EV-T2HPCC-DC400A-5,0M50ECBK11R - DC charging cable

1089664

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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 right-hand angled panel feed-through, with digital temperature sensors, Liquid cooling, 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	1089664
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	EM01
Product key	XWBALD
GTIN	4055626893495
Weight per piece (including packing)	22.22 g
Weight per piece (excluding packing)	22.22 g
Customs tariff number	85444290
Country of origin	DE

Technical data

Product properties

Product type	DC charging cable
Product family	CHARX connect professional
Type	HPC DC charging cable
	with cooled vehicle charging connector and cooled cable
Design	with replaceable mating face frame
	with replaceable DC power contacts
	with right-hand angled panel feed-through
	with digital temperature sensors
	Liquid cooling
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 (Power contacts)

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

Pin assignment (Signal contacts)

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

Temperature sensors (NTC)

Sensor type	NTC
Attachment point	2 sensors for the replaceable front DC contacts

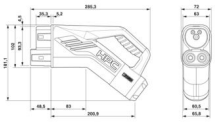
	2 sensors for the internal DC power wires
Switch-off temperature	90 °C

Temperature sensors (Pt 1000)

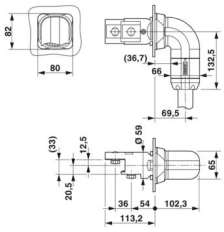
Sensor type	Pt 1000
Standards/regulations	DIN EN 60751
Attachment point	Sensor in the panel feed-through
Switch-off temperature	90 °C ±1 K (equivalent to a Pt 1000 value of 1346.5 Ω)
Long-term stability	0.06 % (after 1000 hours at 130 °C)
Recommended measured current	1 mA (1 V at 0°C)
Coefficient	3850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

Dimensions

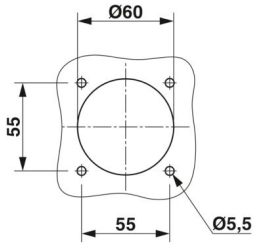
Vehicle charging connector

Dimensional drawing	 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.
Width	72 mm
Height	181.1 mm
Depth	285.3 mm

Panel feed-through

Dimensional drawing	
Width	80 mm
Height	82 mm
Depth	215.5 mm

Bore dimensions

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 ±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 mm² + 7 x 0.75 mm²
External cable diameter	35.70 mm ±0.4 mm
Outer sheath, material	TPE-U in accordance with IEC 62893-1
Cable resistance	≤ 0.00078 Ω/m (based on a power core, at an ambient temperature of 20°C)
Bending radius	min. 357 mm (10x Ø)

