

## DC charging cable - EV-T2M4CC-DC250A-3,5M70ESBK11 - 1130319

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CHARX connect, DC charging cable with vehicle charging connector and open cable end, Housing color black-black, with replaceable mating face frame, 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, 250 A / 1000 V (DC), D-Line 1.1, "PHOENIX CONTACT" logo, cable: 3.5 m, black, straight

### 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
- ✔ Maintenance-friendly replacement of the mating face frame
- ✔ Integrated temperature sensors for monitoring the temperature at the power contacts



### Key Commercial Data

|                      |   |
|----------------------|---|
| Packing unit         | 1 pc  |
| GTIN                 | <br>4 063151 058531 |
| GTIN                 | 4063151058531   |
| Custom tariff number | 85444290  |
| Country of origin    | Germany   |

### Technical data

#### Product definition

|      |  |
|------|--|
| Type | DC charging cable                                  |
|      | with vehicle charging connector and open cable end |

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## Technical data

### Product definition

|                       |  |
|-----------------------|--|
|                       | Housing color black-black  |
|                       | with replaceable mating face frame                               |
|                       | 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                | D-Line 1.1   |
| Standards/regulations | IEC 62196-3  |
| Charging standard     | CCS type 2   |
|                       | Combined Charging System   |
| Charging mode         | Mode 4   |

### Dimensions

|                  |                                     |
|------------------|-------------------------------------|
| Height           | 139 mm (Vehicle charging connector) |
| Width            | 75 mm (Vehicle charging connector)  |
| Depth            | 267 mm (Vehicle charging connector) |
| Conductor length | 3.5 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                    | IP44 (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)           | 250 kW  |
| Maximum charging power (boost mode)          | up to 500 kW (Depending on ambient conditions. For details, see the packing slip in the download area for this item.) |
| Number of power contacts                     | 3 (PE, DC+, DC-)  |
| Rated current of power contacts              | 250 A (up to 40 °C)   |
| Power contacts, maximum current (boost mode) | up to 500 A (Depending on ambient conditions. For details, see the packing slip in the download area for this item.)  |
| 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             |

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### Electrical properties

|                               |  |
|-------------------------------|--|
| Note on the connection method | Crimp connection, cannot be disconnected |
| Resistor coding               | 1500 $\Omega$ (between PE and PP)        |
|                               | PP signal contact connected to cable     |
| Temperature monitoring        | 2x Pt 1000                               |

### 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             | 14.1 mm x 44.8 mm (customer logo on request) |

### Material

|                      |         |
|----------------------|---------|
| Housing material     | Plastic |
| Material handle area | Plastic |
| Material mating face | Plastic |
| Flammability rating  | V0      |

### Cable

|                              |  |
|------------------------------|--|
| Cable structure              | 2 x 70 mm <sup>2</sup> + 1 x 35 mm <sup>2</sup> + 3 x 2 x 0.75 mm <sup>2</sup>         |
| Wiring standards/regulations | DIN EN 50620   |
| Wiring class                 | Class 6  |
| Wiring certifications        | VDE-Reg. 8798  |
| External cable diameter      | 32 mm $\pm$ 0.4 mm   |
| Type of conductor            | straight   |
| Cable resistance             | $\leq$ 0.000272 $\Omega$ /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       | 320 mm (10 x diameter)   |
| Cable weight                 | max. 2300 kg/km  |

### Temperature sensors

|                       |              |
|-----------------------|--------------|
| Type of sensor        | Pt 1000      |
| Standards/regulations | DIN EN 60751 |

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## Technical data

### Temperature sensors

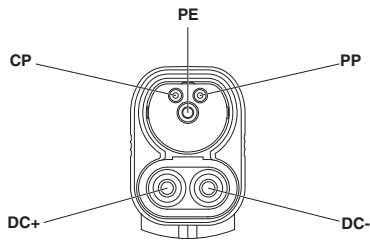
|   |   |
|---|---|
| Recommended measured current                                  | 1 mA (1 V at 0°C)                               |
| Tolerance at the sensor with the recommended measured current | ±1K   |
| Temperature range   | -50 °C ... 130 °C                               |
| Temperature coefficient (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 |

