

EV-T2HPCC-DC400A-5,0M50ECBK11L - DC charging cable



1052443

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CHARX connect professional, CCS type 2, HPC DC charging cable, 400 A permanent, 1000 V DC, with cooled vehicle charging connector and cooled cable, cable: 5 m, black, straight, with replaceable mating face frame, with replaceable DC power contacts, with left-hand angled panel feed-through, with digital temperature sensors, PHOENIX CONTACT logo, IEC 62196-3-1, for charging electric vehicles (EV) with direct current (DC)

Product description

DC charging cable with vehicle charging connector and free cable end for fast charging of electric vehicles (EV) with direct current (DC) via CCS type 2 vehicle charging inlets, for installation at charging stations for e-mobility (EVSE)

Your advantages

- Complete product range
- The right charging cable for every application, from the carport to the charging park
- Ultra-fast HPC charging, with temporary power up to 500 kW
- Convenient handling due to the ergonomic design
- Available with your logo on request - for consistent branding of your charging station
- Developed and produced in accordance with the IATF 16949 automotive standard and ISO 9001
- Additional safety thanks to integrated leakage sensors and a wear indicator in the cable sheath
- Convenient communication interfaces via CAN bus and digital output
- Maintenance-friendly replacement of the mating face frame without draining the coolant
- Integrated strain relief of single-core wires directly in the panel feed-through
- Pre-assembled busbar screw connection for straightforward connection of the customer's busbars or cable lug solutions

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1052443 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | EM01 |
| Product key | XWBALD |
| GTIN | 4055626675787 |
| Weight per piece (including packing) | 22.22 g |
| Weight per piece (excluding packing) | 22.22 g |
| Customs tariff number | 85444290 |
| Country of origin | DE |

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Technical data

Product properties

| | |
|-------------------|--|
| Product type | DC charging cable |
| Product family | CHARX connect professional |
| Technology | Combined Charging System |
| | High Power Charging |
| Application | for charging electric vehicles (EV) with direct current (DC) |
| | for installation at charging stations for electromobility (EVSE) |
| Design | with replaceable mating face frame |
| | with replaceable DC power contacts |
| | with left-hand angled panel feed-through |
| | with digital temperature sensors |
| Charging standard | CCS type 2 |
| Charging mode | Mode 4 |
| Affixed logo | PHOENIX CONTACT logo |
| Label | 8.9 mm x 28.9 mm (customer logo on request) |

Electrical properties

| | |
|-------------------------------|---|
| Type of signal transmission | Pulse width modulation with modulated Powerline communication in accordance with ISO/IEC 15118 / DIN SPEC 70121 |
| Note on the connection method | Crimp connection, cannot be disconnected |
| Coding | 1500 Ω (between PE and PP) |
| Temperature monitoring | 2x NTC (replaceable, front DC contacts) |
| | 2x NTC (DC power wires inside) |
| | Pt 1000 |

Charging power and current (DC charging)

| | |
|--------------------------|----------|
| Type of charging current | DC |
| Charging current | 400 A DC |
| Charging power | 400 kW |
| Rated voltage | 1000 V |

Pin assignment (Leistungskontakte)

| | |
|---------------|---------------------|
| Number | 3 (PE, DC+, DC-) |
| Rated voltage | 1000 V DC |
| Rated current | 400 A (up to 40 °C) |

Pin assignment (Signalkontakte)

| | |
|---------------|------------|
| Number | 2 (CP, PP) |
| Rated voltage | 30 V AC |
| Rated current | 2 A |

Temperature sensors (NTC)

| | |
|-------------|-----|
| Sensor type | NTC |
|-------------|-----|

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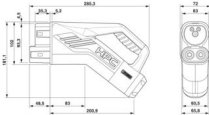
| | |
|------------------------|---|
| Attachment point | 2 sensors for the replaceable front DC contacts |
| | 2 sensors for the internal DC power wires |
| Switch-off temperature | 90 °C |

Temperature sensors (Pt 1000)

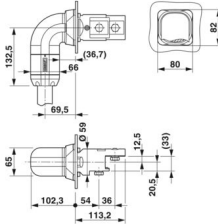
| | |
|------------------------------|--|
| Sensor type | Pt 1000 |
| Standards/regulations | DIN EN 60751 |
| Attachment point | Sensor in the panel feed-through |
| Switch-off temperature | 90 °C ±1 K (equivalent to a Pt 1000 value of 1346.5 Ω) |
| Long-term stability | 0.06 % (after 1000 hours at 130 °C) |
| Recommended measured current | 1 mA (1 V at 0°C) |
| Coefficient | 3850 ppm/K |
| Ambient temperature | -50 °C ... 130 °C (Operation) |