Mechanical properties

Mechanical data

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

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

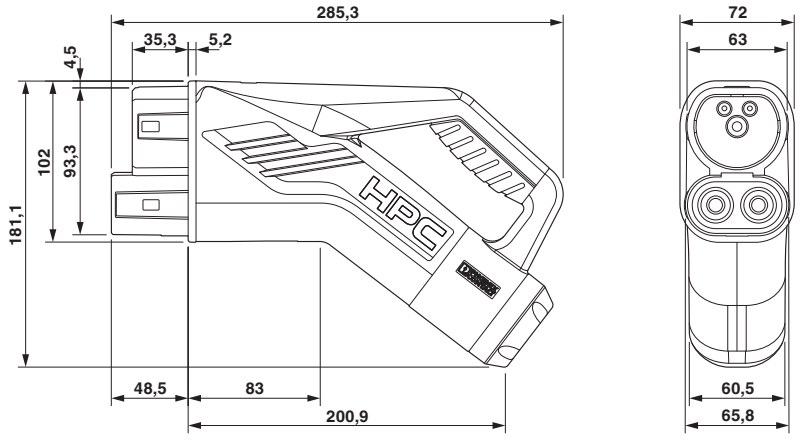
Standards/regulations	IEC 62196-3-1

Mounting

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

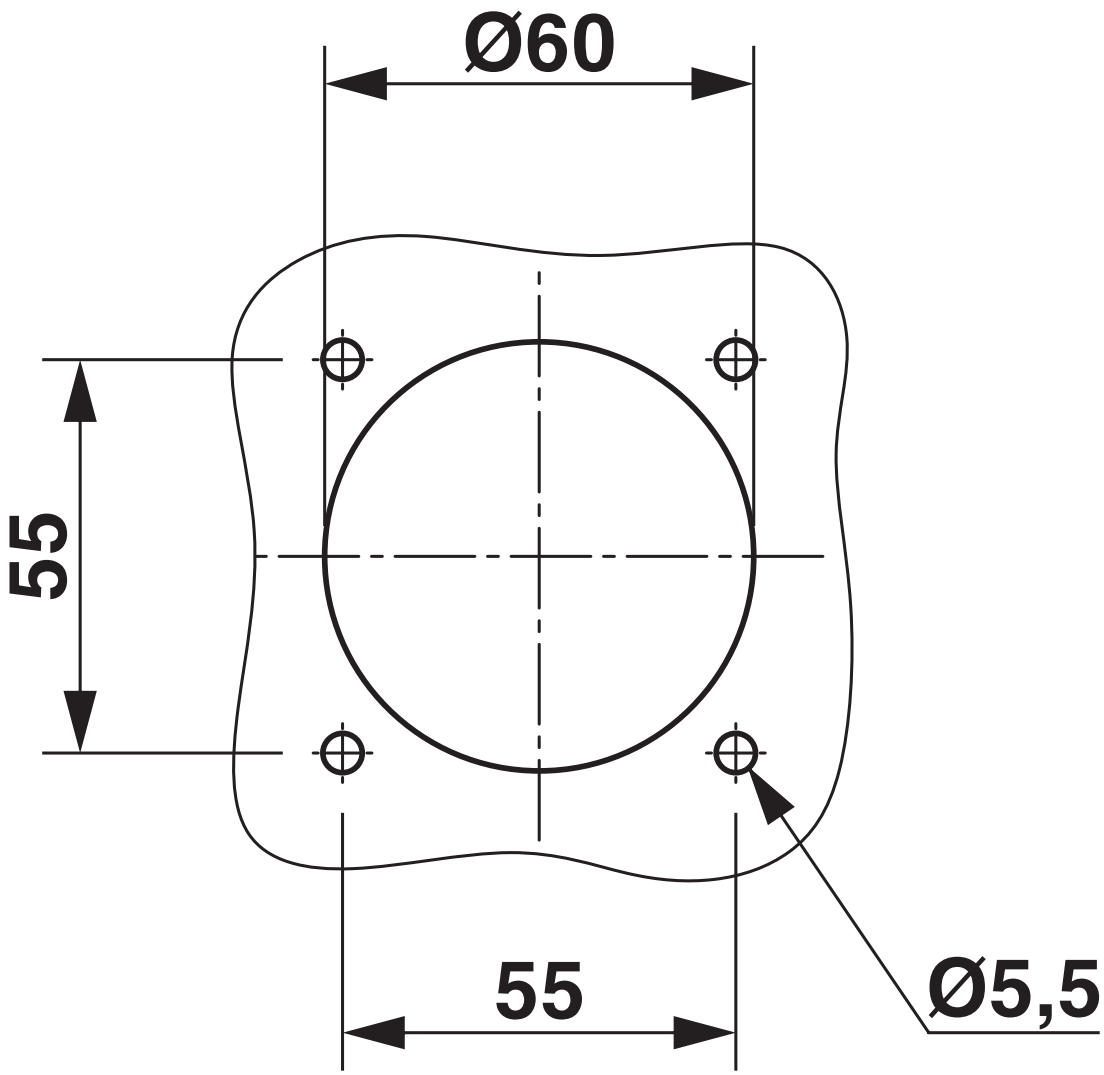
Drawings

Dimensional drawing



