SICHARGE UC

Modular and powerful DC charging for electric fleets

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SIEMENS

Your fleet:
Always ready to go

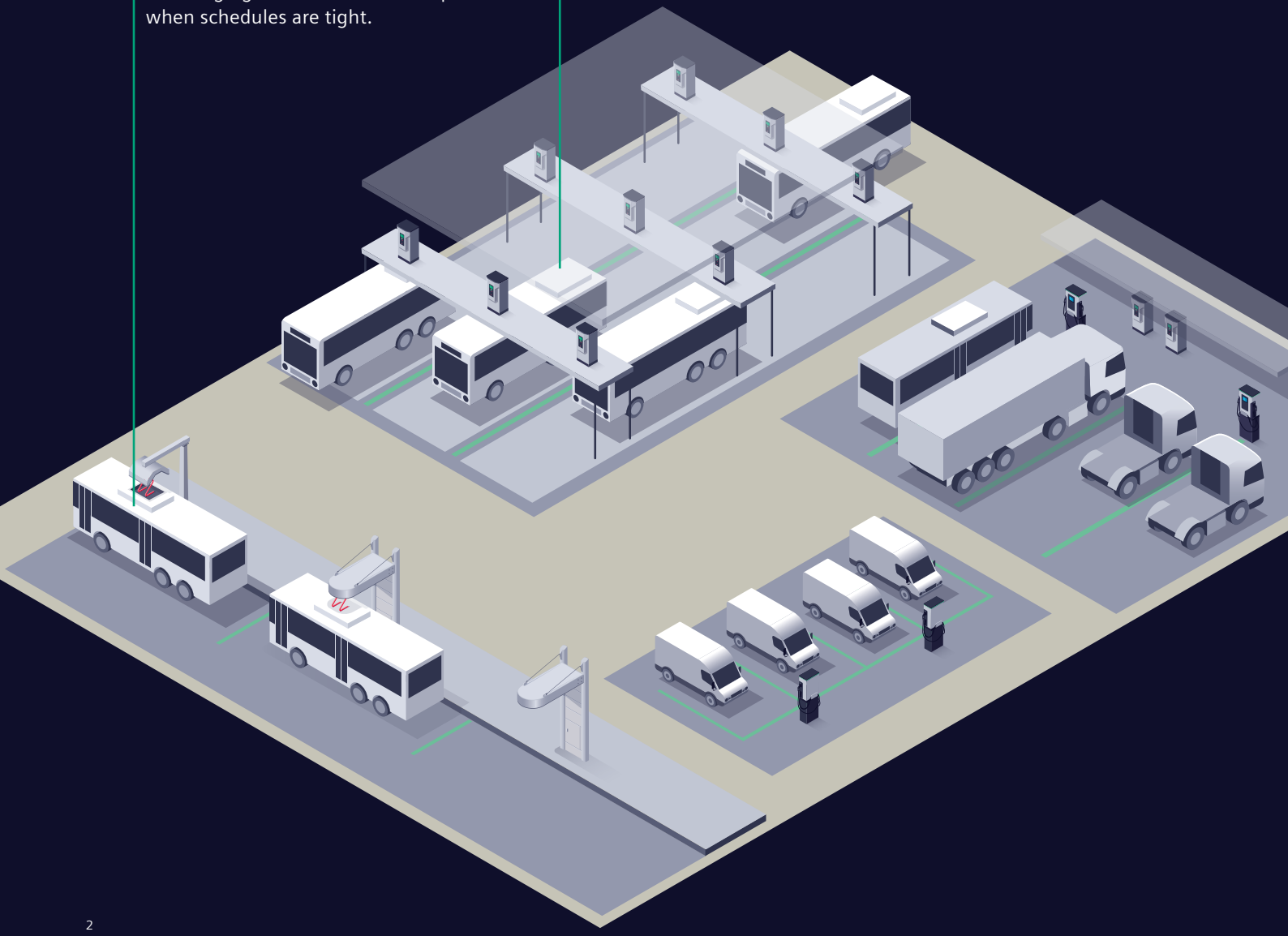
The SICHARGE UC family was specifically designed for charging buses and commercial vehicles at the depot or on-route at selected locations. When and where charging is most reasonable and efficient depends on the routes, charging schedules, and location of electric vehicles. Its modular design, multiple connection options – including dispenser and high-power automated charging with either pantographs or hoods – allows for easy integration into existing charging infrastructures, even with space constraints.