Dimensions

Vehicle charging connector

| | |
|---------------------|---|
| Dimensional drawing | <div></div> <p>Make sure that the vehicle charging connector is placed in an appropriate charging connector holder, which ensures a minimum protection rating of IP24 in accordance with IEC 61851-1, for the entire time between charging. To create this charging connector holder, use the dimensions of the vehicle charging connector. Detailed dimensions can also be found in the Download area.</p> |
| Width | 72 mm |
| Height | 181.1 mm |
| Depth | 285.3 mm |

Panel feed-through

| | |
|---------------------|---|
| Dimensional drawing | <div></div> |
| Width | 80 mm |
| Height | 82 mm |
| Depth | 215.5 mm |

Bore dimensions

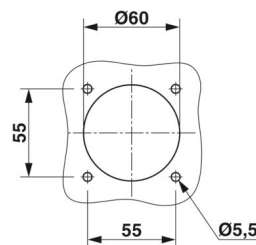
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Dimensional drawing



Drill hole spacing

| | |
|----------|-------|
| Width | 55 mm |
| Height | 55 mm |
| Diameter | 60 mm |

Material specifications

| | |
|--|-----------------------------------|
| Color (Housing) | black (9005) |
| Color (Handle area) | black (9005) |
| Color (Mating face) | black (9005) |
| Color (Cable) | black (9005) |
| Color (Panel feed-through) | black (9005) |
| Material (Vehicle charging connector) | Plastic |
| Material (Cable outer sheath) | EVM-1 in accordance with EN 50620 |
| Material (Panel feed-through) | Plastic |
| Material (Contact surface) | Silver |
| Flammability rating according to UL 94 | V0 (Mating face) |

Cable/line

| | |
|------------------------------|---|
| Cable length | 5 m \pm 45 mm |
| Wiring standards/regulations | according to UL 62 (File E515623, Vol 1) according to IEC 62893 |
| Cable weight | max. 1938.00 kg/km |
| Cable type | straight |
| Cable structure | 5 x 25 mm ² + 7 x 0.75 mm ² |
| External cable diameter | 35.70 mm \pm 0.4 mm |
| Outer sheath, material | TPE-U in accordance with IEC 62893-1 |
| Cable resistance | \leq 0.00078 Ω /m (based on a power core, at an ambient temperature of 20°C) |
| Bending radius | min. 357 mm (10x \varnothing) |

Mechanical properties

Mechanical data

| | |
|-----------------------------|---------|
| Insertion/withdrawal cycles | > 10000 |
| Insertion force | < 100 N |
| Withdrawal force | < 100 N |

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Environmental and real-life conditions

Ambient conditions

| | |
|---|--|
| Degree of protection (Vehicle charging connector) | IP54 (plugged in; when plugged in and ready to operate, the degree of protection is only ensued if both plug-in components are original products from Phoenix Contact or suitable standard-compliant products) |
| Degree of protection (Panel feed-through) | IP54 |
| Ambient temperature (operation) | -30 °C ... 40 °C max. 55 °C (Current reduction required, observe the DC contact temperature limit value of 90°C) |
| Ambient temperature (storage/transport) | -40 °C ... 80 °C |
| Altitude | 5000 m (above sea level) |

Standards and regulations

Standards

| | |
|-----------------------|---------------|
| Standards/regulations | IEC 62196-3-1 |
|-----------------------|---------------|

Mounting

| | |
|----------------------------------|---------------------|
| Mounting type Panel feed-through | Rear panel mounting |
| Fixing screws | M5x16 |

