SICHARGE UC

Modular and powerful DC charging for electric fleets

siemens.com/sichargeuc

SIEMENS

Your fleet:
Always ready to go

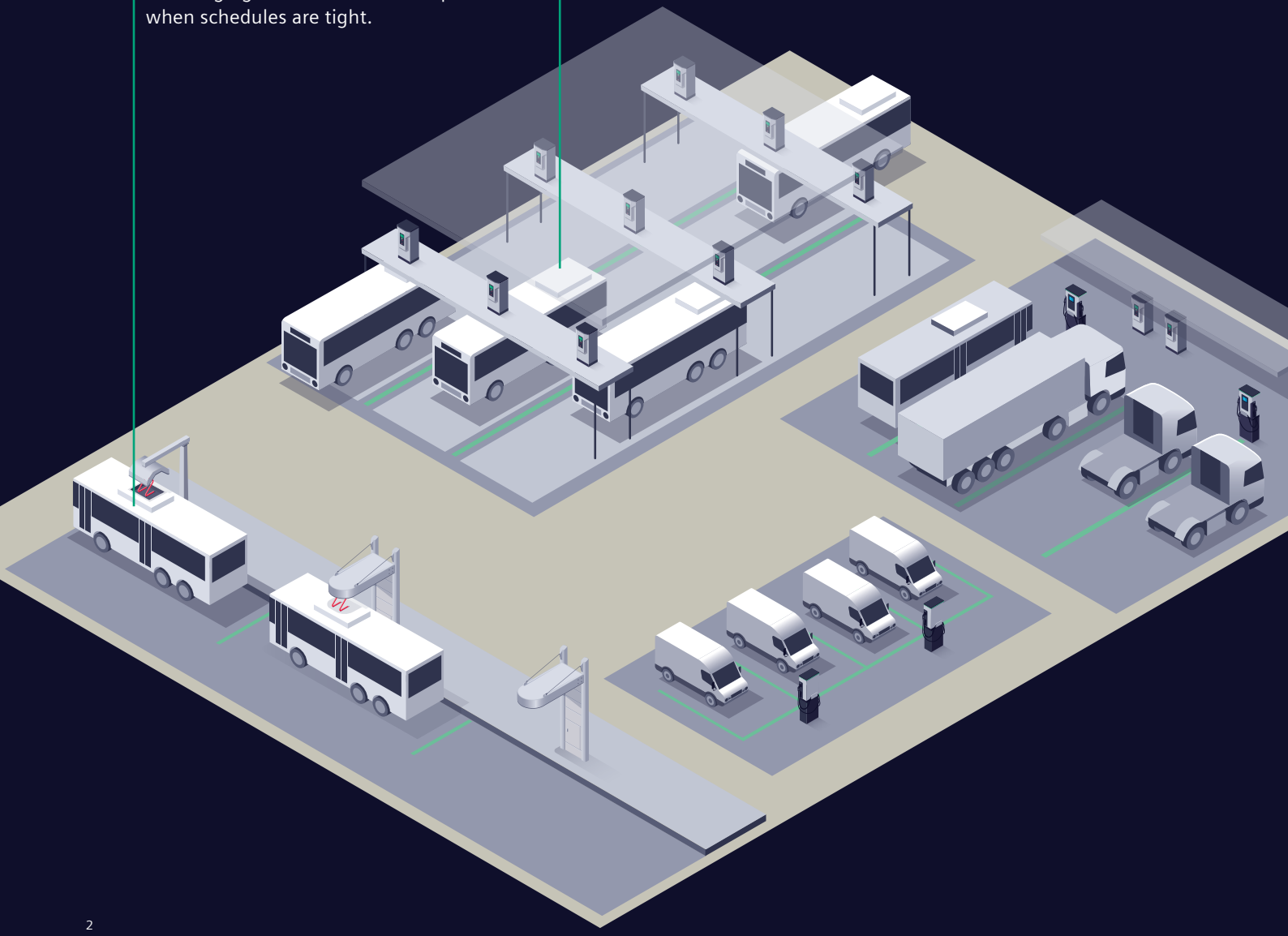
The SICHARGE UC family was specifically designed for charging buses and commercial vehicles at the depot or on-route at selected locations. When and where charging is most reasonable and efficient depends on the routes, charging schedules, and location of electric vehicles. Its modular design, multiple 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