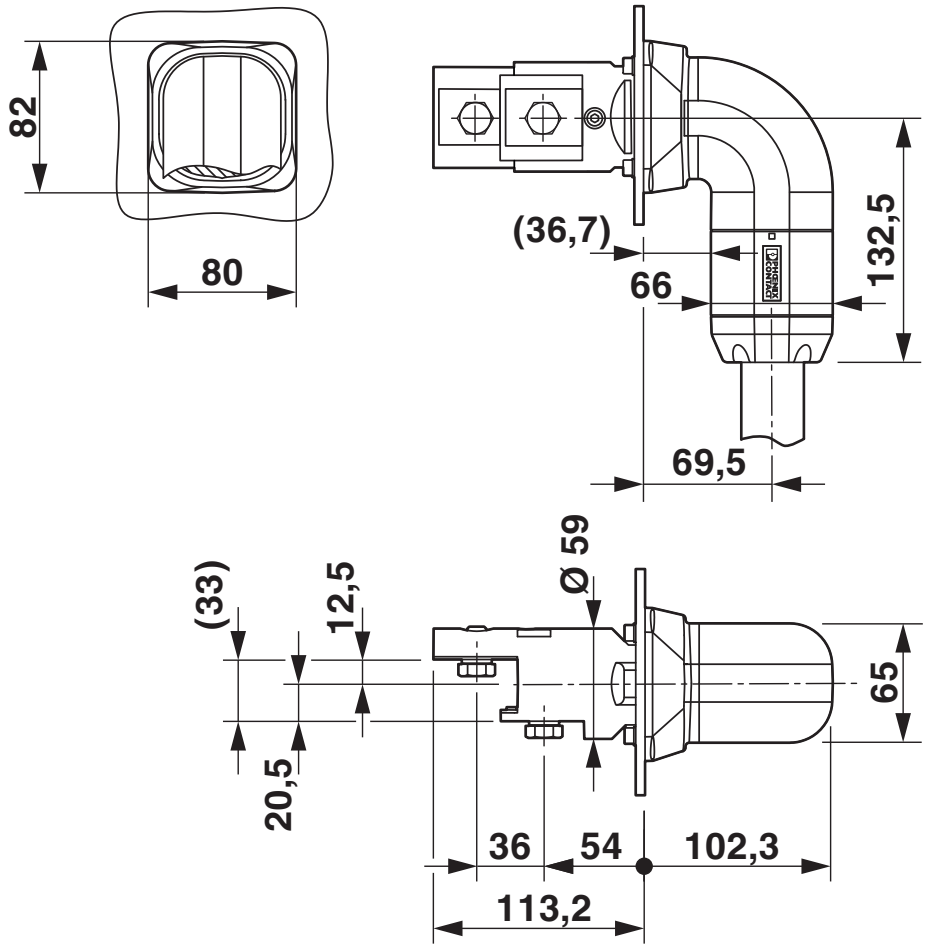
Make sure that the vehicle charging connector is placed in an appropriate charging connector holder, which ensures a minimum protection rating of IP24 in accordance with IEC 61851-1, for the entire time between charging. To create this charging connector holder, use the dimensions of the vehicle charging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