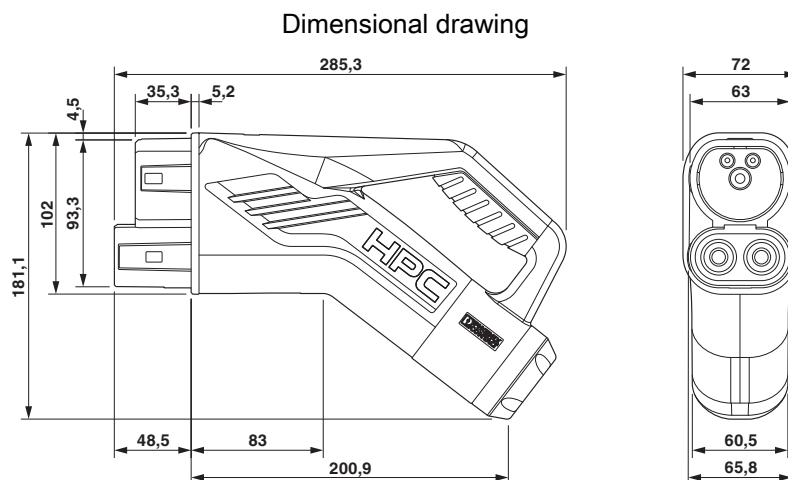
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Drawings



Make sure that the vehicle charging connector is placed in an appropriate charging connector holder, which ensures a minimum protection rating of IP24 in accordance with IEC 61851-1, for the entire time between charging. To create this charging connector holder, use the dimensions of the vehicle charging connector. Detailed dimensions can also be found in the Download area.

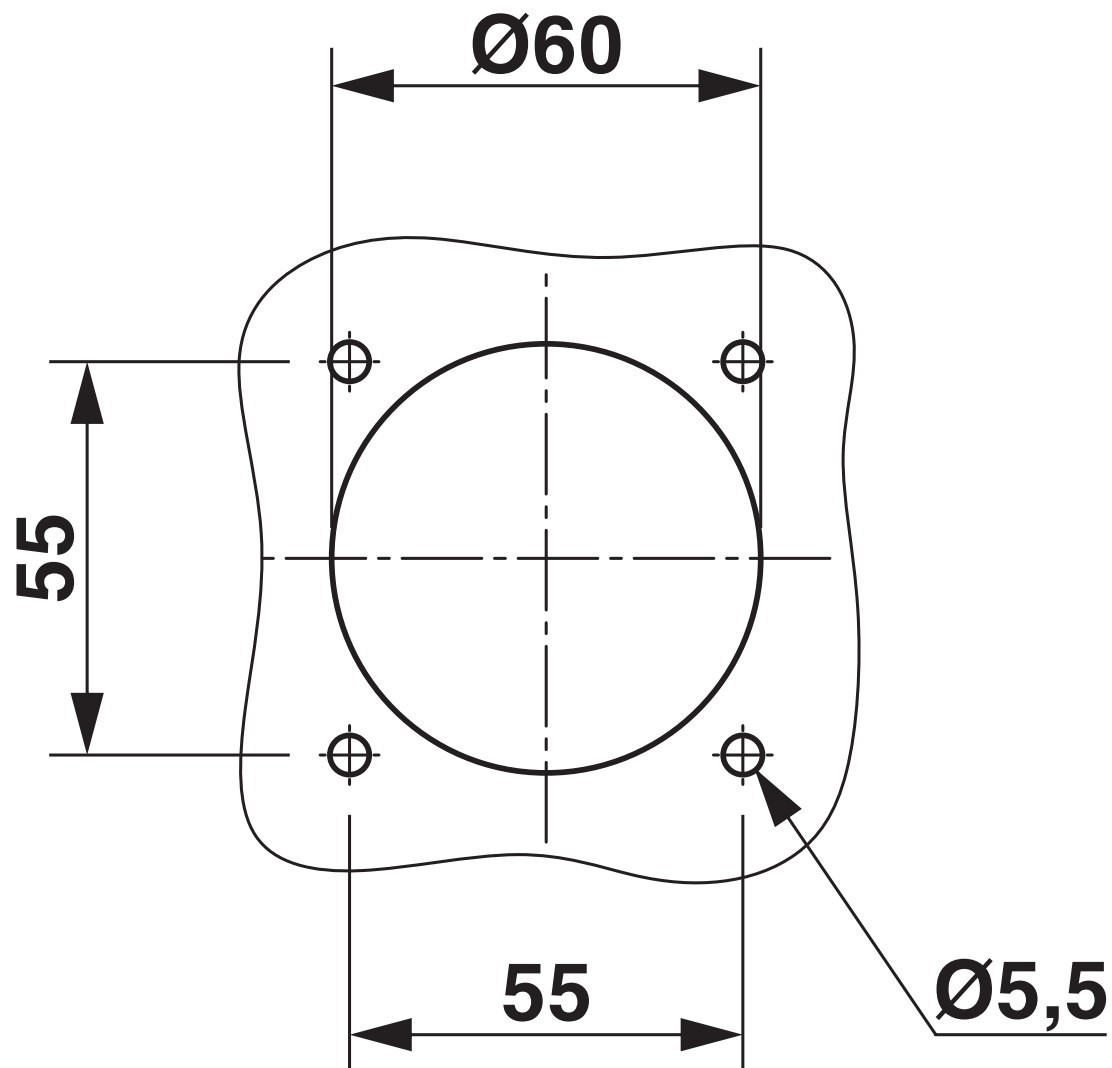
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Dimensional drawing