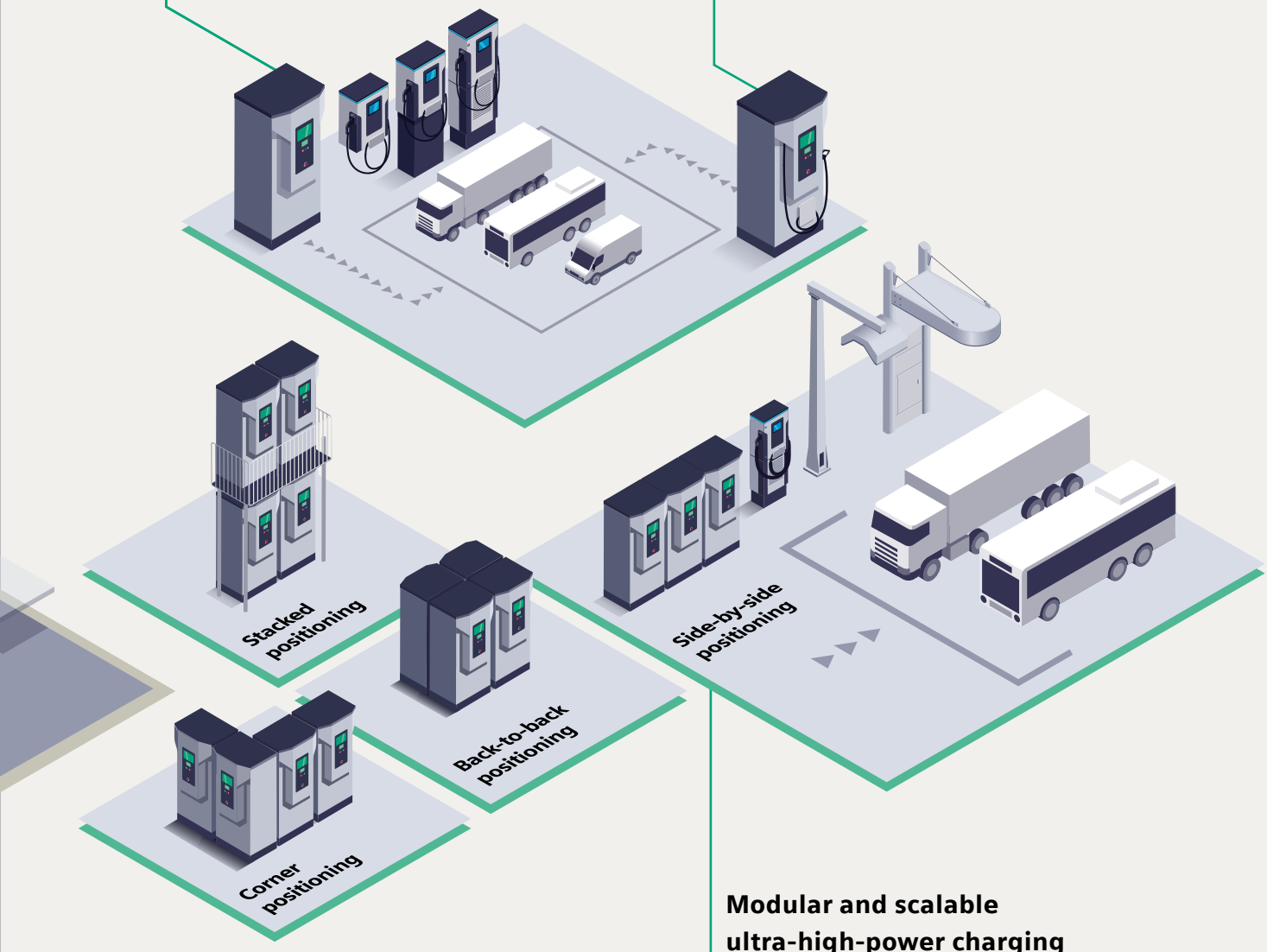
The flexible SICHARGE UC charging systems support you with easy integration into existing depots. They overcome your space constraints and provide you with the ideal charging infrastructure for ensuring that your electric fleet is up and running on time.

