Choosing the Right Charging Solution

Checklist &
Comparison of Amp5 vs Wallboxes

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Checklist

When planning your investment in charging infrastructure, there are several factors that affect operational reliability, total cost over time, and future flexibility.

Below is a checklist to use as support in your decision-making process.

Category	Questions to ask	
Communication & Operational Reliability	Is there a wired network (LAN) to each outlet for reliable connectivity?	☐
	Is there native OCPP support to avoid dependency on manaufacturer's cloud service?	☐
	Is there support for OCPP 2.0.1 for future services like Plug&Charge and V2G?	☐
	Does the system have automatic recovery functions to avoid site visits during operational disruptions?	☐
Power Optimization & Safety	Can the system dynamically balance phases and distribute current to optimize available power?	☐
	Does each charging outlet have a self-resetting residual current device and fuse? Or are site visits required for reset?	☐
	Is surge protection included to protect vehicles and the facility? (Legal requirement for public charging).	☐
	Can the system be integrated with the building's safety system (e.g. emergency stop on fire alarm)?	☐
User Experience & Operations	Is there a display showing charging status, error codes, and dynamic QR codes for secure payment?	☐
	Does the system have a battery backup to unlock charging in the event of a power outage?	☐
	Can lighting be integrated for increased safety and comfort in the parking area?	☐
Installation & Future Scalability	Is the installation modularized and quality-assured, or dependent on 3rd party installation materials?	☐
	Can the facility be expanded without new groundwork and cable routing?	☐
	Can the same infrastructure also be used for other needs, e.g., engine block heaters?	☐

Wallbox or System Solution?

Different projects require different solutions. We believe wallboxes should be used in smaller installations or where site-specific conditions do not allow a system solution.

However, for larger installations, it is important to consider functionality that meets requirements for operational reliability, total cost over time, easy expansion, and future-proof features.

In the tables below, we compare Amp5 with two commonly used wallboxes[1]. The purpose is not to disparage these products, but to clarify what advantages Amp5 can offer in larger and more business-critical installations.

Communication & Operational Reliability

Feature	Amp5	Zaptec Pro	CTEK CC3
Redundant LAN	Yes, each outlet has redundant wired LAN for internet connectivity. This minimizes the risk of communication disruptions.	No, primarily uses wireless connectivity.	Yes, LAN but no redundancy.
Direct OCPP	Yes, Amp5 supports OCPP 1.6J and 2.0.1 (without proxy). Amp5 communicates directly with the charge operator's backend. This eliminates dependency on the hardware manufacturer's cloud service. OCPP 2.0.1 enables future services such as Plug&Charge and V2G.	No, only OCPP 1.6J via Zaptec's own cloud (proxy).	Yes, for OCPP 1.6J. OCPP 2.0.1 support has been communicated in product roadmap.
Self-healing System	Yes, Amp5 has a built-in function that monitors operations and internet connectivity. In case of disruption, automatic restart occurs at processor level and active charging sessions are paused and then resumed.	No, only automatic in connection with firmware updates. Manual restart possible remotely.	No, only automatic in connection with firmware updates. Manual restart possible remotely.

[1] *Based on publicly available data.*

Power Optimization & Safety

Feature	Amp5	Zaptec Pro	CTEK CC3
Load Balancing via LAN at Multiple Levels	Yes, via LAN. Support for RS485-connected energy meter (Modbus) at service level.	No, only via PLC.	Yes, via LAN.
Phase Switching/Current Allocation for optimization of available capacity	Yes, support for dynamically switching phases and distributing current between phases depending on EV needs.	Yes, support for dynamic phase balancing.	No, only static phase allocation.
Self-resetting RCD Type B & Circuit Breaker	Yes, built-in RCD and fuse at each charging outlet. Both are self-resetting after the charging cable is disconnected, minimizing the need for site visits.	No, only the RCD is self-resetting after disconnecting charging cable.	No, only the RCD is self-resetting after disconnecting charging cable.
Surge Protection against lightning and voltage spikes Legal requirement for public charging!	Yes, centralized surge protection as standard.	No, requires separate installation.	No, requires separate installation.
Emergency Stop	Amp5 has an input for emergency stop that can be integrated with the building's existing fire or safety system. On alarm, all charging sessions are immediately interrupted.	No, only possible via separate installation.	No, only possible via separate installation.