Depot charging

Vehicles generally spend at least several hours during the day or night at a central depot and can be charged based on the needs of their schedule. Charging directly from a SICHARGE UC compact charger or connected dispenser is ideal for overnight charging at the depot.

Opportunity charging

High-power automated charging with pantographs or contact hoods is the optimal ultra-fast charging solution. The system can either be configured for charging on-route or in the depot when schedules are tight.



Charging system designed for your needs

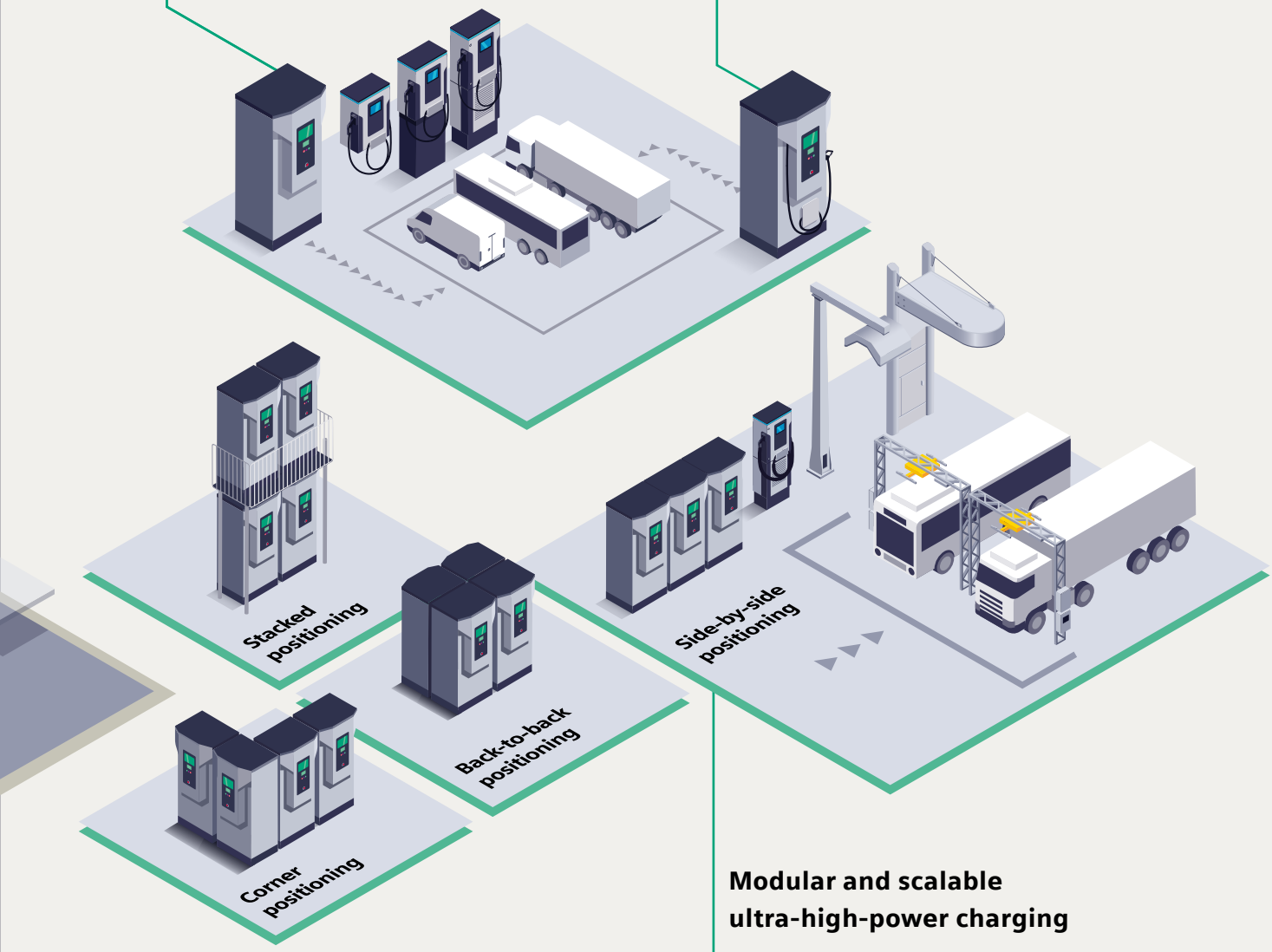
The flexible SICHARGE UC charging systems support you with easy integration into existing depots. They overcome your space constraints and provide you with the ideal charging infrastructure for ensuring that your electric fleet is up and running on time.

