SICHARGE D

# Dynamic charging for future eMobility

siemens.com/sicharge-d SIEMENS **SIEMENS** 03/2023 **IEC** standard

## SICHARGE D

The future of fast charging: High-power, flexible, modular, and scalable

Dynamic and flexible, the SICHARGE D compact charger offers numerous built-in options.





#### ValueScreen

The 24" touchscreen makes charging an experience and enables easy integration of customized content.



#### **PowerUp**

The SICHARGE D chargers allow an easy upgrade of charging power to meet evolving charging needs.



#### ConnectPlus

Cost-efficient and space-saving, the SICHARGE D can be easily extended with two DC charge points to charge up to five cars in parallel\*.



#### **FullDPA**

Dynamic power allocation easily considers eVehicle's individual power demands and ensures optimized charging time.

\*coming soon

# Perfect fit for all your applications

## When travelling, in town, for short breaks

When the time to charge is short and high power is required, the perfect choice is SICHARGE D: The compact charging station that can be seamlessly integrated into your environment.



## Highway and urban charging stations

Offering much more than a quick recharge of electric vehicles, our smart and cost efficient SICHARGE D provides you with:

- Best-in-class efficiency
- · Highest utilization of installed power
- Very compact footprint



#### **Public fast charging**

A perfect fit for any cityscape, SICHARGE D provides your charging infrastructure with:

- Robust housing incl. anti-vandalism protection IK10 also valid for its large screen
- Noise level parameterization (< 50dB(A)) for example for day and night mode
- Variety of payment options



## **Customer and guest parking**

SICHARGE D ensures seamless charging, high reliability, and flexibility along with:

- Unique, appealing design and value-adding screen
- High cyber security based on special Siemens assessment processes

## Best-in-class technology

Features designed for you – using extensive technological expertise and passionate ingenuity



## ValueScreen – more than a touchscreen

Numerous opportunities for flexible interaction for you and your customers



The integrated 24" user-friendly adjustable screen allows your customers to easily operate the SICHARGE D charger at the most convenient height. Future chargers will operate as part of integrated business processes, and allow more functions than just charging. With its large flexible screen, the SICHARGE D is already prepared to support this expanded functionality.



## Future-proof flexibility

## Scalable power and extendable DC outlets

SICHARGE D has a modular system that can be easily upgraded. Future demands on charging power or extension of DC outlets can be met easily and cost-efficiently to serve next generations of electric vehicles.



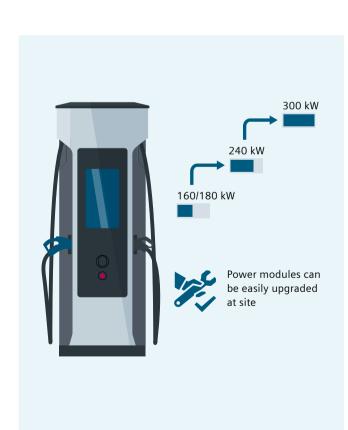
## All chargers can be upgraded to 300 kW

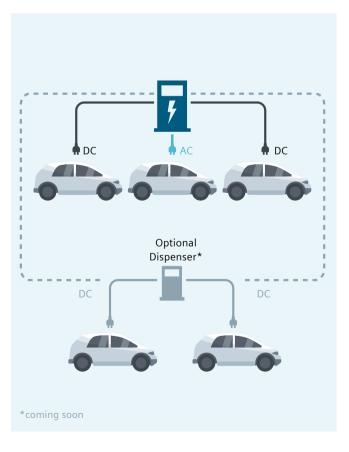
With our SICHARGE D you are ready to meet the rising demands for fast charging. Your charger can easily be upgraded with additional power modules guaranteeing minimum downtime: plug-and-play. After restarting, the system is automatically reconfigured and delivers upgraded power.



## Charge up to five cars with a single system

Easily extendable with two additional DC charge points, the Flex models of SICHARGE D charging systems give you ultimate flexibility and optimized parking space utilization.
Easily accessible by up to five electric vehicles charging in parallel (4 x DC and 1 x AC) at these SICHARGE D compact chargers.





