual charging

Manual charging works like charging a conventional electric pallet jack: plug in the charger during a break or when the machine is idle.

Automatic charging

With the optional automatic charger, the robot drives to the station, positions itself at the charger, and a charging interface extends to the vehicle's charging plates — no human contact with the connection is needed. This supports opportunity charging (https://info.mobilerobot.com/applications/scenarios/automatic-charging/) while the robot is not busy. Automatic charging is an advanced automation capability; when purchased, its setup is part of installation Day 1.

Related pages

- Safety architecture (https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/) — where the charging-current relay sits among the certified components.
- Performance levels (https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) — all assigned levels in one table.
- Technical specifications (https://info.mobilerobot.com/products/j1600/technical-specifications/) — full battery and power data.

> **PRELIMINARY SPECIFICATION**
>
> Performance Levels come from the preliminary January 2026 product documentation and are subject to change.