Distributed charging

The SICHARGE UC charging center can power up multiple charging points by using UC dispensers. This cost- and space-saving solution can be flexibly installed on the floor, on the wall, or under the ceiling.

Compact charging

SICHARGE UC 150C compact charger with integrated cable – simple and direct connection of the charger to your eVehicle.



Modular and scalable ultra-high-power charging

Up to four 150 kW charging centers can be combined to deliver up to 600 kW of DC power from a single charging point.

For rapid charging in the depot or on-route, the SICHARGE UC family offers dispenser with liquid cooled cable (up to 400 A) or automated solutions like inverted pantographs and contact hoods (up to 800 A).

Check out all the features of our depot solutions

Charging center

The charging center is the core of your system. It contains the charging controller, the DC converters, and an optional direct cable connection to the vehicle. Several other vehicle connections like the cable-based dispenser, inverted pantograph, and contact hood can be powered by this unit.

SICHARGE UC 150 charging center highlights

- Optimized design concept with large 180° front door opening for convenient service
- High degree of protection (IP54) from dust and spray water
- C4 paint for highly corrosive environments; weatherproof, UV-resistant, color-stable, and scratch-resistant powder coating
- Rain inclination hood
- Emergency DC shutdown button
- Smooth plug handling with ergonomically designed plug holder

Optional

A variety of options are available for SICHARGE UC charging centers:

- Power cable of an appropriate length up to 10 m with cable holder for easy operation
- LED for user guidance and indication of DC charging status
- EMC Class B
- RFID card reader
- Daylight-readable multilingual 10″ outdoor touchscreen display IK10
- DC charging cable CCS2
- Input AC meter, output DC meter

Technical data (IEC)

SICHARGE UC		150C	150	300 (2 x 150)	450 (3 x 150)	600 (4 x 150)
Configuration with cable		Yes	n.a.	n.a.	n.a.	n.a.
Prepared for dispenser connection		n.a.	Yes	Yes	Yes	Yes
Cable lengths	m	3.5; 6; 10	n.a.	n.a.	n.a.	n.a.
AC nominal input						
Voltage	V	400 ± 10%				
Current at nom. voltage per phase	A	228		456	684	912
Frequency	Hz	50				
Power factor	cos phi	> 0.99				
Short-circuit current rating	kA	10				
THDi	%	< 10				
Network type		TN-C, TN-S, TN-C-S				
DC output						
Rated power	kW	150		300	450	600
Voltage (range)	V	100 ...1,000				
Current (max. @600 V DC)	A	250		500	750	1,000
Efficiency factor η (at load 100%)	%	≥ 96				
Environmental conditions						
Operating environment		Indoor and outdoor				
Operating temperature	° C	–25 ... +45				
Operating altitude	m	≦ 2,000 above sea level (without derating)				
Relative humidity	%	5 ... 95 (non-condensing)				
Mechanical specifications						
Enclosure protection		IP54, IK10				
Housing material		Painted steel and stainless steel				
Coating		C4H (suitable for operation in industrial areas and coastal areas with moderate salinity) acc. to ISO 12944-5				
Color		Main housing: RAL 9006 – white aluminum; roof and base: RAL 9017 – Traffic black matte				
Approx. overall dimensions[1]						
W x D x H	mm	919 x 908 x 2,058		1,848 x 908 x 2,058	2,777 x 908 x 2,058	3,706 x 908 x 2,058
Approx. foundation dimensions[1]						
W x D	mm	919 x 719		1,848 x 719	2,777 x 719	3,706 x 719
Approx. weight acc. to configuration	kg	1,250		2,500	3,750	5,000
General specifications						
Local user interface		10" touchscreen HMI and status LED (optional)				
User authentication		RFID offline and online (optional)				
Network connection		Ethernet interface; 3G and 4G				
Electric safety device		RCD Type B (optional)				
Operating noise level						
@ 3 m distance	dB(A)	Up to 62 in normal operation, low-noise mode 50 (optional)				
Norms and standards						
Charging standards		EN 61851-1/23/24, ISO 15118 (DIN 70121)[2]				
Communication protocol[2]		OCPP 1.6J, Modbus TCP[2]				
EMC standards		EN 61000-6-2, -3, -4, -5, and -6				
EMC class		EMC Class A, Class B (optional)				
CE certification		Yes				

eVehicle connection possibilities with sequential charging operation

Charging Center UC 150C	Comes with integrated CCS2 DC plug with no other charging connection options
Charging Center UC 150[3]	Up to 4 charge points with air-cooled cable Up to 3 charge points with air-cooled cable + 1 charge point with air-cooled cable with contact hood 1 contact hood or 1 inverted pantograph
Charging Center UC 300	Up to 2 charge points with liquid-cooled cable[4] 1 contact hood or 1 inverted pantograph
Charging Center UC 450, UC 600	1 contact hood or 1 inverted pantograph