Dimensional drawing



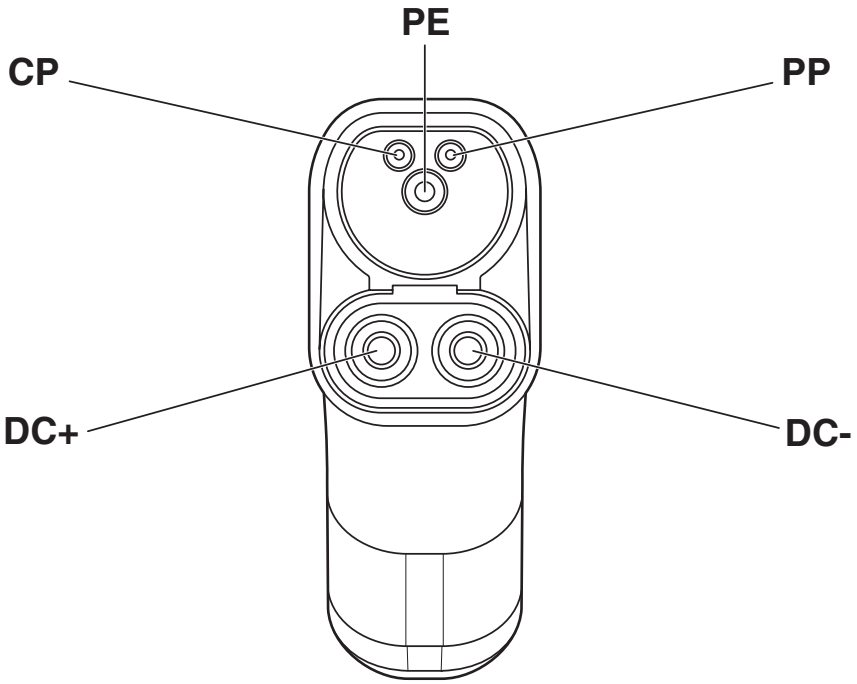
Drill hole spacing

Dimensional drawing



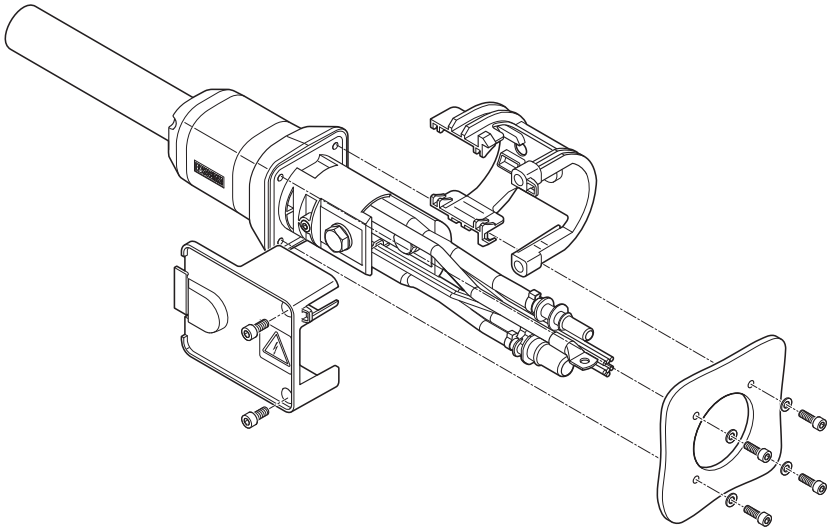
Right-hand angled panel feed-through

Schematic diagram



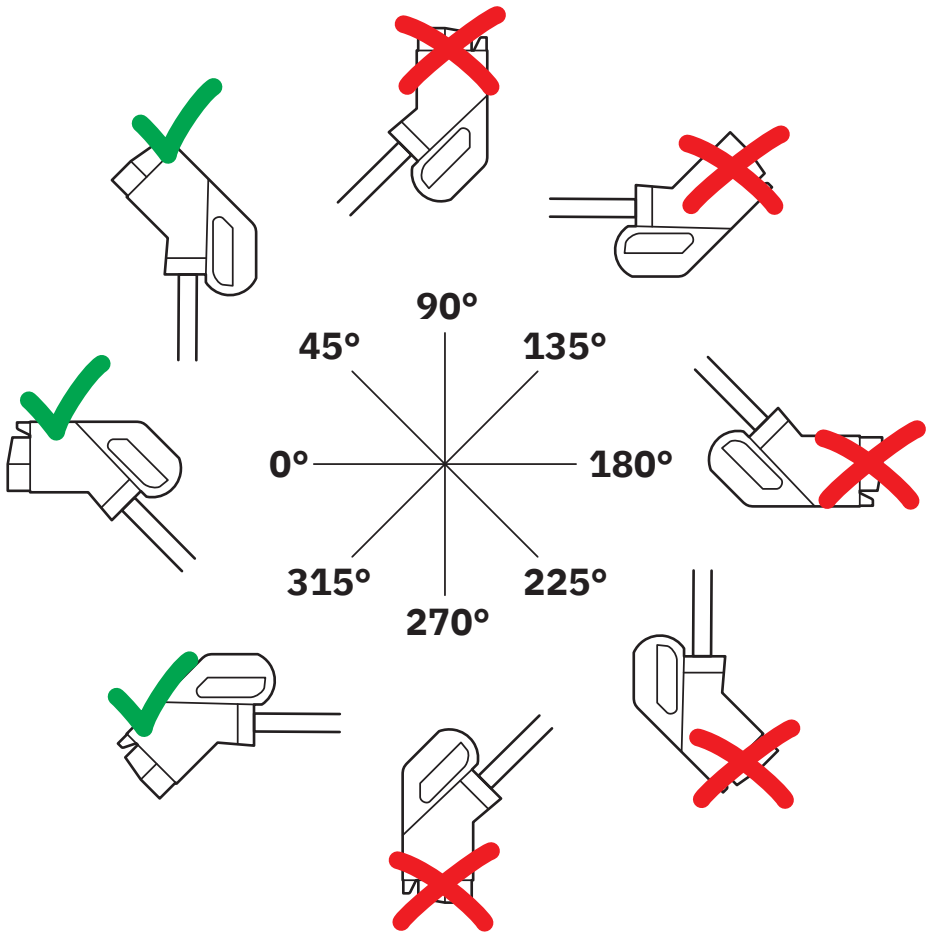
