

CHARX T2HBI24-1AC32DC250-2,0M2 - Vehicle charging inlet



1211206

<https://www.phoenixcontact.com/us/products/1211206>

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CHARX connect universal, Vehicle charging inlet, for charging with alternating current (AC) and with direct current (DC), CCS type 2, IEC 62196-2, IEC 62196-3, 250 A / 1000 V (DC), 32 A / 250 V (AC), Single wires, length: 2 m, locking actuator: 24 V, 4-pos., Front and rear mounting, M6, housing: black, A protective cap is supplied as standard for the DC and AC contacts.

Product description

Vehicle charging inlet for charging with direct current (DC), compatible with type 2 CCS vehicle charging connectors (EVSE), for installation in electric vehicles (EV).

Your advantages

- Complete product range
- Uniform, space-saving dimensions for the installation space and the screw connection points of all Phoenix Contact vehicle charging inlets
- Developed and produced in accordance with the IATF 16949 automotive standard and ISO 9001
- Integrated interlock during charging
- Manual emergency release of the locking actuator
- Protected and sealed against dirt and water with a high degree of protection

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1211206 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | EM01 |
| Product key | XWCAID |
| GTIN | 4063151284169 |
| Weight per piece (including packing) | 7.105 kg |
| Weight per piece (excluding packing) | 6.97 kg |
| Customs tariff number | 85444290 |
| Country of origin | PL |

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1211206

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Technical data

Notes

| | |
|---------|--|
| General | A protective cap is supplied as standard for the DC and AC contacts. |
|---------|--|

Product properties

| | |
|-------------------|---|
| Product type | Vehicle charging inlet |
| Product family | CHARX connect universal |
| Application | for charging with alternating current (AC) and with direct current (DC) for installation in electric vehicles (EV) Combined Charging System |
| Charging standard | CCS type 2 |
| Charging mode | Mode 2, 3, 4 |

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 |
| Insulation resistance | > 200 MΩ |
| Coding | 4.7 kΩ (between PE and PP) |
| Temperature measurement | DC contacts: 2x PT1000 (DIN EN 60751) |
| Temperature monitoring | AC contacts: PTC chain (DIN EN 60738-1) |
| Type of charging current | AC single-phase |
| Charging power | 8 kW |
| Charging current | 32 A |
| Type of charging current | DC |
| Charging power | 250 kW |
| Charging current | 250 A |
| Type of charging current | DC Boost Mode |
| Charging power | up to 500 kW (Boost Mode, depending on the ambient conditions. For detailed information, see the packing slip in the download area for this item.) |
| Charging current | up to 500 A (Boost Mode, depending on the ambient conditions. For detailed information, see the packing slip in the download area for this item.) |

| | |
|---------------|-------------------------|
| Power contact | |
| Number | 5 (L1, N, PE, DC+, DC-) |
| Rated voltage | 250 V AC 1000 V DC |
| Rated current | 32 A AC 250 A DC |

| | |
|----------------|--|
| Signal contact | |
|----------------|--|

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1211206

<https://www.phoenixcontact.com/us/products/1211206>

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

Temperature sensors (PTC chain)

| | |
|------------------------------|-------------------------------------|
| Sensor type | PTC chain |
| Standards/regulations | DIN EN 60738-1 |
| Attachment point | Sensor for the AC contacts |
| Messbereich_Widerstand | 790 Ω ... 1420 Ω |
| Resistance | max. 1280 Ω ±5 K |
| Recommended measured current | ≤ 1 mA (U _{max} = 16 V DC) |
| Ambient temperature | -40 °C ... 130 °C (Operation) |

Temperature sensors (Pt 1000)

| | |
|-----------------------|-------------------------------|
| Sensor type | Pt 1000 |
| Standards/regulations | DIN EN 60751 |
| Attachment point | 2 sensors for the DC contacts |