1) With side-by-side positioning

2) For supported functionalities of OCPP, Modbus, and ISO 15118, please refer to the technical documentation available from your Siemens partner.

3) Optional sequential charging operation. For the details please consult your local Siemens partner.

4) More than one dispenser connection available with an additional engineering solution.

Dispensers

The cable-connected dispensers in the SICHARGE UC family are installed close to the vehicle connection and feature a small footprint. For investment and space optimization, dispenser can be delivered in a single- or dual-plug configuration and several dispensers can be powered in sequence by a single charging center.

Single-/dual-plug dispenser highlights

- Second CCS2 DC charging cable with covered plug holder at a dual-plug version
- Built for outdoor use with IP54 degree of protection from dust and spray water
- Multiple options for floor, wall, or under-ceiling mounting
- Charging status indication by 360° LED light
- Inclined rain protection hood directs water to the rear
- Cable holder for easy and clean operation
- Power cable for use in convenient length in different variations

Optional

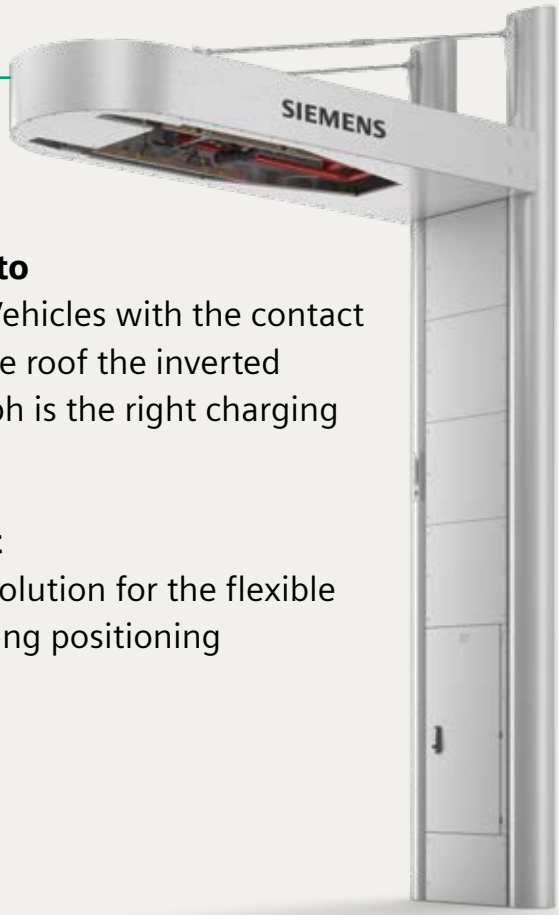
The following option is available:

10" daylight readable touchscreen display at an ergonomic height with the new design of HMI

Technical data (IEC)

		Floor-mounted dispenser	Wall- and ceiling-mounted dispenser	Liquid-cooled cable dispenser
Configuration		Single-/dual-plug		Single-plug
Cable variants		Air-cooled cables		Liquid-cooled cables
Cable lengths	m	3.5; 6; 10		5
DC output				
Connection standard		CCS type 2 plug		
Rated power	kW	100/150		300
Voltage (range)	V	100 ...1,000		
Current (max.)	A	125/250		400
Peak auxilliary power consumption at 230 V	W	41		1,216
Standby power consumption @ 25° C	W	32		
Environmental conditions				
Operating environment		Outdoor and indoor		
Operating temperature	° C	–25 ... +45		
Operating altitude	m	≦ 2,000 above sea level (without derating)		
Relative humidity	%	5 ... 95 (non-condensing)		
Mechanical specifications				
Enclosure protection		IP54, IK10 for housing		IP54, IK10 for housing, IK09 for HMI
Housing material		Painted steel and stainless steel		
Coating		C4H (suitable for operation in industrial areas and coastal areas with moderate salinity) acc. to ISO 12944-5		
Color		Main housing: RAL 9006 – white aluminum; roof and base: RAL 9017 – Traffic black matte		
Overall dimensions W x D x H	mm	600 x 300 x 2,000	600 x 300 x 835	600 x 300 x 2,000
Approx. weight acc. to configuration	kg	110/133	84/107	180
General specifications				
Local user interface and LED		10″ touchscreen HMI (optional) and status LED		7″ touchscreen HMI (optional) and status LED (optional)
User authentication		RFID offline and online (optional)		n.a.
Network connection		Ethernet/optical fiber (optional)		
Max. allowed cable length between charging center and dispenser	m	100		
Norms and standards				
Charging standards		IEC 61851-1/23/24		
Communication protocol		ISO 15118-1/2/3 (DIN 70121)		
CE certification		Yes		