Drill hole spacing

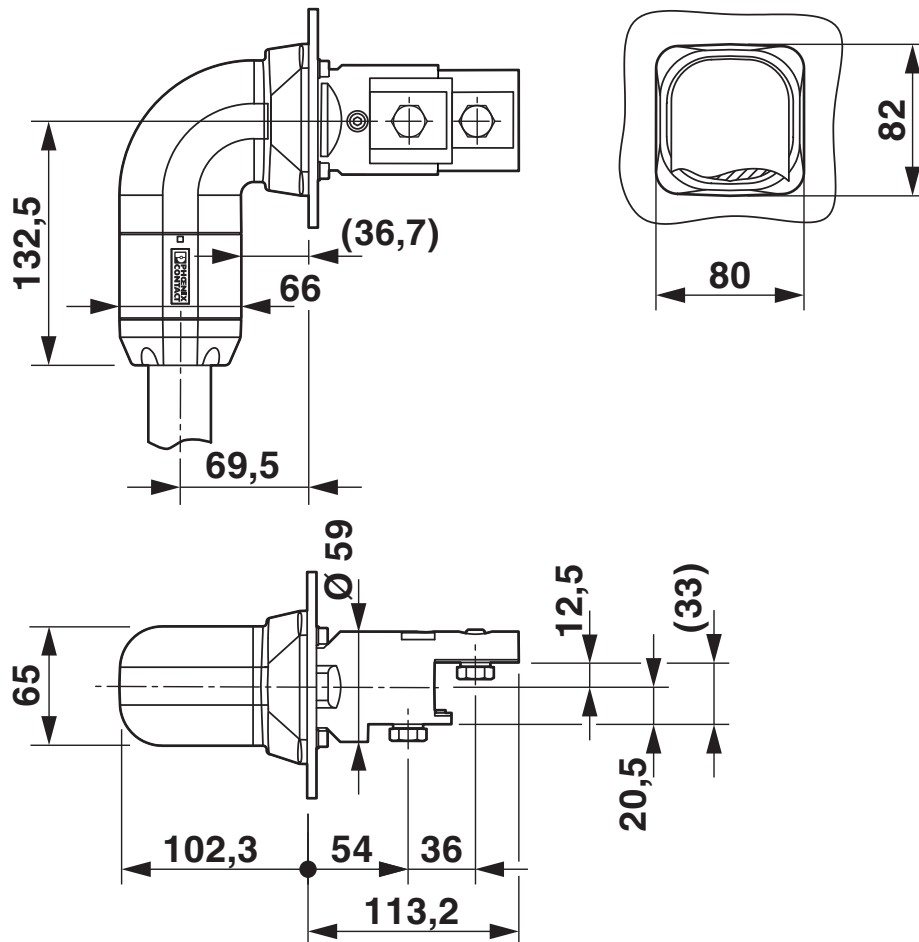
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Dimensional drawing