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 todeliver 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 liquid-cooled dispensers (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.

** Optional: Comes without a cable for other types of vehicle connections*

SICHARGE UC 150 charging center highlights

- 17% smaller dimensions compared with the previous generation for space-constrained sites
- Optimized design concept with large 180° front door opening for convenient service
- Power cable* of an appropriate length up to 10 m with cable holder for easy operation
- 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:

- 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 @600 V	kW	150		300	450	600
Voltage (range)	V	100 ...1,000				
Current of connected cables (max.)	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				
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)				
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 and payment		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

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

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) 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, several dispensers can be powered in sequence by a single charging center.

Single-plug dispenser highlights

- Inclined rain protection hood directs water to the rear
- Built for outdoor use with IP54 degree of protection from dust and spray water
- Cable optionally cooled for up to 400 A
- Multiple options for floor, wall, or under-ceiling mounting
- Cable holder for easy and clean operation
- Power cable for use in harsh environments, convenient length
- Air ventilation slots for the liquid-cooled cable version

Optional

The following options are available:

Multilingual 7“ outdoor touchscreen display at an ergonomic height, accessible and easy to read even in bright sunlight

Charging status indication by 360° LED light

Technical data (IEC)

Connection options		Single-plug dispenser	Single-plug wall- and roof-mounted dispenser	Singe-plug liquid-cooled cable dispenser
Cable variants		Air-cooled cables	Air-cooled cables	Liquid-cooled cables
Cable lengths	m	3.5; 6; 10	3.5; 6; 10	3.5; 5
DC output				
Connection standard			CCS type 2 plug	
Rated power	kW	100/150	100/150	300
Voltage (range)	V		100 ...1,000	
Current of connected cables (max.)	A	125/200	125/200	400
Peak auxilliary power consumption at 230 V	W	276	276	1,216
Standby power consumption @ 25° C[1)]	W		46	
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, IK09 for HMI	
Housing material			Painted steel and stainless steel	
Coating			C4H (suitable for operation in industrial areas and coastal areas with moderate salinity)	
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	95	60	180
General specifications				
Local user interface and LED			7” touchscreen HMI and status LED (optional)	
Network connection			Ethernet/optical fiber (optional)	
Max. allowed cable length between charging center and dispenser	m		100	
Norms and standards				
Charging standards			EN 61851-1/23/24, ISO 15118[2)] (DIN 70121)	
Communication protocol			Powerline communication (PLC)	
CE certification		Yes	Yes	Yes

1) Standby power consumption at < 10° C is 115 W for air-cooled and liquid-cooled dispensers.

2) For supported functionalities of ISO 15118, please refer to the technical documentation provided by your Siemens partner.

