



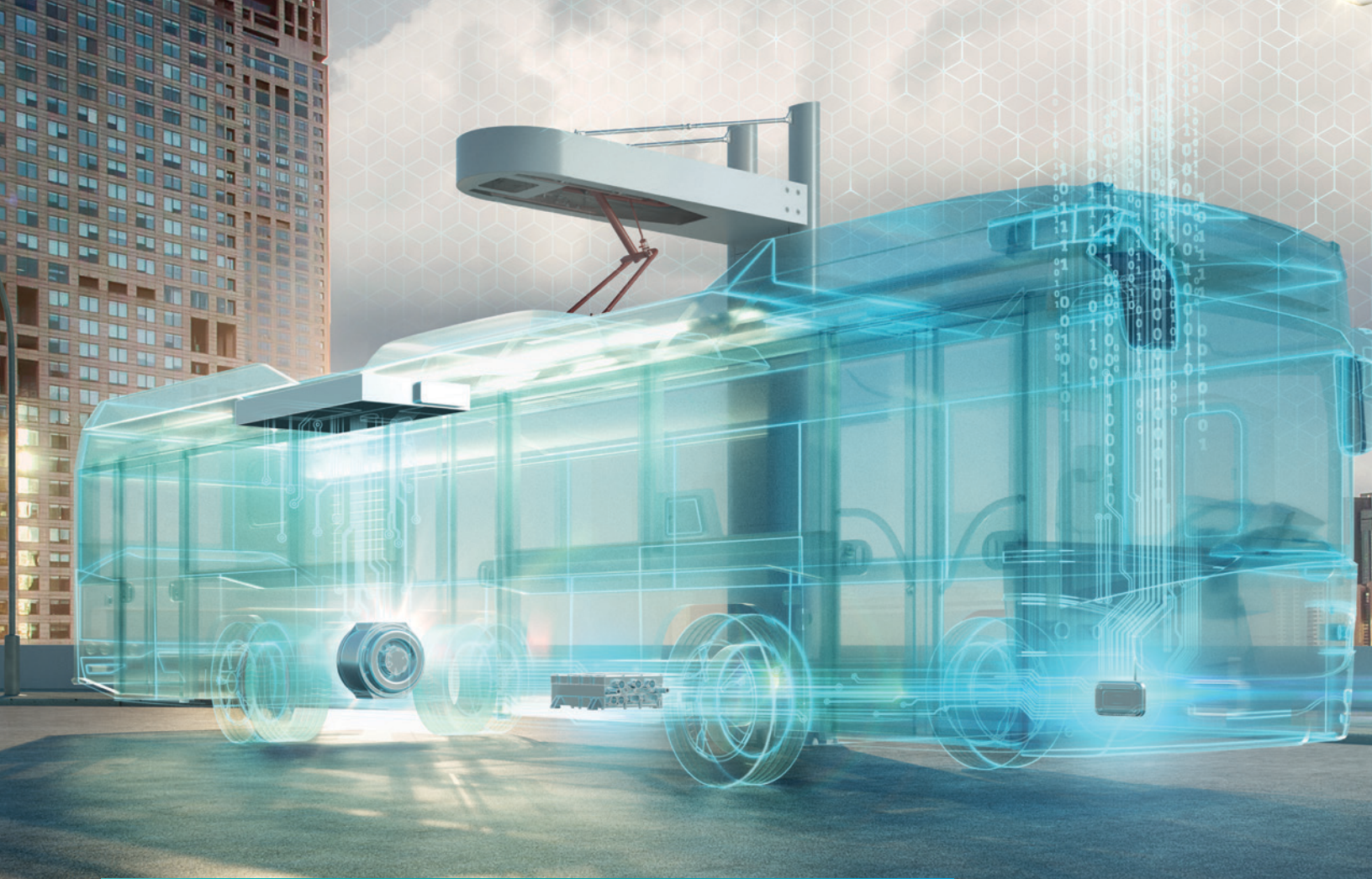
SIEMENS

Ingenuity for life

VersiCharge Apex™ and VersiCharge Go™ chargers

Pantograph charging solutions

[siemens.ca/emobility](https://www.siemens.ca/emobility)



VersiCharge Apex™ and VersiCharge Go™ chargers

Pantograph charging solutions

Fleet and sustainability managers are moving at a fast pace to upgrade their aging bus systems to more environmentally friendly eBus solutions, but with this change comes a substantial increase in energy requirements for bus charging.