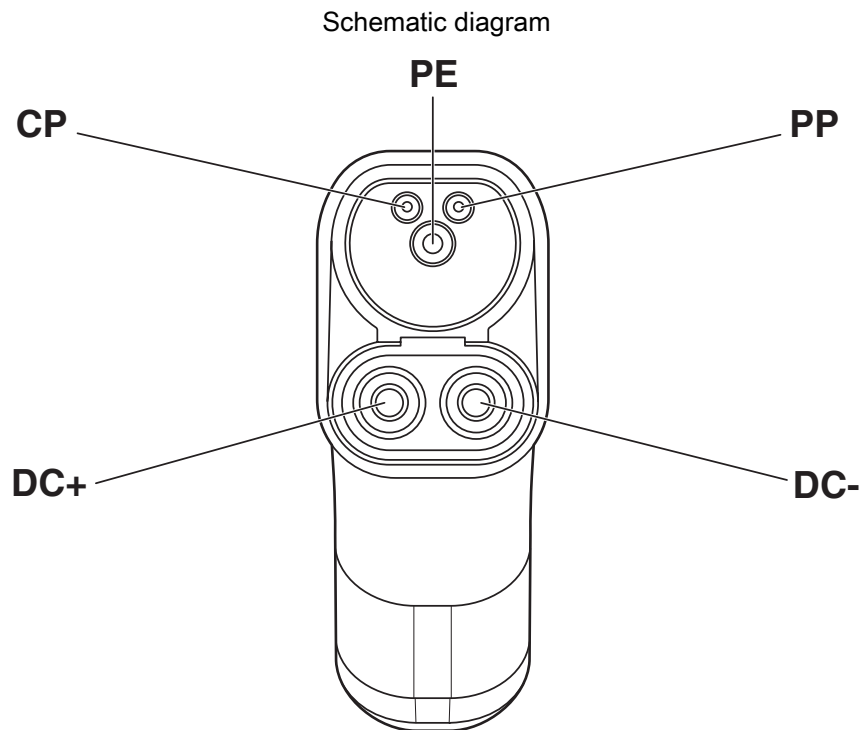


Left-hand angled panel feed-through

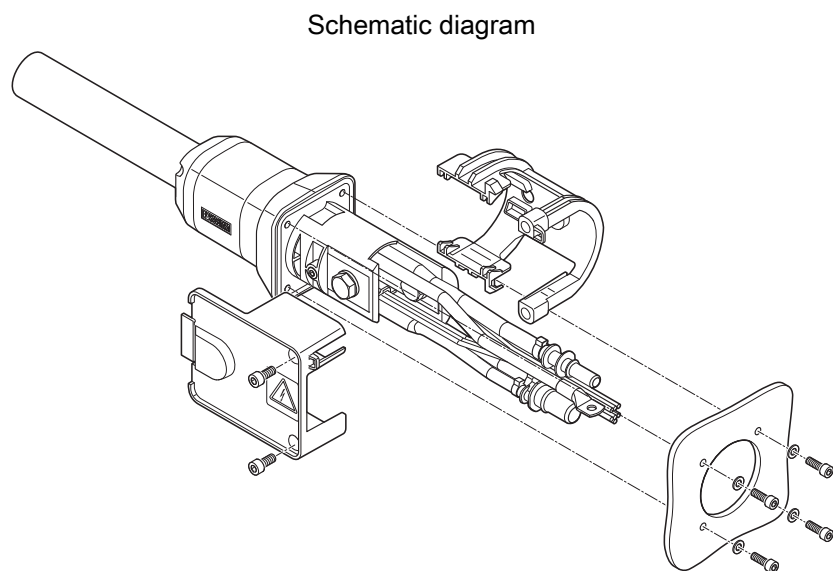
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Pin assignment of the Vehicle Connector