Pin assignment of the Vehicle Connector

Schematic diagram



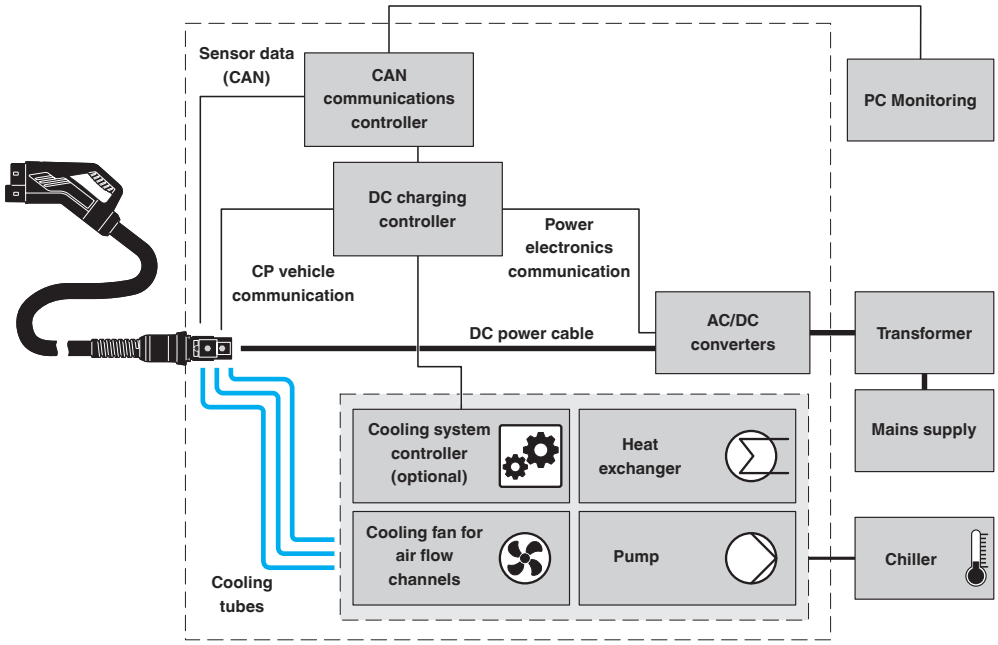
Assembly instructions for attaching the touch protection using straight panel feed-through as an example