Locking actuator

| | |
|----------------------------------|------------|
| Operating voltage | 24 V |
| Note number of positions | 4-pos. |
| Position of the locking actuator | right-side |

Locking actuator

| | |
|--|---------------------|
| Operating voltage | 24 V |
| Note number of positions | 4-pos. |
| Position of the locking actuator | right-side |
| Possible power supply range at the motor | 22 V ... 26 V |
| Maximum voltage for locking detection | 30 V |
| Typical motor current for locking | 0.05 A |
| Reverse current of the motor | max. 0.5 A |
| Max. dwell time with reverse current | 1 s |
| Recommended adaptation time | 600 ms |
| Pause time after entry or exit path | 3 s |
| Service life insertion cycles | > 10000 load cycles |
| Lock recognition | available |
| Mechanical emergency release | available |
| Ambient temperature (operation) | -30 °C ... 50 °C |

Material specifications

| | |
|----------------------------|--------------|
| Color (Housing) | black (9005) |
| Color (Mating face) | black (9005) |
| Material (Housing) | Plastic |
| Material (Contact surface) | Silver |

Cable/line

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| | |
|----------------------------|-----------------------|
| Cable length | 2 m |
| Cable type | Single wires |
| Single wire, cross section | 95.00 mm ² |

Single-core wires for AC

| | |
|-------------------------|-----------------------|
| Cable length | 2 m |
| Cable structure | 2 x 6 mm ² |
| Single wire, material | Silicone |
| Single wire, color | OG |
| External cable diameter | 12.6 mm ±0.2 mm |
| Cable resistance | ≤ 3.2 Ω/km |

Single-core wires for DC

| | |
|-------------------------|------------------------|
| Cable length | 2 m |
| Cable structure | 2 x 95 mm ² |
| Single wire, material | Silicone |
| Single wire, color | OG |
| External cable diameter | 20.6 mm ±0.3 mm |
| Cable resistance | ≤ 0.196 Ω/km |

Single-core wire for PE

| | |
|-------------------------|------------------------|
| Cable length | 2 m |
| Cable structure | 1 x 25 mm ² |
| Single wire, material | Silicone |
| Single wire, color | GN/YE |
| External cable diameter | 8.6 mm ±0.1 mm |
| Cable resistance | ≤ 0.743 Ω/km |

Single-core wires for locking actuator

| | |
|-------------------------|----------------------------|
| Cable length | 0.5 m |
| Cable structure | 4 x 0.5 mm ² |
| Single wire, material | PVC |
| Single wire, color | BU/RD, BU/GN, BU/YE, BU/BN |
| External cable diameter | 1.6 mm ±0.20 mm |
| Cable resistance | ≤ 37.1 Ω/m |

Single-core wires for PTC temperature sensors

| | |
|-------------------------|-------------------------|
| Cable length | 1 m |
| Cable structure | 5 x 0,5 mm ² |
| Single wire, material | PVC |
| Single wire, color | BN/GY |
| | BN/YE/GN |
| External cable diameter | 1.6 mm ±0.20 mm |
| Cable resistance | ≤ 37.1 Ω/m |

Single-core wires for Pt 1000 temperature sensors

| | |
|--------------|-----|
| Cable length | 1 m |
|--------------|-----|

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1211206

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| | |
|-------------------------|-------------------------|
| Cable structure | 3 x 0.5 mm ² |
| Single wire, material | PVC |
| Single wire, color | BN |
| | GN |
| | YE |
| External cable diameter | 1.6 mm ±0.20 mm |
| Cable resistance | ≤ 37.1 Ω/m |

Single-core wires for communication

| | |
|-------------------------|-------------------------|
| Cable length | 1 m |
| Cable structure | 2 x 0.5 mm ² |
| Single wire, material | PVC |
| Single wire, color | BK |
| | WH |
| External cable diameter | 1.6 mm ±0.20 mm |
| Cable resistance | ≤ 37.1 Ω/m |