### Environmental Product Compliance

|            |   |
|------------|---|
| REACH SVHC | Lead 7439-92-1  |
| China RoHS | Environmentally Friendly Use Period = 10;   |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

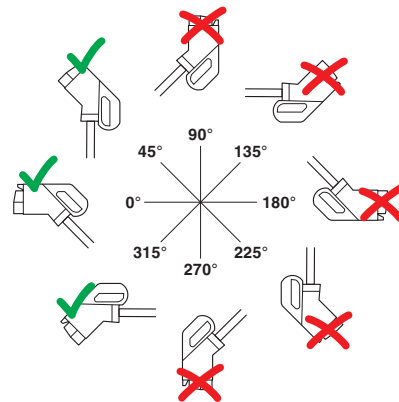
## Drawings

Schematic diagram



Pin assignment of the Vehicle Connector

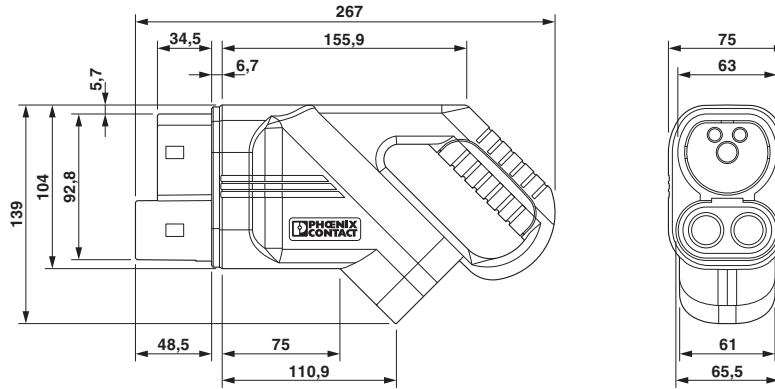
Schematic diagram



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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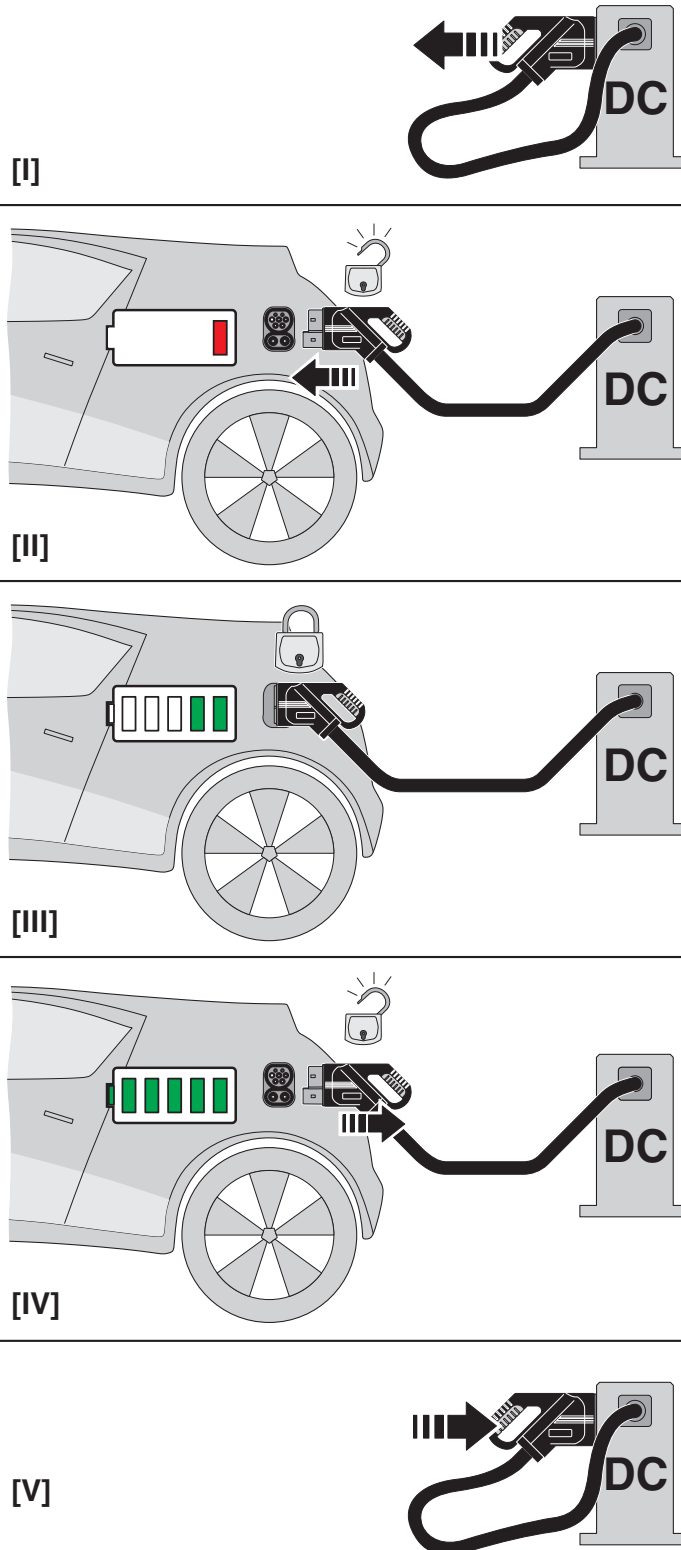
Dimensional drawing