Schematic diagram



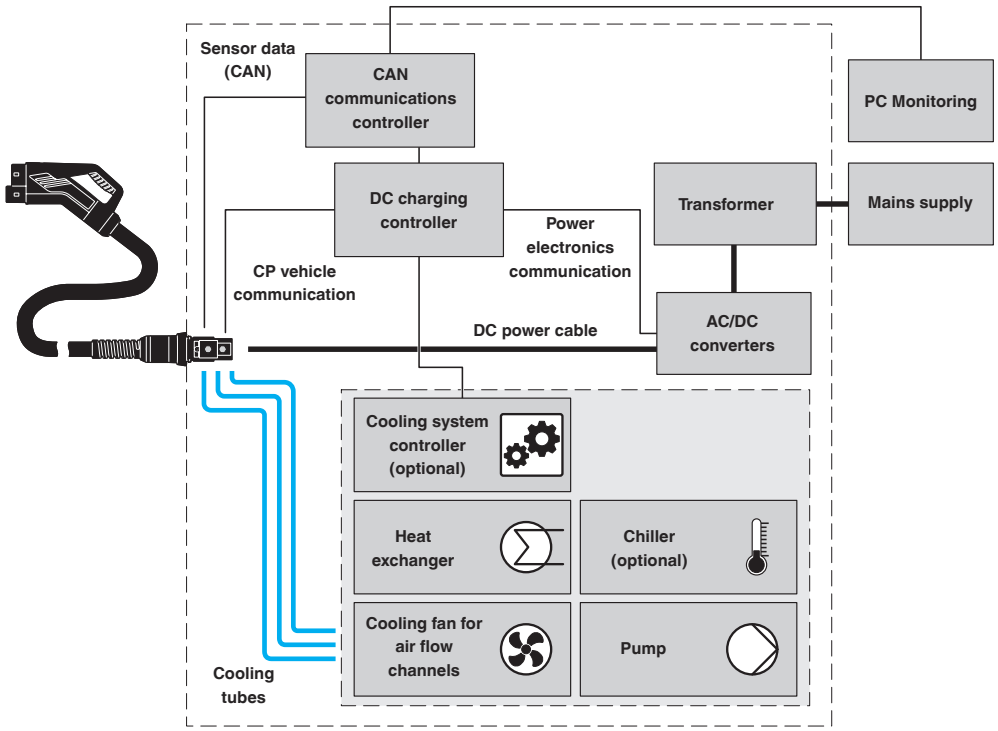
The resting position must be installed in the charging station such that the user cannot hang up the vehicle connector upside down (90° to 270°). However, positions rotated upward (45°) or downward (315°) are options for a resting position.

Schematic diagram



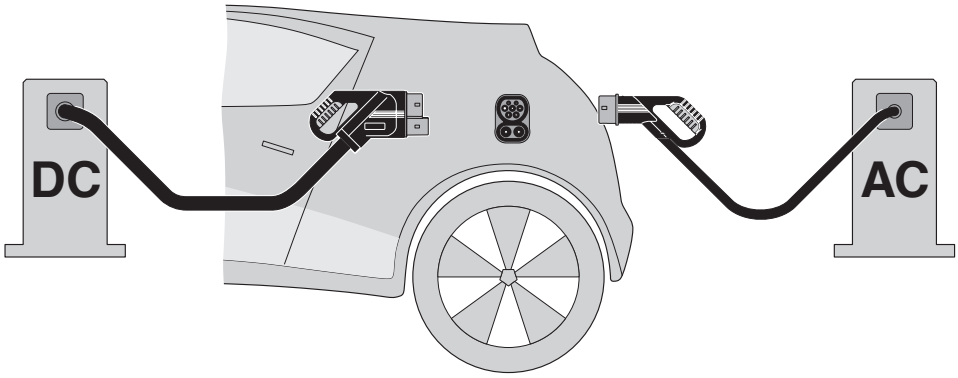
Central system: cooling unit and controller are positioned externally and supply multiple charging stations, each of which is equipped with a heat exchanger. The cooling is done actively using a chiller.