Siemens pantograph VersiCharge Go™ (street level) and Apex™ (ceiling mount) chargers solve this challenge by providing charging at the most efficient and user friendly location. This fast, safe and secure solution spreads out charging to locations where power is available.

Main advantages

- A fast, high-efficiency charging solution available in 450 kW and 600 kW
- Proven interoperability with eBus Original Equipment Manufacturers (OEMs)
- Urban (custom colours) or industrial mast designs
- Easy integration to any OCPP compatible backend
- Street level or depot ceiling mounted designs
- Smart opportunity charging with monitoring and reporting available



General specifications

Temperature range: -35°C (-31°F) to 45°C (113°F)

Built in North America

Communications: OCPP 1.6J

OppCharge and SAE J-3105 Compliant

Wi-Fi Communications: ISO 15118

Max output current: 400A/600A/800A

Voltage range: 200VDC to 920VDC

EN 55016-2-1 and 3

kW range: 450 or 600 kW

EN 61000-4-2, 61000-4-3, and 61000-4-4

Equipment certification: UL /CSA field certified

EN 61000-4-5 and 61000-4-6

Protection class: NEMA 3R

Charging standard: EN 61851-1/23/24

Safety: IEC 950, UL 1950, EN60950

Cooling principle: Forced air

Fleet charging options



Plug in with remote dispenser charger or Plug in charger



Indoor Pantograph



Outdoor Pantograph



VersiCharge Go – Pantograph street-level

Built in industrial or urban designs

Modular architecture and versatility

A variety of of colour designs are available with the Siemens mast offerings. Depending on your city’s needs, an urban or industrial design are available. Either design can be manufactured to accommodate a single or double-decker bus.

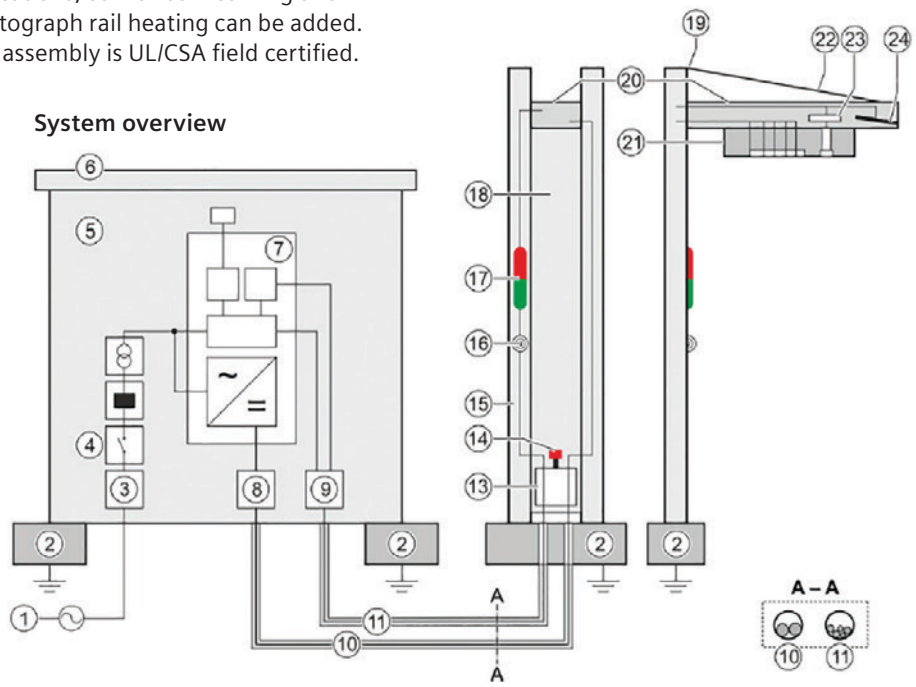
The mast designs are fully pre-assembled at our North American factory and come with power and control connection boxes for interconnections to the High Power Charging (HPC) cabinet.



Modular design

The modular design includes an HPC cabinet with an isolation transformer, AC-DC converter, charger controls, communications, as well as incoming and outgoing connection panels. If required, pantograph rail heating can be added. The cabinet is rated for NEMA 3R. The entire assembly is UL/CSA field certified.