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User Experience & Operations

Feature	Amp5	Zaptec Pro	CTEK CC3
Display	Amp5 is equipped with a 4.3" TFT display that can show real-time charging data, error messages, and digital QR codes. Digital QR codes prevent fraud with fake stickers.	No, lacks display. MID version has a counter for kWh.	No display on standard CC3. The CC3i variant has a 7" touchscreen with dynamic QR codes and real-time charging data.
Battery Backup	Amp5 has integrated battery backup that allows ongoing charging sessions to be safely concluded during power outages and charging outlets to be unlocked. System owners are notified automatically.	No backup function. Requires separate installation.	Nobackup function. Requires separate installation.
LED Lighting	Amp5 can be delivered with integrated LED lighting for increased safety and comfort in parking areas.	No, lacks this feature.	No, lacks this feature.

Installation & Scalability

Feature	Amp5	Zaptec Pro	CTEK CC3
Modular Installation	Amp5 is a fully modularized system where every module and installation is predetermined. This ensures the highest quality and eliminates the risk of faulty workmanship or substandard components. Additionally, installation time is minimized.	No, needs to be supplemented with third-party materials during installation.	No, needs to be supplemented with third-party materials during installation.
Ground Expansion	Amp5 is built on ground screws or pole bases with integrated cabling. Expansion can be done quickly and without costly groundwork or new cable routing.	No, requires new groundwork and cable routing for expansion.	No, requires new groundwork and cable routing for expansion.
Engine Block Heaters	Amp5 can also be used for engine block heaters via EVSE adapter thanks to phase switching support. This provides more use cases for the same infrastructure.	No, warranty covers EV charging only. EVSE adapters may not be used unless approved by the vehicle manufacturer.	No, warranty covers EV charging only. EVSE adapters are not permitted according to the manual.

Centralized charging technology for operational reliability.

Modular for fast & reliable installation.

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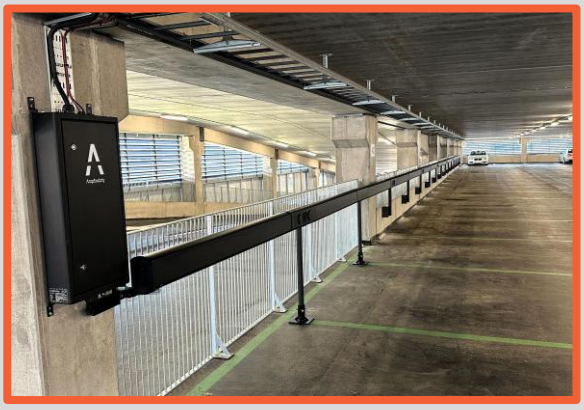
Aesthetics

Naturally a matter of taste, but many Amp5 customers appreciate the discreet design, especially for larger installations. Below are a few customer references.