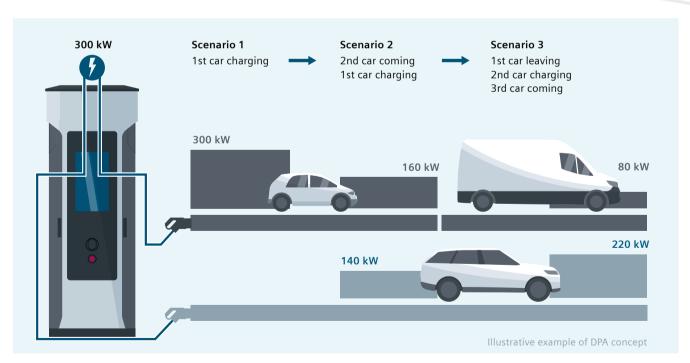
## Dynamic power allocation (DPA)

Intelligent and dynamic distribution of charging power



With SICHARGE D, the charging process automatically adapts to the connected vehicle(s) to fulfill two goals. It always seeks to use the full charging power available, and to use it based on the actual power request of each car(s) connected.

In this way, either the entire charging capacity can be used on one vehicle, or it can be distributed to several vehicles based on their demand. Because the power demand is dynamic during the charging process, the appropriate distribution of charging power by SICHARGE D minimizes the charging times for all connected EVs.



Electric vehicles with high charging capacity can consume up to 300 kW on any DC outlet, depending on configuration.

In case two vehicles are charging in parallel, the available power will be automatically shared according to their individual demand, optimizing the charging time.

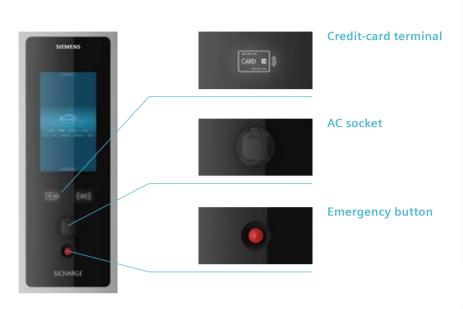
## Technical data

### **SICHARGE D**

| AC nominal input                      |         |  |
|---------------------------------------|---------|--|
| Voltage                               | V       | 400 ± 10%  |
| Current at nom. voltage per phase     | A       | 301 / 332 / 423 / 515 (incl. AC socket)  |
| Frequency                             | Hz      | 50 / 60  |
| Power factor                          | cos phi | > 0.99 at full load  |
| Short circuit current rating          | kA .    | 50   |
| ГНДІ                                  | %       | <3   |
| Network type                          |         | TN-C, TN-S or TT   |
| DC output                             |         |  |
| Rated power                           | kW      | 160 / 180 / 240 / 300  |
| Jpgradeability                        | kW      | up to 300  |
| /oltage (range)                       | V       | 1501,000   |
| Outlet options                        |         | DC: 2 x CCS2 or 1 x CCS2 and 1 x CHAdeMO 1.2 Optional AC: AC Type 2 socket (with flap and shutter), 22 kW incl. RCD  |
| Current of connected cables (max.)    | A       | CCS2: 1 x 400 (air-cooled cable), 1 x 500 (liquid-cooled cable) CHAdeMO: 1 x 125 / 200   |
| nterface for additional dispenser1)   |         |  |
| parallel charging)                    |         | Preinstalled interface for one dispenser with two DC charge points   |
| Efficiency factor $\eta$              | %       | > 95 rated, > 96 peak  |
| Cable lengths                         | m       | 3.1; 5   |
| Environmental conditions              |         |  |
| Operational environment               |         | Indoor and outdoor   |
| Dperating temperature                 | °C      | – 25+55 (without power derating up to + 35) <sup>2)</sup>  |
| Operating altitude                    | m       | 2,000 above sea level  |
| Relative humidity                     | %       | 595 (non condensing)   |
| Mechanical specifications             |         |  |
| Enclosure protection                  |         | IP54, IK10 (including display)   |
| Casting material                      |         | Powder-coated galvanized steel, Anti-Graffiti paint  |
| Coating                               |         | C4-M / C5-L  |
| Color                                 |         | RAL 9006 – White aluminum  |
| Overall dimensions W x D x H          | mm      | 845 x 820 x 2,300  |
| oundation dimensions W x D            | mm      | 680 x 620  |
| Approx. weight acc. to                |         |  |
| configuration                         | kg      | 540 – 820  |
| General specifications                |         |  |
| ocal user interface and LEDs          |         | Full-color 24" touchscreen with adaptable position of user interface; status LED per outlet  |
| Jser authentication and payment       |         | RFID, PIN Code, QR Code + smartphone, credit card (optional)   |
| letwork connection                    |         | Ethernet 10 / 100 Base; 2G; 3G; 4G (LTE)   |
| Electric safety device                |         | Surge protection, overvoltage category III   |
| Operating noise level                 |         |  |
| ⊉3 m distance                         | dB(A)   | < 65 (silent mode: < 50, configurable times e.g. for day and night)  |
| Metering options                      |         | Optional: DC meter per outlet (standard meter <sup>3)</sup> or according to German MessEV <sup>3)</sup> )  AC meter for type 2 outlet (standard meter <sup>3)</sup> or according to German MessEV <sup>4)</sup> ), AC income meter |
| Remote management                     |         | Remote access, over-the-air (OTA) software updates, external load managment via ModBus <sup>6)</sup>   |
| Norms and standards                   |         |  |
| Charging standards                    |         | EN 61851-1/23, ISO 15118 (DIN 70121) <sup>5) 6)</sup> , IEC 62196-3 (Mode 4, Type 2),  |
|                                       |         | JEVS G105 (Mode 4, CHAdeMO 1.2)<br>AC (optional): IEC 61851-1, IEC 62196-2, (Mode 3, Type 2)   |
| Communications protocol <sup>6)</sup> |         |  |
|                                       |         | AC (optional): IEC 61851-1, IEC 62196-2, (Mode 3, Type 2)  |

