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CHARX connect, DC charging cable with vehicle charging connector and open cable end, Housing color black, with connected PP contact, For charging electric vehicles (EV) with direct current (DC), for installation at charging stations for electromobility (EVSE), CCS type 2, Combined Charging System, IEC 62196-3, 40 A / 1000 V (DC), C-Line, "PHOENIX CONTACT" logo, cable: 7 m, black, straight, NOTE: Cable management may be required.

### **Product Description**

DC charging cable with Vehicle Connector and open cable end for fast charging of electric vehicles (EV) with direct current (DC) via CCS type 2 Vehicle Inlets, for installation at charging stations for E-Mobility (EVSE)

### Your advantages

- ☑ Consistent design of all Phoenix Contact Vehicle Connectors and Infrastructure Plugs
- Silver-plated surface of the power and signal contacts
- Developed and produced in accordance with the IATF 16949 automotive standard and ISO 9001
- Convenient handling, thanks to the ergonomic handle
- Integrated temperature sensors for monitoring the temperature at the power contacts

## RoHS

### Key Commercial Data

| Packing unit         | 1 pc            |
|----------------------|-----------------|
| GTIN                 | 4 063151 343040 |
| GTIN                 | 4063151343040   |
| Custom tariff number | 85444290        |
| Country of origin    | Germany         |

### Technical data

### Product definition

| Туре | DC charging cable                                  |
|------|--|
|      | with vehicle charging connector and open cable end |
|      | Housing color black                                |



## Technical data

### Product definition

|                                     | with connected PP contact   |
|-------------------------------------|---|
| Application                         | For charging electric vehicles (EV) with direct current (DC)  |
|                                     | for installation at charging stations for electromobility (EVSE)  |
| Affixed logo                        | "PHOENIX CONTACT" logo  |
| Design                              | C-Line  |
| Standards/regulations               | IEC 62196-3   |
| Charging standard                   | CCS type 2  |
|                                     | Combined Charging System  |
| Charging mode                       | Mode 4  |
| Normative cable length restrictions | NOTE: Cable management may be required.   |
|                                     | Cable management is required in certain regions if the cable length exceeds 5.0 m (Switzerland) or 7.5 m (USA) (IEC 61851-1). |

### Dimensions

| Height           | 144 mm (Vehicle charging connector) |
|------------------|-------------------------------------|
| Width            | 71 mm (Vehicle charging connector)  |
| Depth            | 243 mm (Vehicle charging connector) |
| Conductor length | 7 m                                 |
| Stripping length | 140 mm ±10 mm                       |

### Ambient conditions

| Ambient temperature (operation)         | -30 °C 50 °C   |
|---|--|
| Ambient temperature (storage/transport) | -40 °C 80 °C   |
| Max. altitude                           | 5000 m (above sea level)   |
| Degree of protection                    | 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) |

### **Electrical properties**

| Charging power (nominal operation) | 40 kW   |
|------------------------------------|---|
| Number of power contacts           | 3 (PE, DC+, DC-)  |
| Rated current of power contacts    | 40 A (up to 40 °C)  |
| Rated voltage for power contacts   | 1000 V DC   |
| Number of signal contacts          | 2 (CP, PP)  |
| Rated current for signal contacts  | 2 A   |
| Rated voltage for signal contacts  | 30 V AC   |
| Type of signal transmission        | Pulse width modulation with modulated Powerline communication according to ISO/IEC 15118 / DIN SPEC 70121 |
| Resistor coding                    | 1500 $\Omega$ (between PE and PP)   |
| Temperature monitoring             | 2x Pt 1000  |



## Technical data

### Mechanical properties

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

### Design

| Design line       | Standard                                    |
|-------------------|---|
| Housing color     | black                                       |
| Mating face color | black                                       |
| Color handle area | black                                       |
| Label             | 8.9 mm x 28.9 mm (customer logo on request) |

### Material

| Housing material             | Plastic |
|------------------------------|---------|
| Material handle area         | Plastic |
| Material mating face         | Plastic |
| Flammability rating          | V0      |
| Material surface of contacts | Ag      |

### Cable

| Cable structure              | 3 x 6.0 mm <sup>2</sup> + 3 x 2 x 0.75 mm <sup>2</sup>                              |
|------------------------------|---|
| Wiring standards/regulations | prEN 50620 / DIN EN 50620   |
| Wiring class                 | Class 6   |
| External cable diameter      | 14.9 mm ±0.4 mm   |
| Type of conductor            | straight  |
| Cable resistance             | $\leq$ 0.0033 $\Omega/m$ (based on a power core, at an ambient temperature of 20°C) |
| Outer sheath, material       | TPE-U   |
| External sheath, color       | black   |
| Minimum bending radius       | 111.8 mm (7.5 x diameter)   |
| Cable weight                 | max. 364 kg/km  |

### Temperature sensors

| Type of sensor  | Pt 1000   |
|---|---|
| Standards/regulations   | DIN EN 60751                                    |
| Recommended measured current                                  | 1 mA (1 V at 0°C)                               |
| Tolerance at the sensor with the recommended measured current | ±1K   |
| Temperature range   | -50 °C 130 °C                                   |
| Temperature coefficient (TCR)                                 | 3850 ppm/K                                      |
| Long-term stability (max. R0-Drift)                           | 0.06 % (After 1000 hours at 130°C)              |
| Shutdown temperature  | 90 °C equivalent to a Pt 1000 value of 1346.5 Ω |