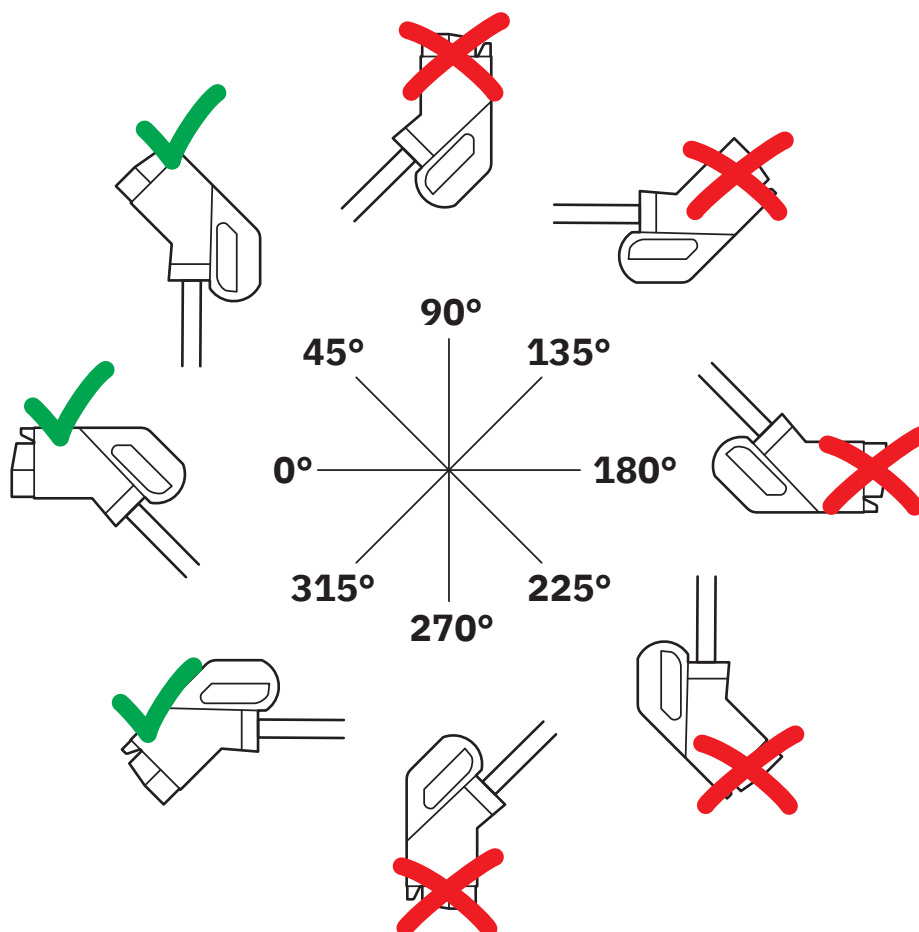


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Schematic diagram

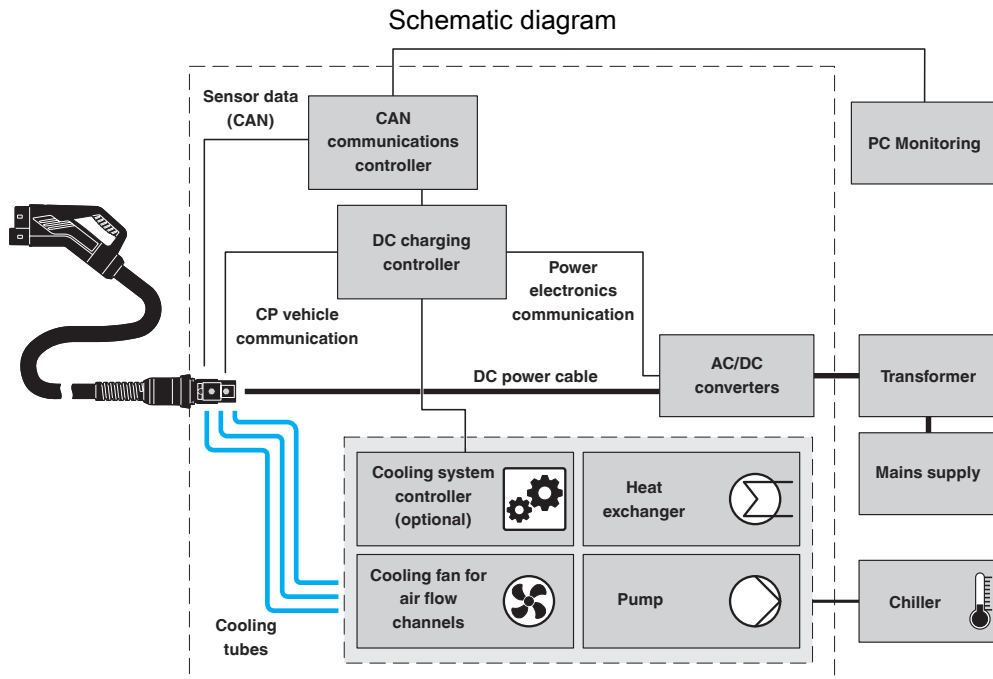


The resting position must be installed in the charging station such that the user cannot hang up the vehicle connector upside down (90° to 270°). However, positions rotated upward (45°) or downward (315°) are options for a resting position.