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 inlet) | IP55 (plugged in; when plugged in and ready to operate, the degree of protection is only ensured if both plug-in components are original products from Phoenix Contact or suitable standard-compliant products) |
| | IP67 (Inner area of vehicle charging inlet) |
| Ambient temperature (operation) | -40 °C ... 60 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Altitude | 4000 m (above sea level) |

Standards and regulations

Standards

| | |
|-----------------------|-------------|
| Standards/regulations | IEC 62196-2 |
| | IEC 62196-3 |

Mounting

| | |
|--|---|
| Mounting type | Front and rear mounting (0 to 90 degree frontal inclination possible) |
| Mounting hole diameter | 6.70 mm (Ø) |
| Fixing screws | M6 |
| Screws included in the scope of delivery | none |

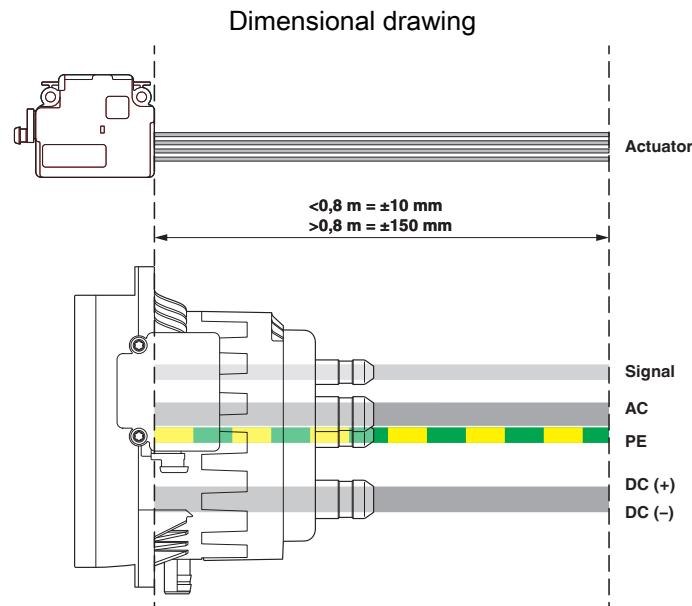
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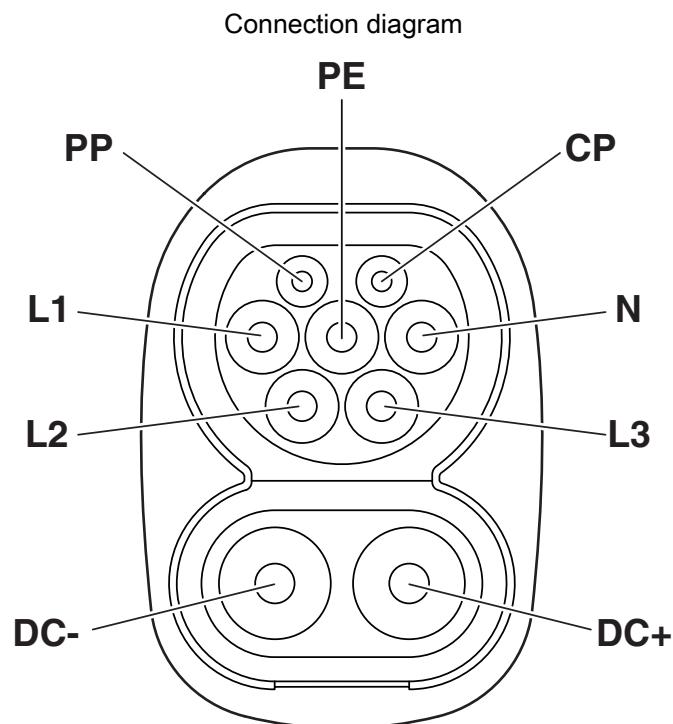
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Drawings