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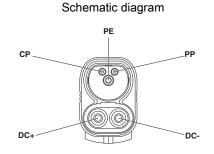


### Technical data

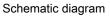
### **Environmental Product Compliance**

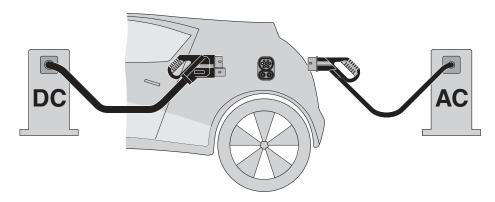
| China RoHS | Environmentally Friendly Use Period = 10;   |
|------------|---|
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

### Drawings



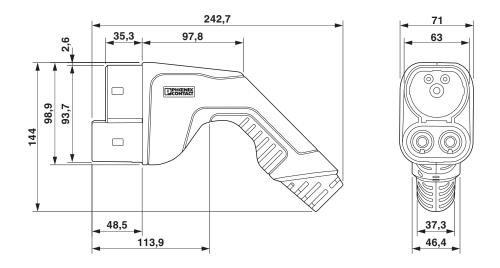
Pin assignment of the Vehicle Connector





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.

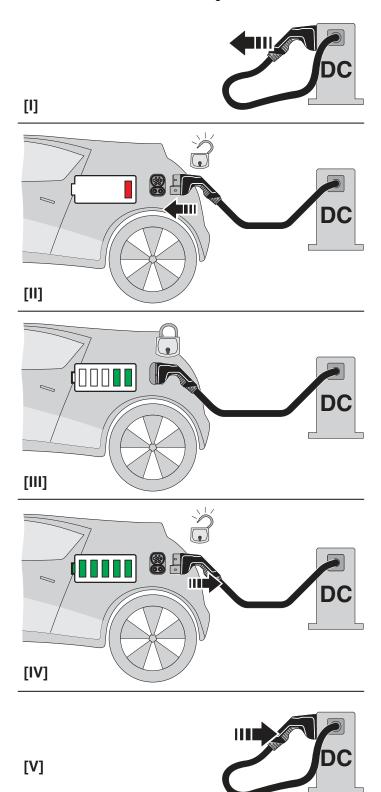




Dimensional drawing

Dimensional drawing





Schematic diagram

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## Classifications

### eCl@ss

| eCl@ss 10.0.1   | 27144705 |
|-----------------|----------|
| eCl@ss 11.0     | 27144705 |
| eCl@ss 9.0      | 27144705 |
| ETIM            |          |
| ETIM 7.0        | EC002897 |
| Approvals       |          |
| Approvals       |          |
| Approvals       |          |
| IECEE CB Scheme |          |
| Ex Approvals    |          |
|                 |          |

### Approval details

| IECEE CB Scheme    | <b>CB</b><br>scheme | http://www.iecee.org/ | DE1-64088 |
|--------------------|---------------------|-----------------------|-----------|
|                    |                     |                       |           |
| Nominal voltage UN |                     | 40 V                  |           |
| Nominal current IN |                     | 1000 A                |           |

### Accessories

Accessories

Adhesive label

Label - EV-LABEL-K - 1309761



CHARX connect, Label, accordance to DIN EN 17186, for DC charging cables, for voltage range from 50 V to 500 V, Marking K for CCS type 2 vehicle charging connectors and type 2 vehicle charging inlets



### Accessories

Label - EV-LABEL-L - 1309765



CHARX connect, Label, accordance to DIN EN 17186, for DC charging cables, for voltage range from 200 V to 920 V, Marking L for CCS type 2 vehicle charging connectors and type 2 vehicle charging inlets

### Charging connector holder

Charging connector holder - EV-T2CCS-PARK - 1624153



CHARX connect, Charging connector holder, for vehicle charging connectors on charging stations (EVSE), CCS type 2, IEC 62196-3, Front mounting, Item is not compatible with the HPC CCS type 2 charging cable from Phoenix Contact.

### DC charging controller

DC charging controller - EV-PLCC-AC1-DC1 - 1624130



Programmable charging controller for DC and AC charging of electric vehicles in accordance with IEC 61851-1,-23, DIN SPEC 70121 with integrated 3G mobile network modem

### DC power module

DC power module - CHARX PS/3AC/920DC/87.5KW - 1162690



CHARX power, Fast charging module for setting up DC charging stations, Rack mounting, input: 3-phase, output: 200 V DC...920 V DC / 125 A. The corresponding system control cabinet CHARX PS-CAB/4x87.5KW (Order No. 1165442) is necessary for operating the DC power module



### Accessories

DC power module - CHARX PS-M2/3AC/1000DC/30KW - 1232243



CHARX power, Fast charging module for setting up DC charging stations, 19" rack mounting, CAN bus, input: 3-phase, output: 150 V DC...1000 V DC / 0 A...100 A

DC power module - CHARX PS-M2/825DC/1000DC/30KW - 1296467



CHARX power, Fast charging module for setting up DC charging stations, 19" rack mounting, CAN bus, output: 150 V DC...1000 V DC / 0 A...100 A

Full screw connection

Cable gland - G-INS-M25-M68N-PNES-BK - 1411134



Cable gland, cable gland material: PA, external cable diameter 11 mm ... 17 mm, shielding: no, connecting thread: M25 x 1.5, color: jet black RAL 9005

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