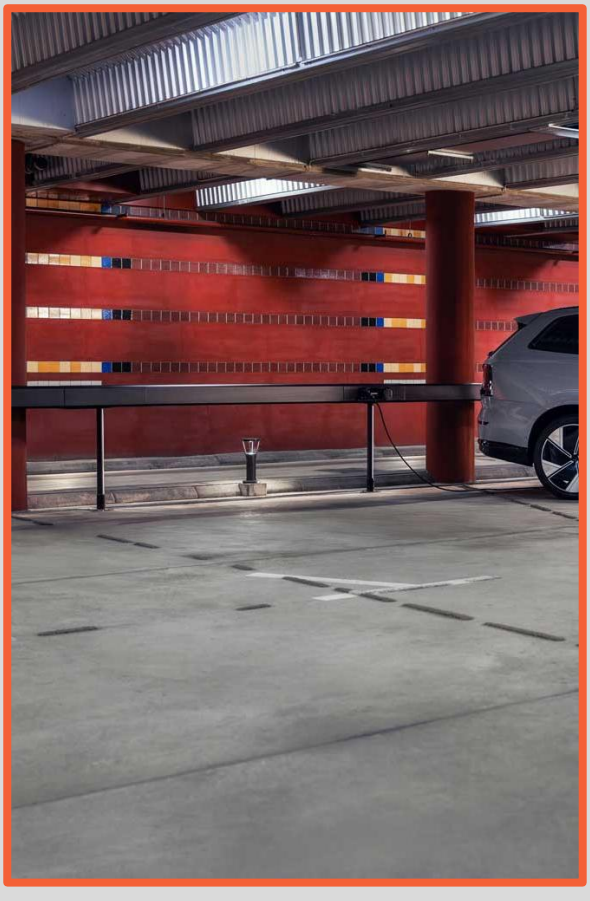


Hedin Mobility Group in Sweden

Stena Properties, Malmö in Sweden

Stena Properties, Malmö in Sweden

Slottsmöllan, Halmstad in Sweden



Wihlborgs Properties, Malmö in Sweden

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Aesthetics

Slottsmöllan, Halmstad in Sweden

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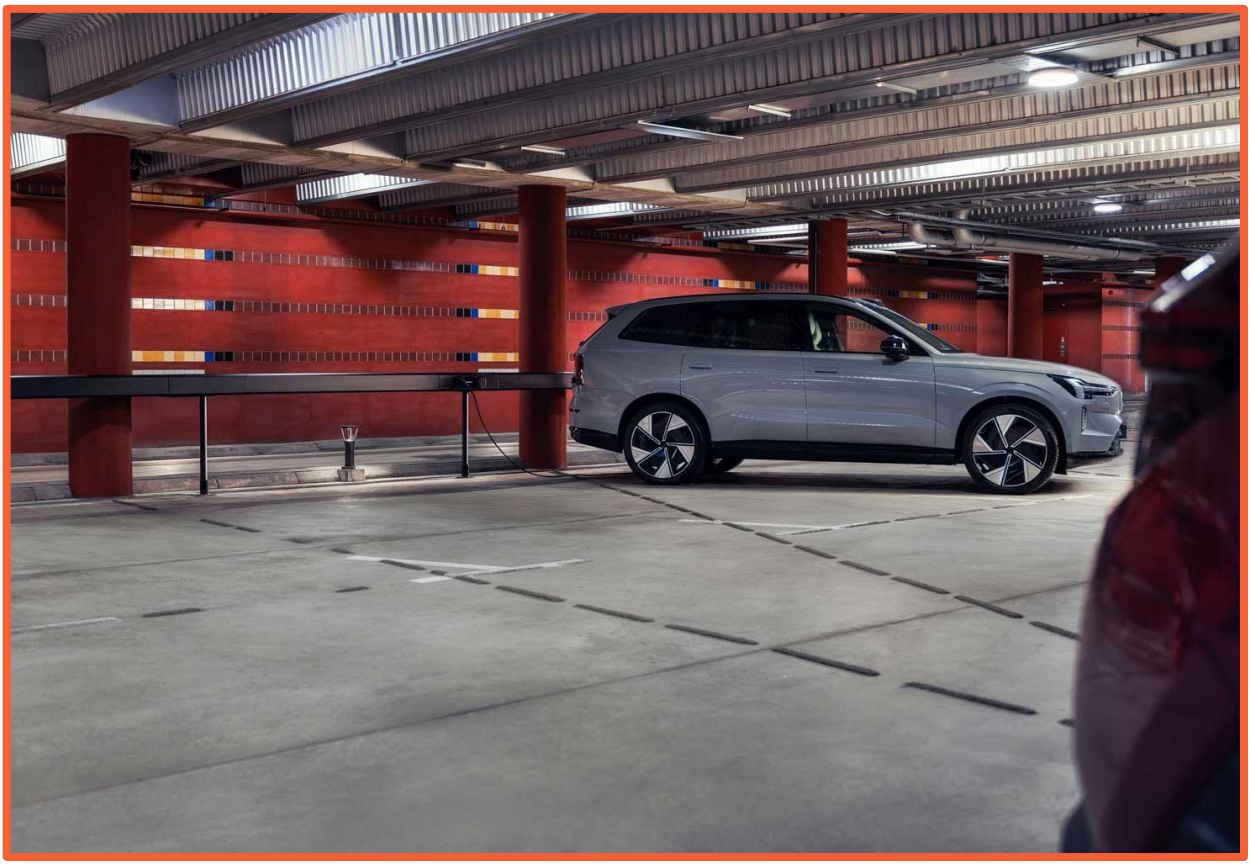
Aesthetics