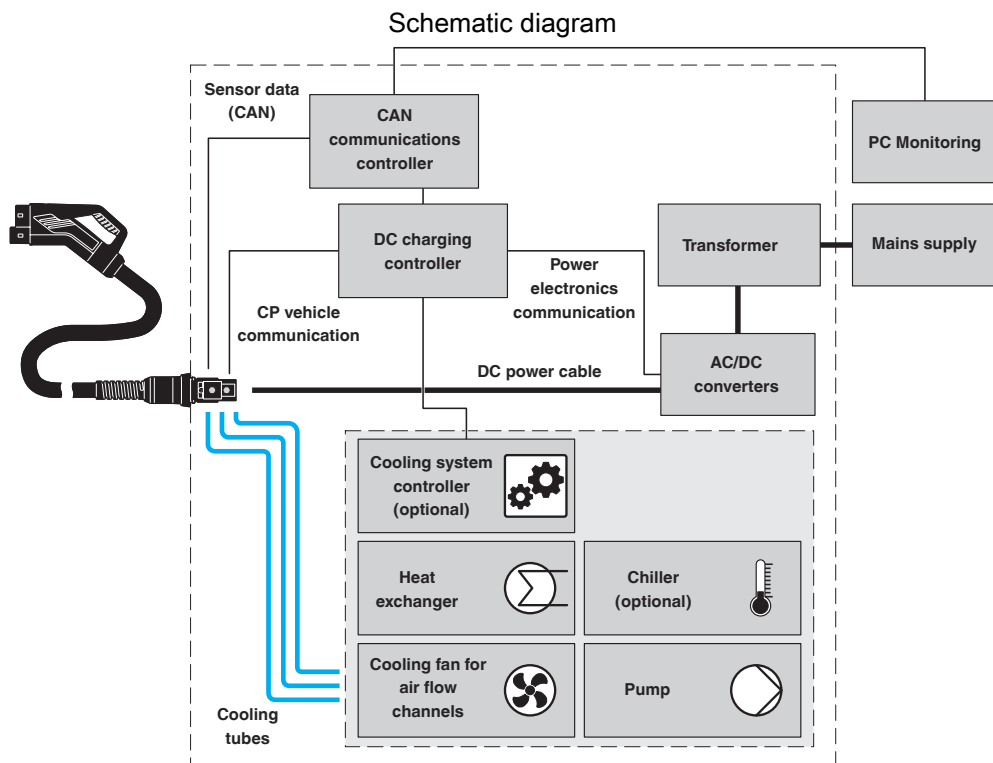
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Central system: cooling unit and controller are positioned externally and supply multiple charging stations, each of which is equipped with a heat exchanger. The cooling is done actively using a chiller.



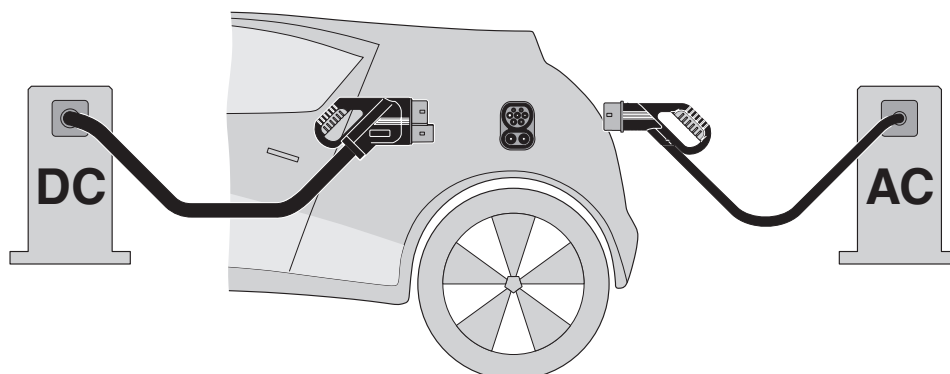
Standalone, decentralized system: cooling unit and controller are integrated into the charging station. The choice of cooling unit can be passive or active (i.e., with or without chiller).