Inverted pantographs and hoods

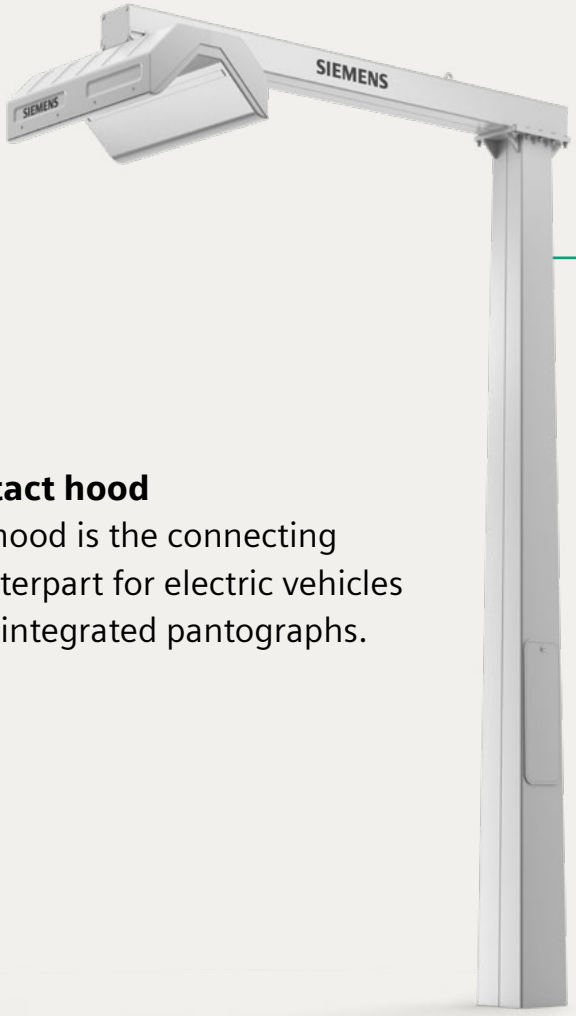
Inverted pantograph highlights

- 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

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



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
DC output			
Rated power	kW	500	600
Voltage (range)	V	100 ... 1,000	
Current of connected cables (max.)	A	500	800
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		Powder-coated galvanized steel, painted	
Color		RAL 9006 – White aluminum	
Height, installed	mm	5,765	6,573
Road clearance	mm	1,250 to 1,550 height of the electric vehicle incl. insulators	4,550 to 4,650
Cantilever length	mm	3,510	4,200 or 5,200 (optional)
Approx. distance mast to curb	mm	1,900	1,400
Footprint on sidewalk	mm	350 x 300	1,300 x 315
Pantograph operating range	mm	n.a.	900
Approx. weight acc. to configuration	kg	900	1,870
General specifications			
User authentication and payment		n.a.	RFID (optional)
Network connection		Ethernet	
Charging status indication		n.a.	LED
Norms and standards			
Connection standards		CCS	OPPCharge
Communication protocol		PLC	WiFi IEEE 802.11a
CE certification		Yes	Yes

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.

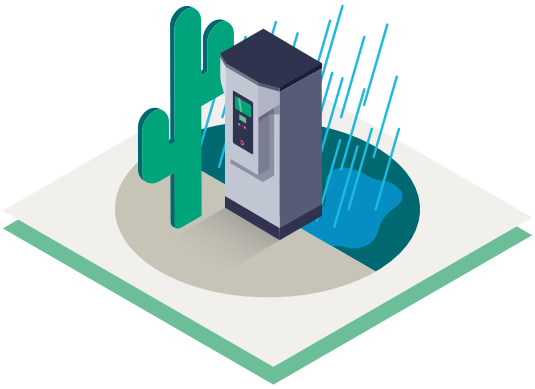
Contact our experts

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, dimensions optimized by 17%, and flexible positioning

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.

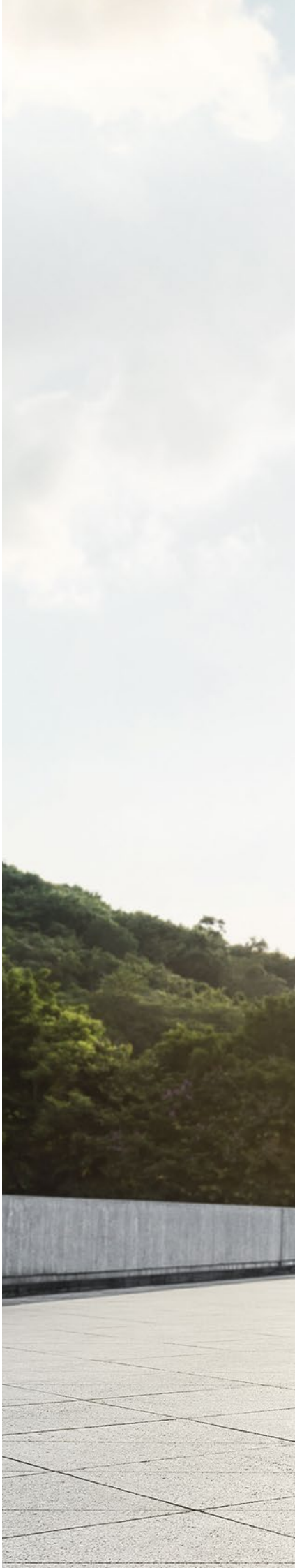
And how do we do this?

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.

siemens.com/emobility



Published by
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)
E-mail: marketing.emobility.si@siemens.com

Article No. SIE-B10004-00-7600
TH S28-220673 BR 0223

Status 03/2023