Schematic diagram



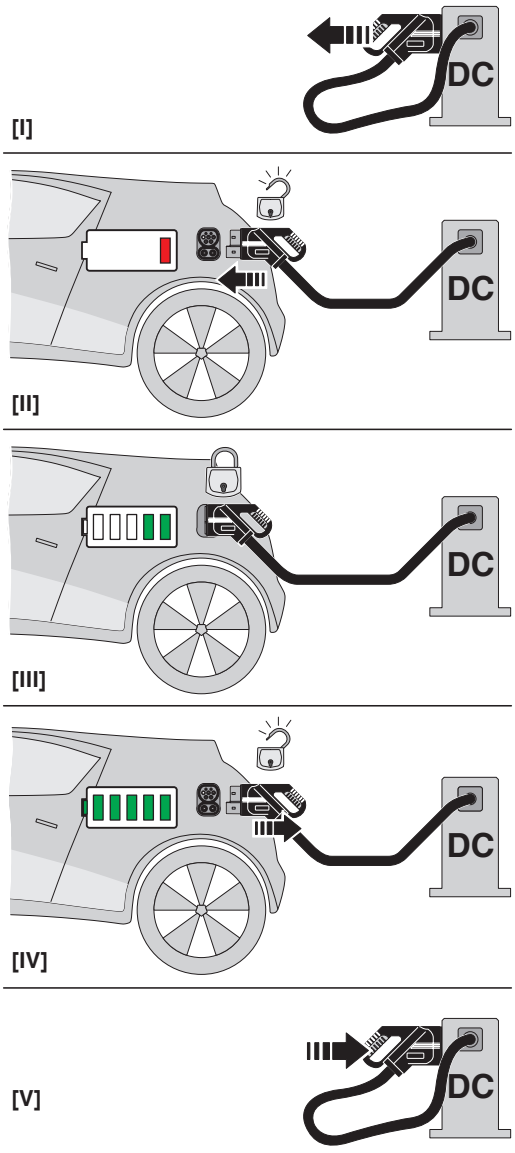
Standalone, decentralized system: cooling unit and controller are integrated into the charging station. The choice of cooling unit can be passive or active (i.e., with or without chiller).

Schematic diagram



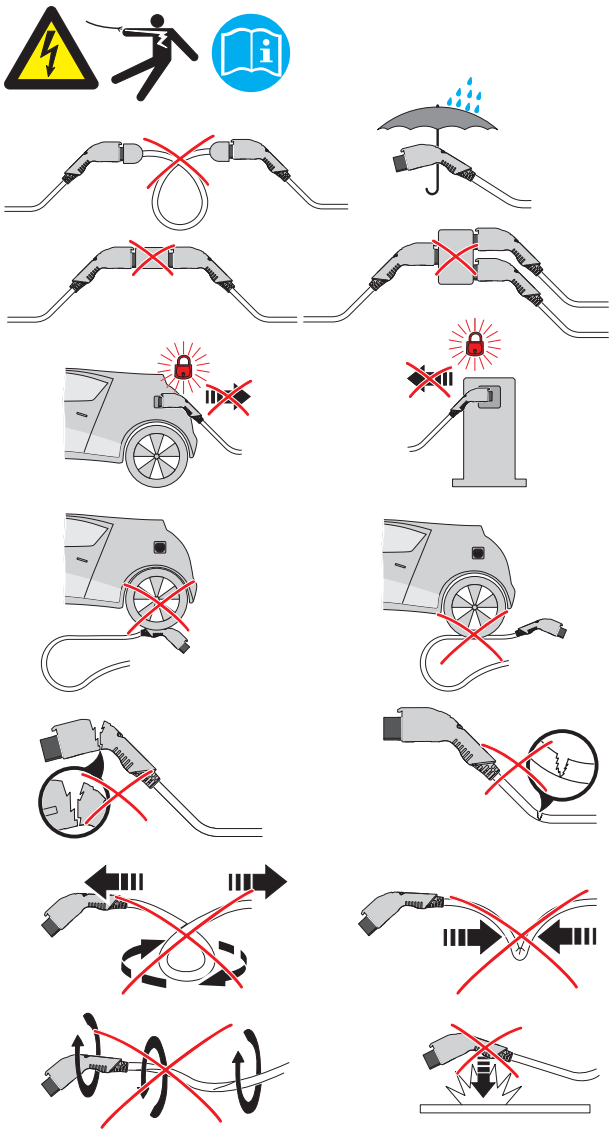
The Combined Charging System (CCS) principle - standard-compliant charging system for electric vehicles, which supports both conventional AC charging and fast DC charging. Both Vehicle Connectors fit into the CCS Vehicle Inlet.

Schematic diagram



Operating instructions

Schematic diagram



Warning signal note

Classifications

ECLASS

ECLASS-13.0	27144705

ETIM

ETIM 9.0	EC002897

Environmental product compliance

China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%

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