Inverted pantographs and hoods



Inverted pantograph highlights

- Cantilever arms available in short or long in a large variety of colors to suit any city environment
- WiFi antenna for secure and reliable wireless communication between charging infrastructure and vehicle based on OPPCharge protocol
- LED signal lamp to indicate the availability status of charging infrastructure

Optional

One-meter cantilever extension for MastPanto variant

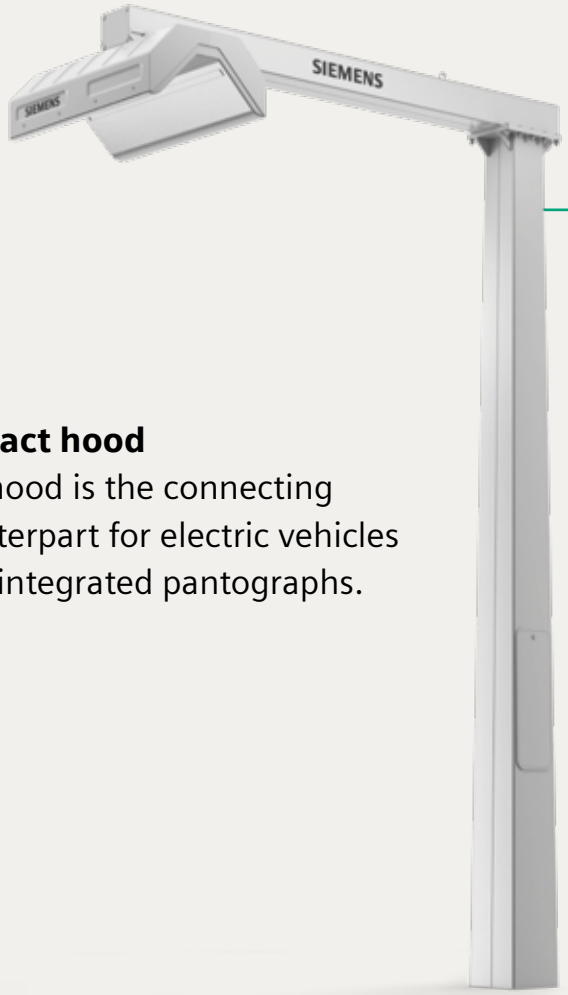
Panto Kit solution for under-ceiling mounting

MastPanto

For the eVehicles with the contact rails on the roof the inverted pantograph is the right charging solution.

Panto Kit

Modular solution for the flexible space-saving positioning



Contact hood

The hood is the connecting counterpart for electric vehicles with integrated pantographs.

Contact hood highlights

- Cantilever arm
- Connection hood with insulated 4-pole contact
- Lightweight mast and simple architecture that's easy to set up
- Baseplate for safe attachment to the foundation

Optional

Contact hood for the under-ceiling application

Technical data (IEC)