Reference points for measuring the line length



Pin assignment of vehicle charging inlets

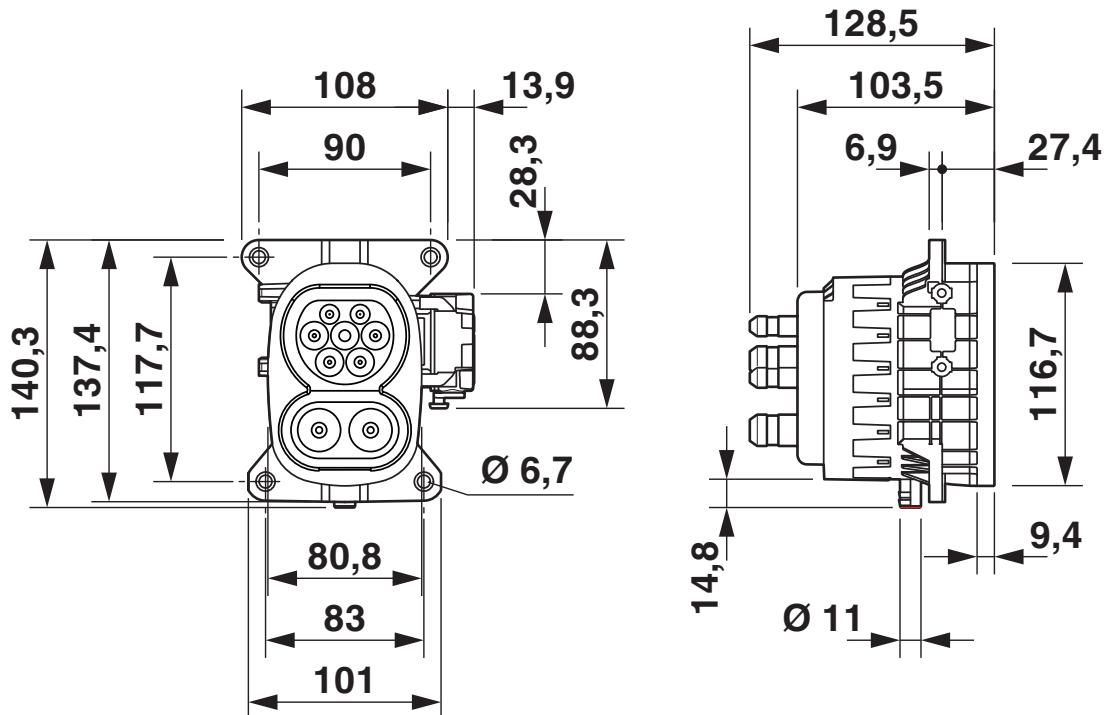
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Dimensional drawing



