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DC charging cable, DC charging cable with vehicle connector, open cable end, CCS type 1, Combined Charging System, SAE J1772, IEC 62196-3, 125 A / 600 V (DC), design line Standard, cable: 25 ft, black, straight, NOTE: Cable management may be required., mating face: black, handle area: gray

#### **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 1 Vehicle Inlets, for installation at charging stations for E-Mobility (EVSE)

#### Your advantages

- Silver-plated surface of the power and signal contacts
- ☑ Certified in accordance with IATF 16949:2016 and ISO 9001:2015
- ☑ Integrated temperature sensors for monitoring the temperature at the power contacts



#### **Key Commercial Data**

| Packing unit | 1 pc            |
|--------------|-----------------|
| GTIN         | 4 055626 388649 |
| GTIN         | 4055626388649   |

## Technical data

#### Product definition

| Product type          | DC charging cable with vehicle connector, open cable end  |
|-----------------------|---|
| Standards/regulations | SAE J1772   |
|                       | IEC 62196-3   |
| Charging standard     | CCS type 1  |
|                       | Combined Charging System  |
| Charging mode         | Mode 4  |
| Note                  | 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). |



## Technical data

### Dimensions

| Vehicle connector width  | 67.90 mm      |
|--------------------------|---------------|
| Vehicle connector height | 140.80 mm     |
| Vehicle connector depth  | 260.00 mm     |
| Conductor length         | 25 ft         |
| Stripping length         | 130 mm ±20 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                    | 3R (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

| Maximum charging power            | 75 kW   |
|-----------------------------------|---|
| Number of power contacts          | 3 (PE, DC+, DC-)  |
| Rated current of power contacts   | 125 A   |
| Rated voltage for power contacts  | 600 V DC  |
| Number of signal contacts         | 2 (CP, CS)  |
| 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 |
| Note on the connection method     | Crimp connection, cannot be disconnected  |
| Resistor coding                   | 480 Ω (Lever actuated)  |
|                                   | 150 Ω (Lever not actuated)  |
| Temperature monitoring            | 2x Pt 1000  |

## Mechanical properties

| Insertion/withdrawal cycles | > 10000 |
|-----------------------------|---------|
| Insertion force             | < 75 N  |
| Withdrawal force            | < 75 N  |

### Design

| Design line             | Standard                                     |
|-------------------------|--|
| Housing color           | black  |
| Mating face color       | black  |
| Color handle area       | gray   |
| Actuating element color | gray   |
| Color protective cap    | black  |
| Label                   | 14.1 mm x 44.8 mm (customer logo on request) |

#### Material



## Technical data

### Material

| Housing material             | Plastic      |
|------------------------------|--------------|
| Material handle area         | Soft plastic |
| Actuating lever material     | Metal        |
| Material mating face         | Plastic      |
| Flammability rating          | V0           |
| Material surface of contacts | Ag           |

#### Cable

| Cable structure              | 2 x 1 AWG + 1 x 3 AWG + 3 x 2 x 18 AWG |
|------------------------------|--|
| Wiring standards/regulations | UL 62                                  |
|                              | FFSO7.E343212                          |
| External cable diameter      | 35.3 mm ±0.5 mm                        |
| Type of conductor            | straight                               |
| Outer sheath, material       | TPE                                    |
| External sheath, color       | black                                  |
| Minimum bending radius       | 529.5 mm (15 x diameter)               |
| Flammability rating          | FT2                                    |