Connection options		Contact hood	Inverted Pantograph	
			MastPanto	Panto Kit
DC output				
Rated power	kW	600	600	150/300
Voltage (range)	V		100 ... 1,000	
Current (max.)	A	800	800	250/400
Environmental conditions				
Operating temperature	° C		−25 ... +45	
Operating altitude	m		≦ 2,000 above sea level (without derating)	
Relative humidity	%		5 ... 95 (non-condensing)	
Mechanical specifications				
Enclosure protection			IP54, IK10, outdoor	
Housing material		Hot-dip galvanized steel	Powder-coated galvanized steel, painted	Powder-coated mild steel, painted
Color			RAL 9006 – White aluminum	
Height, installed	mm	5,765	6,573	4,175 to 5,675
Road clearance	mm	1,250 to 1,550 height of the electric vehicle incl. insulators	4,550 to 4,650	3,700 to 5,200
Cantilever length	mm	3,510	4,200 or 5,200 (optional)	n.a.[1)]
Approx. distance mast to curb	mm	1,900	1,400	n.a.[1)]
Footprint on sidewalk	mm	350 x 300	1,300 x 315	n.a.[1)]
Pantograph operating range	mm	n.a.	900	875
Approx. weight acc. to configuration	kg	900	1,870	175
General specifications				
User authentication and payment		n.a.	RFID (optional)	
Network connection			Ethernet	
Local user interface and LED		n.a.	Status LED	10" touchscreen HMI and/ or status LED (optional)
Norms and standards				
Connection standards		CCS	OPPCharge	
Communication protocol		PLC	WiFi IEEE 802.11ac (ISO 15118 using WiFi)	
CE certification			Yes	

1) When mounting on a mast solution, the values of the MastPanto must be considered.

Your journey to successful electrification

We support your entire electrification and charging project throughout its lifecycle, from in-depth consulting and intelligent planning to optimized digital solutions for ease of operation and dedicated service packages that give you peace of mind at all times.

Run your operation with digital solutions for efficient charging management

Along with the charging equipment, DepotFinity – our best-in-class digital solutions and services – ensures the smooth, reliable, and efficient operation of your electric fleet, increasing its uptime while reducing CAPEX and OPEX. Starting with charging operations, our services can be extended with solutions for optimal depot operation, including control of your energy demand and costs.

Offer a reliable charging operation with cloud-based service packages

Profit from our Care full-scale service packages that are designed to support the reliability of your business throughout the entire lifetime of your charging equipment.

Four reasons to **go electric with Siemens**

With Siemens, you'll rely on a global partner who knows the challenges of eMobility and offers comprehensive solutions for all charging applications.

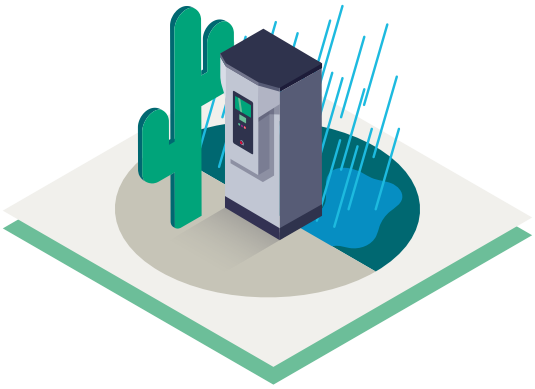
Contact our experts

Interoperable, future-proof technology

Up to 1,000 V ensures flexibility in electrifying your fleet – cybersecure for today and tomorrow and ready to be installed in semi-public locations

Robust, durable outdoor design

Ensures equipment longevity, easy outdoor use per IP54, and the highest fleet availability



Flexible, space-saving solutions

Modular for easy integration with multiple vehicle connection options

CAPEX and OPEX optimization

To realize the most competitive charging solution and efficiently manage your daily operations with > 96% best-in-class power efficiency and digital solutions

About Siemens eMobility

eMobility is already part of our everyday. And we are committed to anchoring this even more in everybody's daily lives by offering a charging infrastructure that is smart, efficient and innovative – and which makes mobility more sustainable ultimately.

And how do we do this?

By building an ecosystem to tackle the challenges of a complex world together. By cooperating with OEMs, utilities, fleet operators, companies, cities and customers alike – while bringing in the sound knowledge in energy supply, grids, mobility and buildings from a technology company that has been transforming the everyday for a 175 years. By connecting the real and the digital worlds with our IoT-enabled hardware, software solutions and service offerings that help customers and users save time, resources and costs.

And finally, with innovations like wireless or megawatt charging providing solutions for the challenges ahead. Our portfolio is designed for every use case in almost every region of the world – be it at home, at work, at bus stations, or within company depots.

To make a long story short: by electrifying mobility and making it more sustainable, we transform the everyday for a better tomorrow.

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Siemens AG

Smart Infrastructure
eMobility
Siemenspromenade 10
91058 Erlangen
Germany

For more information,
please contact our
Customer Support Center:
Phone: +49 180 524 70 00
Fax: +49 180 524 24 71
(Charges depending on provider)

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