Wihlborgs Properties, Malmö in Sweden



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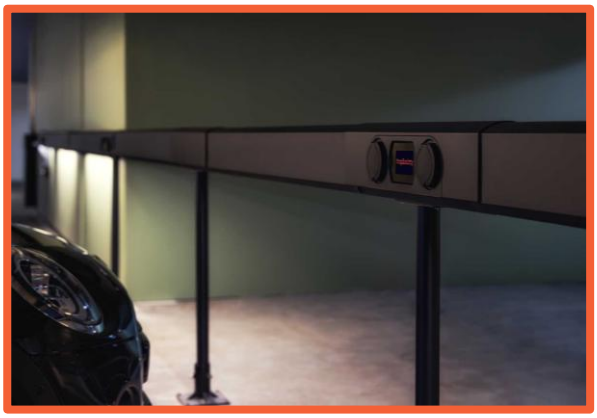
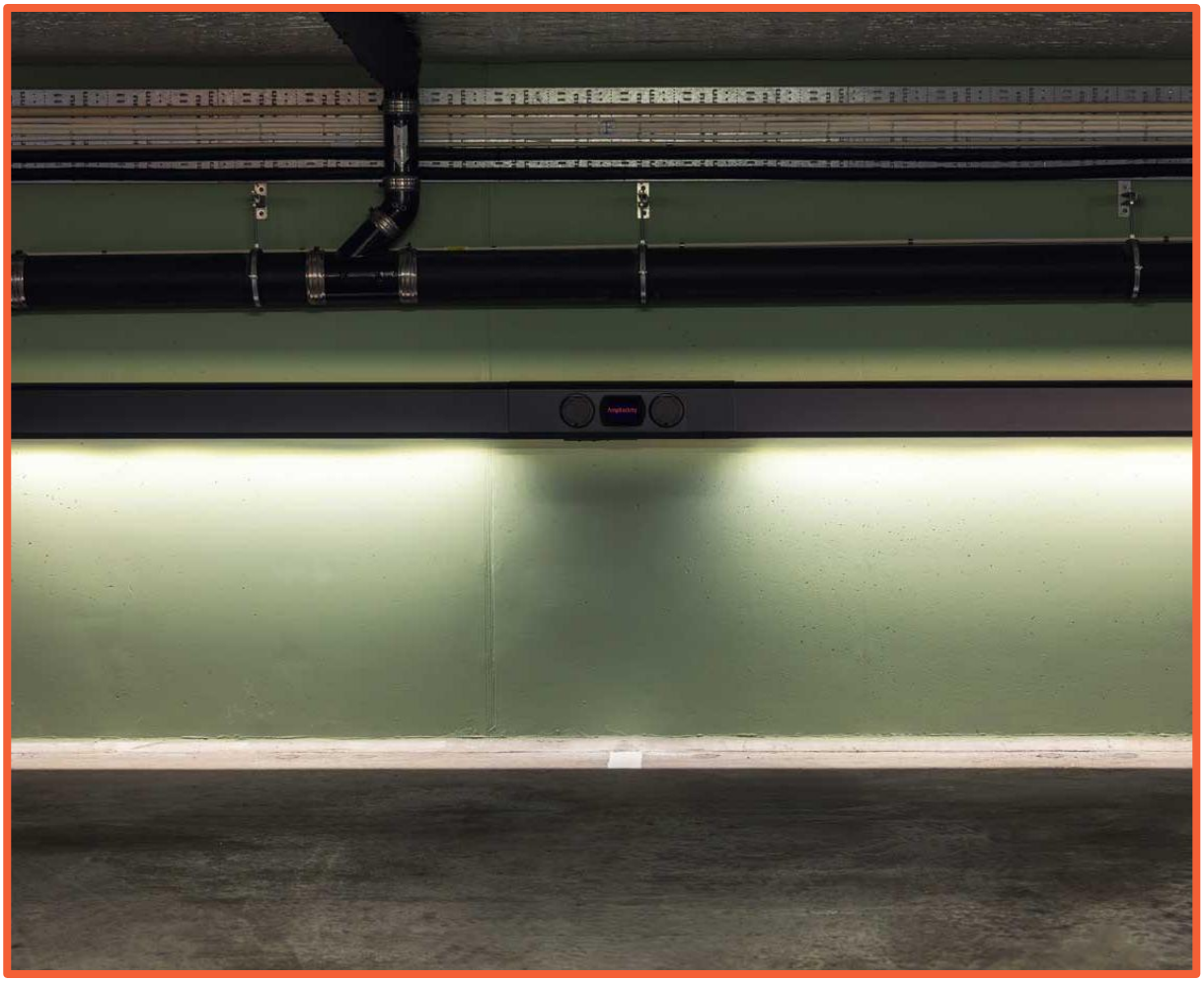
Aesthetics