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.

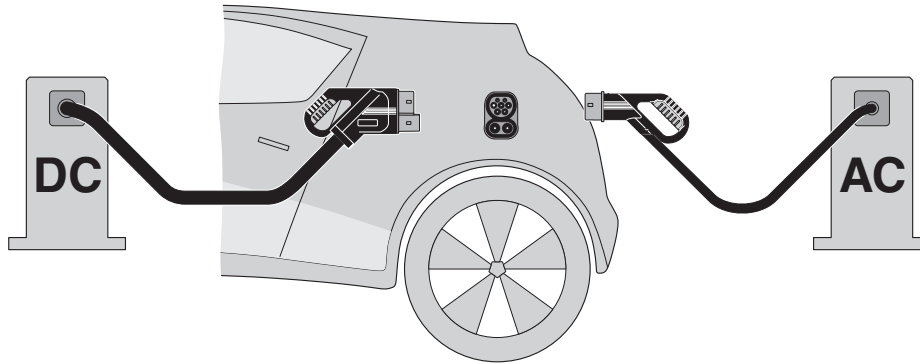
# DC charging cable - EV-T2M4CC-DC250A-3,5M70ESBK11 - 1130319

Schematic diagram



## DC charging cable - EV-T2M4CC-DC250A-3,5M70ESBK11 - 1130319

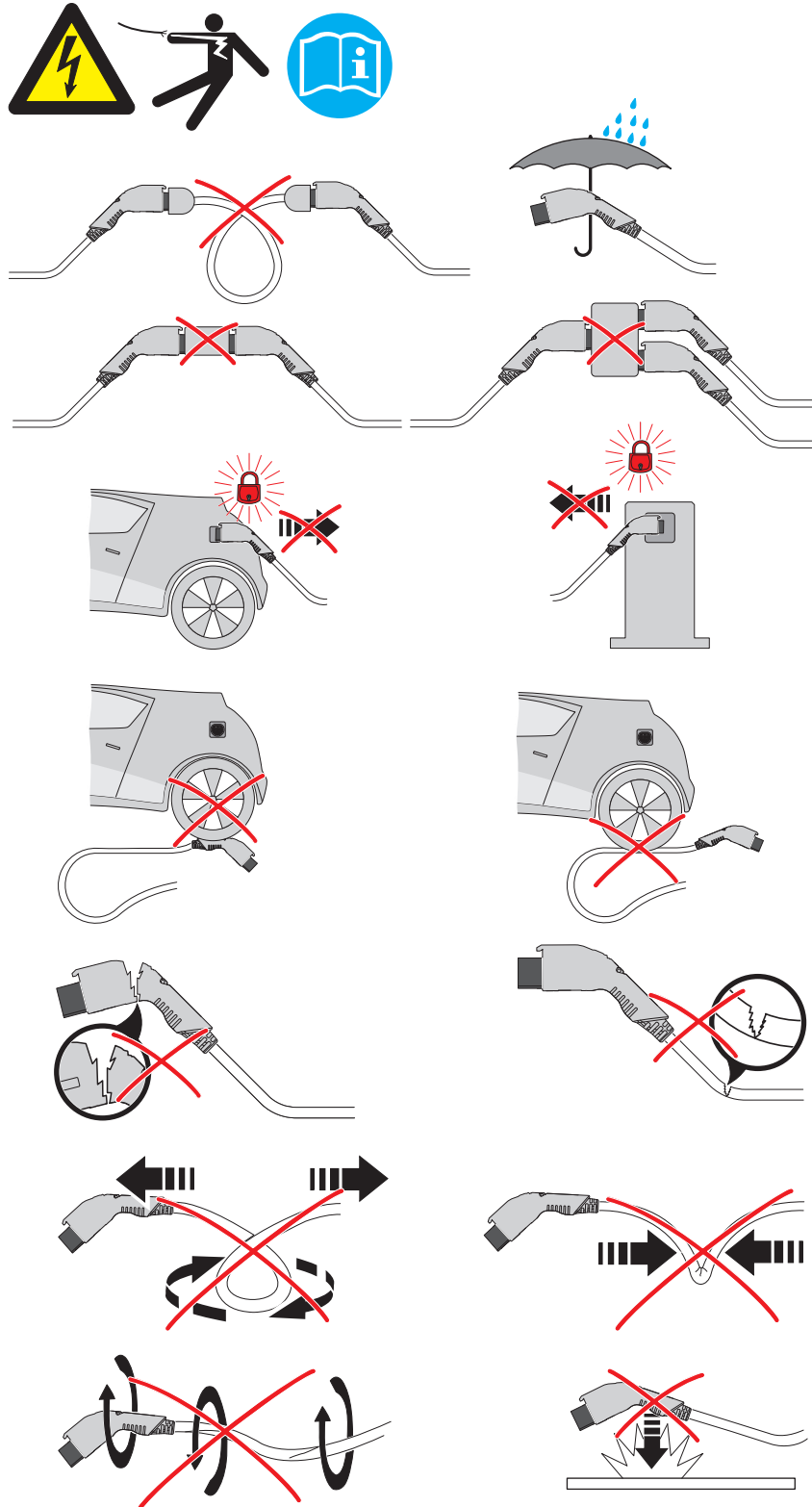
Schematic diagram



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.

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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 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 18.0 | 39121522 |
| UNSPSC 19.0 | 39121522 |
| UNSPSC 20.0 | 39121522 |
| UNSPSC 21.0 | 39121522 |

## 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

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

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### Accessories

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.

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### 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

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### 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

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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

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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

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### Accessories

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#### Full screw connection

Cable gland - G-INS-M50-L68L-PNES-BK - 1411138



Cable gland, cable gland material: PA, external cable diameter 30 mm ... 36 mm, shielding: no, connecting thread: M50 x 1.5, color: jet black RAL 9005

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#### Repair kit

Repair kit - EV-T2CCS-MF-M4X45-BIT - 1085796



CHARX connect, Repair kit, with replaceable mating face frame, with 5x M4X45 rounded head screws with Torx safety drive, with special bit for safety screwdriver, For replacement of the mating face frame of vehicle charging connectors, CCS type 2, Combined Charging System, IEC 62196-3, The vehicle connector housing does not have to be opened in order to replace the mating face frame.

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Repair kit - EV-T2CCS-MF-M4X45 - 1081734



CHARX connect, Repair kit, with replaceable mating face frame, with 5x M4X45 rounded head screws with Torx safety drive, For replacement of the mating face frame of vehicle charging connectors, CCS type 2, Combined Charging System, IEC 62196-3, The vehicle connector housing does not have to be opened in order to replace the mating face frame.

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