<sup>1)</sup> Coming soon 2) Without direct sunlight exposure 3) Accuracy class B 4) Accuracy class A (acc.to EN 50470-3: 2006 and EN 50470-1:2006)
5) Hardware-ready 6) For supported functionalities of OCPP, Modbus and ISO 15118, please refer to the technical documentation available by your Siemens partner

## Flexible configuration options





This is a selection of configuration options

## **Configuration options**

| AC socket                              | Additional 22 kW AC Type 2 socket   |
|--|---|
| Incoming AC meter                      | AC meter for measuring total power consumption  |
| AC meter for AC outlet                 | AC meter for measuring the consumption at the AC outlet   |
| DC meter for DC outlet                 | DC meter per outlet optional acc. to German calibration law (ERK)                                 |
| Credit-card payment                    | Integrated contactless terminal   |
| Additional safety pack                 | Additional fuses on the DC power trains and an emergency stop button on the housing               |
| Integration test of new backend system | SICHARGE D can be flexibly connected to any backend according to OCPP 1.6J                        |
|  | On your behalf, we can also configure and test the connection to a previously unconnected backend |
| Noise level parameterization           | Depending on local requirements (in sensitive areas like hospitals, hotels, residential           |
|  | dwellings) the charger noise level can be parameterized for day and/or night mode                 |

Configuration options in your region may vary; please contact your Siemens representative for more information



## More than charging

## **Experience peace of mind**

We offer you world-class services and support throughout the entire lifetime of your charging equipment thus assuring the maximum uptime and highest availability of your chargers.



## Today's solution for the challenges of tomorrow

## Benefits at a glance



### Dynamic and scalable

- Modular and scalable power
- Upgradeable up to 300 kW
- Dynamic power allocation
- Parallel charging



### **User-friendly**

- Intuitive multi-language 24" touchscreen with adaptable height
- Prepared for value-adding marketing content
- Space-saving



## Efficient and grid-friendly

- Best-in-class efficiency (up to 96 percent)
- High short-circuit withstand capability
- Low harmonic distortion (THDi < three percent)</li>



## State-of-the-art and future-proof

- Upgradeable to latest standards
- Highest voltage up to 1,000 V
   High current up to 500 A per charge point
- Open OCPP communication



## Confidence

- High availability
- Industry-leading cybersecurity and functional safety
- Excellent serviceability



## Robust and reliable

- Outdoor protection IP54
- High vandalism protection (IK10)
- Long-lasting components

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