#### 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 |

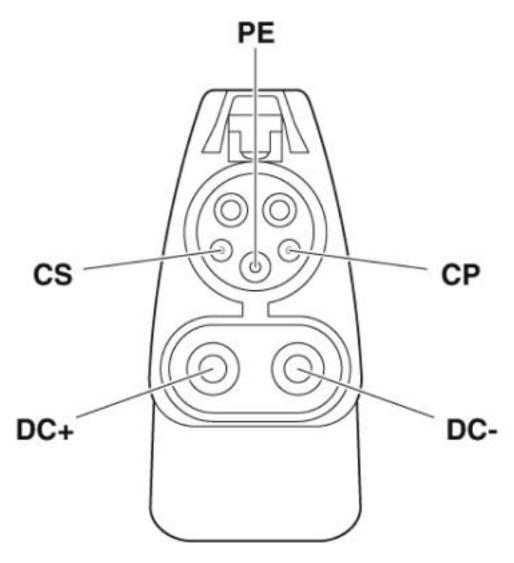
## **Environmental Product Compliance**

| 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**

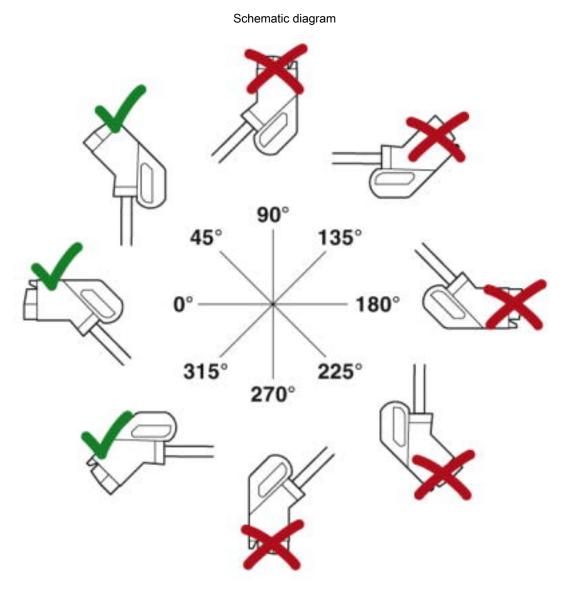


Connection diagram



Pin assignment of the Vehicle Connector

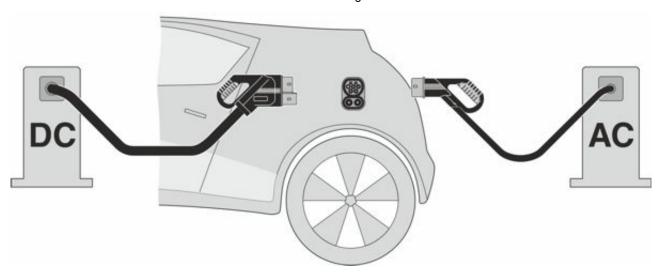




The resting position must be installed in the charging station such that the user cannot hang up the vehicle connector upside down ( $90^{\circ}$  to  $270^{\circ}$ ). However, positions rotated upward ( $45^{\circ}$ ) or downward ( $315^{\circ}$ ) are options for a resting position.



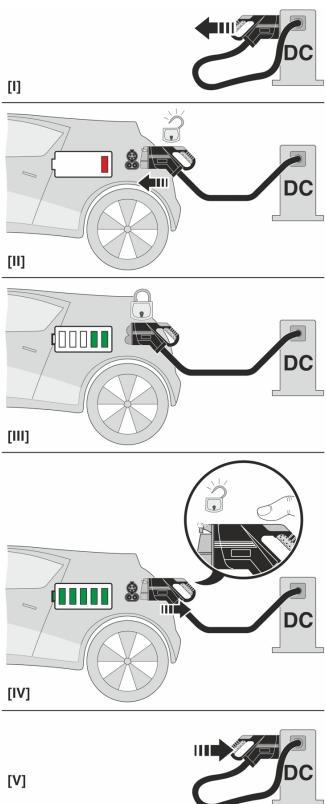
Schematic diagram



"Combined Charging System" principle

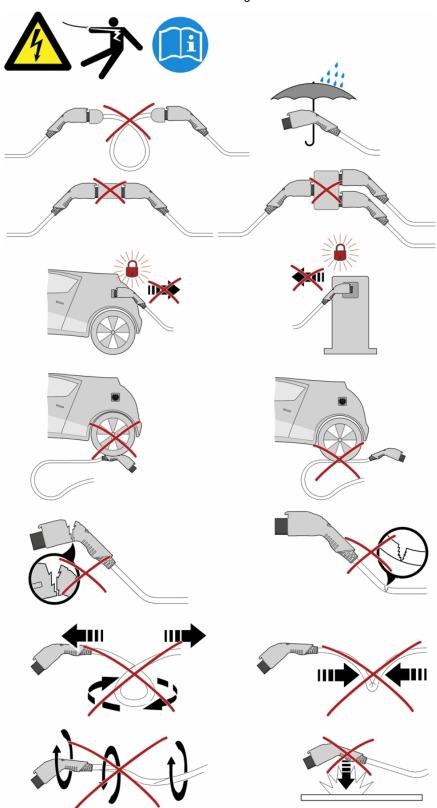


Schematic diagram



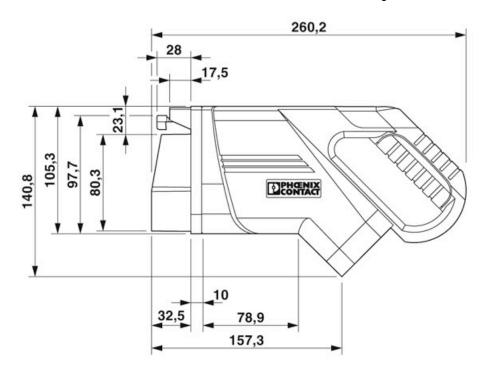


Schematic diagram





#### Dimensional drawing





Ensure that the vehicle connector is placed in an appropriate resting position that ensures a minimum protection rating of IP24 in accordance with IEC 61851-1 for the entire time between charging. Use the dimensions of the vehicle connector to create this type of resting position. Detailed specifications can also be found in the download area.

### Approvals

Approvals

Approvals

cULus Recognized



## Approvals

Ex Approvals

### Approval details

| cULus Recognized <b>GFU</b> us | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm E473195-20160308 |       |
|--------------------------------|--|-------|
|                                |  |       |
| Nominal voltage UN             |  | 600 V |
| Nominal current IN             |  | 125 A |
| mm²/AWG/kcmil                  |  | 1     |

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