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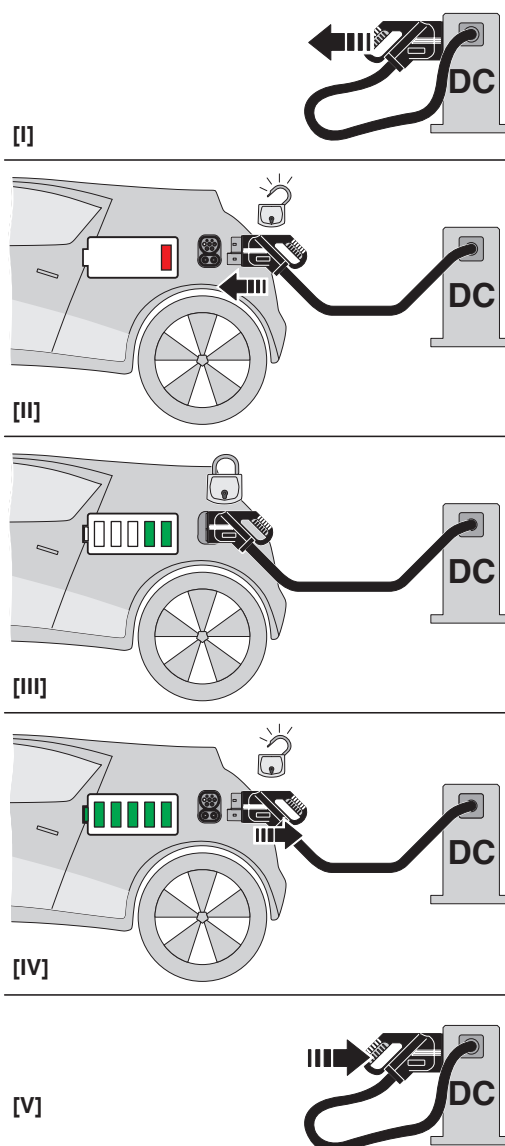
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Schematic diagram



The Combined Charging System (CCS) principle - standard-compliant charging system for electric vehicles, which supports both conventional AC charging and fast DC charging. Both Vehicle Connectors fit into the CCS Vehicle Inlet.

Schematic diagram



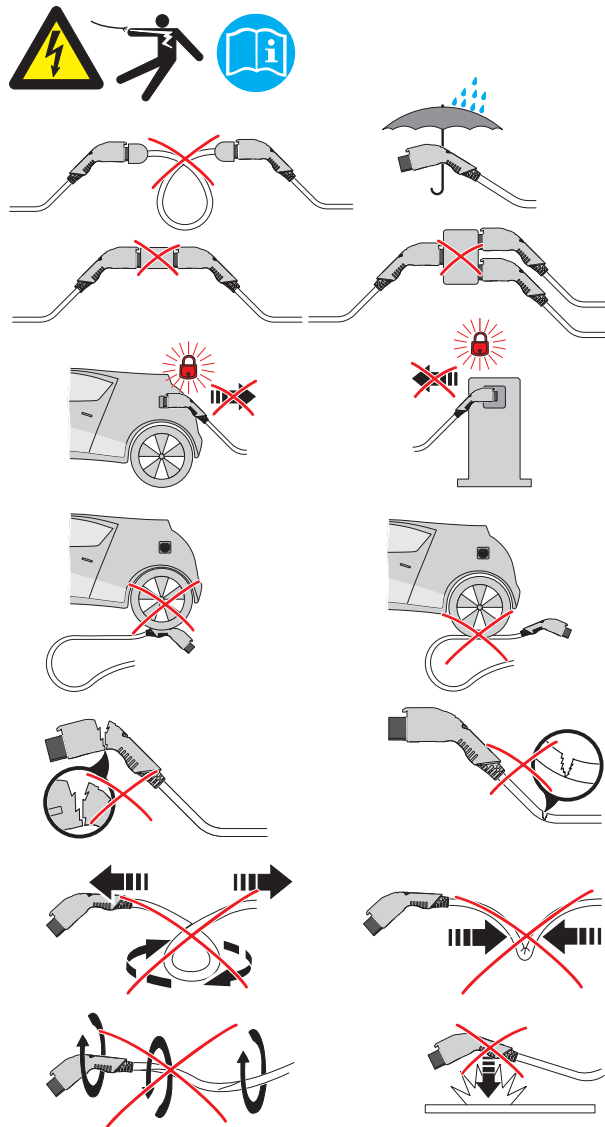
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Schematic diagram



Warning signal note

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27144705 |
|-------------|----------|

ETIM

| | |
|----------|----------|
| ETIM 9.0 | EC002897 |
|----------|----------|

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Environmental product compliance

| | |
|--|---|
| China RoHS | |
| Environment friendly use period (EFUP) | EFUP-10 |
| | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |
| EU REACH SVHC | |
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |

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