1. Main connection
2. Foundation with foundation ground electrode
3. Line voltage input
4. Main line connection switch
5. Charger housing
6. Roof
7. High Power Core Charger (HPCC)
8. Power supply outputs
9. Signal and control outputs
10. Charging cable
11. Signal and control cables
12. Terminal box
13. Stop charge button
14. Charger mast
15. Y-sensor
16. LED signal lamp
17. Panels
18. Suspension of the tension rod
19. Cantiever arm
20. Pantograph
21. Tensioning rod
22. Pantograph control
23. WLAN antenna



VersiCharge Apex – Pantograph depot designs

Built for ceiling or gantry depot applications



Copyright: Volvo



Hands-free charging

The Siemens VersiCharge Apex pantograph adds high power charging to depots. This design requires no interaction by the operators to initiate a charge, thus, saving time and avoiding personnel handling plug-in cables.

Modular installation

Providing flexibility in your depot design, the ceiling-mounted electrical infrastructure can be easily run using either cable or busway. Power is supplied by the main, high-power charging cabinet.

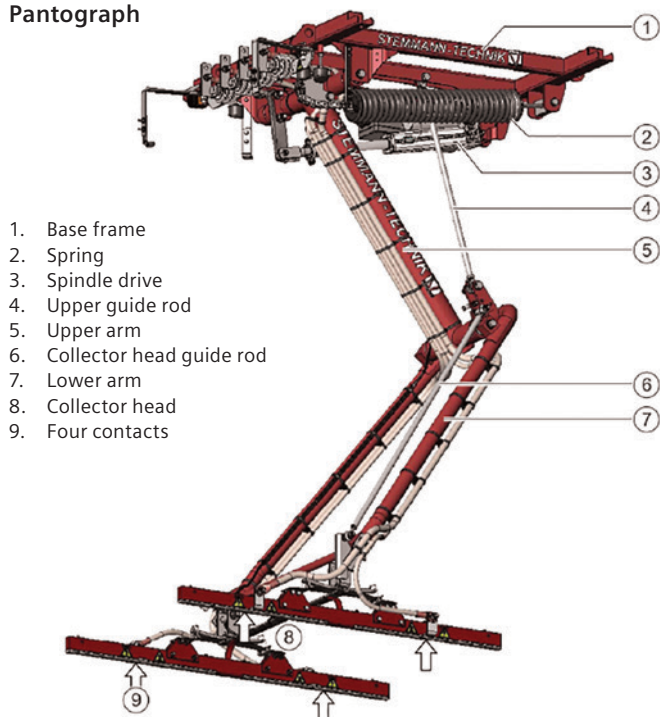
Communications

Communication to the pantograph is over secure Wi-Fi based on ISO 15118, ensuring the unit is only deployed when required.

Operations

The pantograph will automatically connect to the bus when communication is established and proximity is confirmed. Force sensors will ensure accurate deployments and additional safety measures are in place, should the power flow or communication fail at any point during the charging process. To ensure connectivity in colder climates, the contacts are heated to prevent icing.

Pantograph



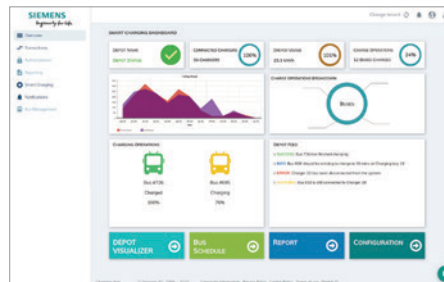
Cloud based Software as a Service™ (SaaS)

Operator interfaces and technical specifications

Cloud SaaS

The Siemens IoT cloud solution provides monitoring, control, operational data, and reporting for the entire charging infrastructure. Communication is based on the industry's open standard, OCPP 1.6J. Common operational and performance information includes:

- Commencement and duration of charging session
- Bus-ID and ID of the charging station
- Amount of delivered energy in kWh
- Profiles for voltage, power, and current
- Detailed process information and statistics
- Charging profile / Energy / Availability analysis
- Alerts and alarms



Dashboard overview



Monitoring and reporting

Siemens SaaS features



Remote support and diagnostics



Charger notifications SMS/email



Customer monitoring/reporting on any web browser



Energy optimization



HOCHBAHN

Plug-in



HOCHBAHN

UAA2

UNSER ANTRIEB
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VISION AUF

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