Stena Properties, Malmö in Sweden





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Amp5 - Technical Information

Max number of charging outlets	54 per Smart Hub[1]
Max number of simultaneous charging sessions	30 per SmartHub[1]
Max incoming current	63A per SmartHub[1]
Max simultaneous charging power	44kW
Max charging power per outlet	22kW (3-phase), 7.4kW (1-phase)
Main fuse	63A, B-characteristic
Communication protocol	OCPP 1.6J / OCPP 2.0.1 / ISO15118-20
Network connection	Teltonika RUT 901 with 4G SIM card LAN Wifi (configuration only)
RF technology	GSM, GPRS, EDGE, UMTS/HSPA+, LTE
RFID type	ISO/IEC 14443 Type A, 13.56 MHz Mifare
Current measurement	MID certified version of Amp5 is available for delivery in May 2026.
24V input for external switch	Yes
Static load balancing against fixed value	Yes
Dynamic load balancing	Yes. Via internet or locally with Modbus TCP / RS-485
Residual current device	Type B per outlet (IEC60947-2)
Circuit breaker	32A B-characteristic
Battery backup (UPS)	Capacitor
Charging outlet	Typ 2, (IEC 62196-2)

Display	TFT 480x272px, (HxW): 55 x 96 mm
Temperature range - operating	-30°C to 45°C air temp.
Temperature range - non-operating	-30°C to 65°C condensation-free
Material	Aluminum, minimum 75% recycled aluminum
Color	Graphiteblack (RAL 9011), powder-coated
Lock	EBR-lock "Stockholm"
IP rating	IP54
IK rating	IK10
Autocharge	ISO15118-2:MAC
Other	Customizable display content via OCPP RCD testing with magnetic sensor User interaction via QR code, RFID Lockable charging outlets

[1] If more than 54 charging outlets, more simultaneous charging sessions, or support for higher incoming current is desired, Amp5 is supplemented with additional SmartHubs.