Dimensional drawing

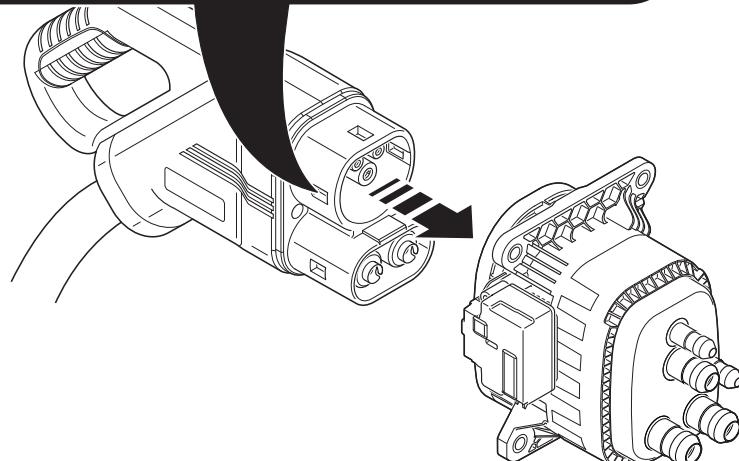
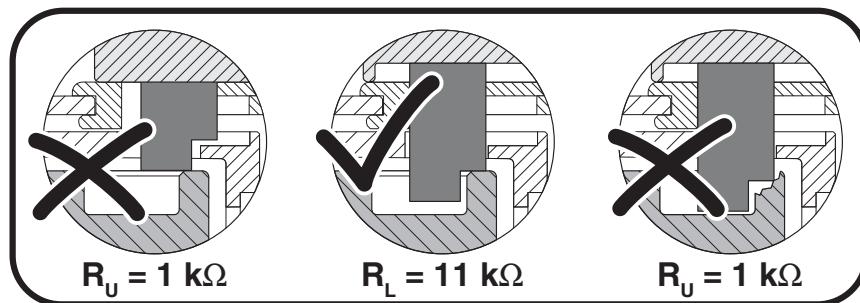
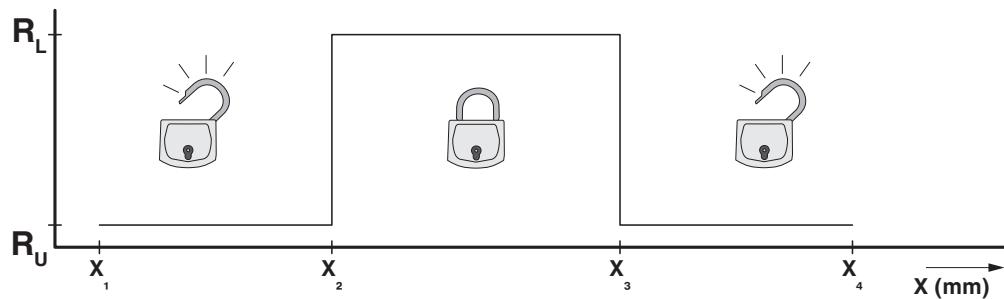
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Connection diagram



Detection for Vehicle Connector

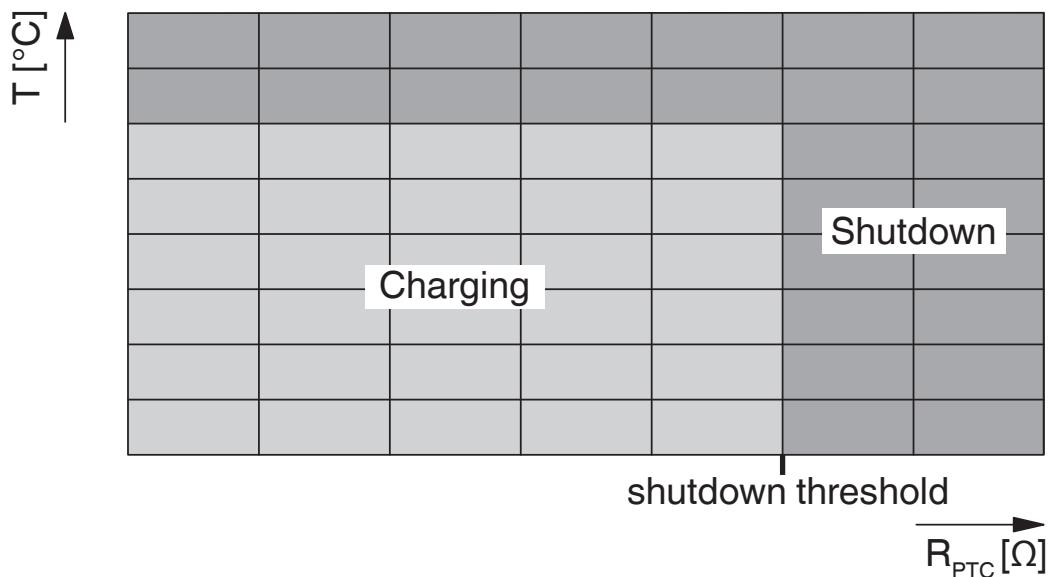
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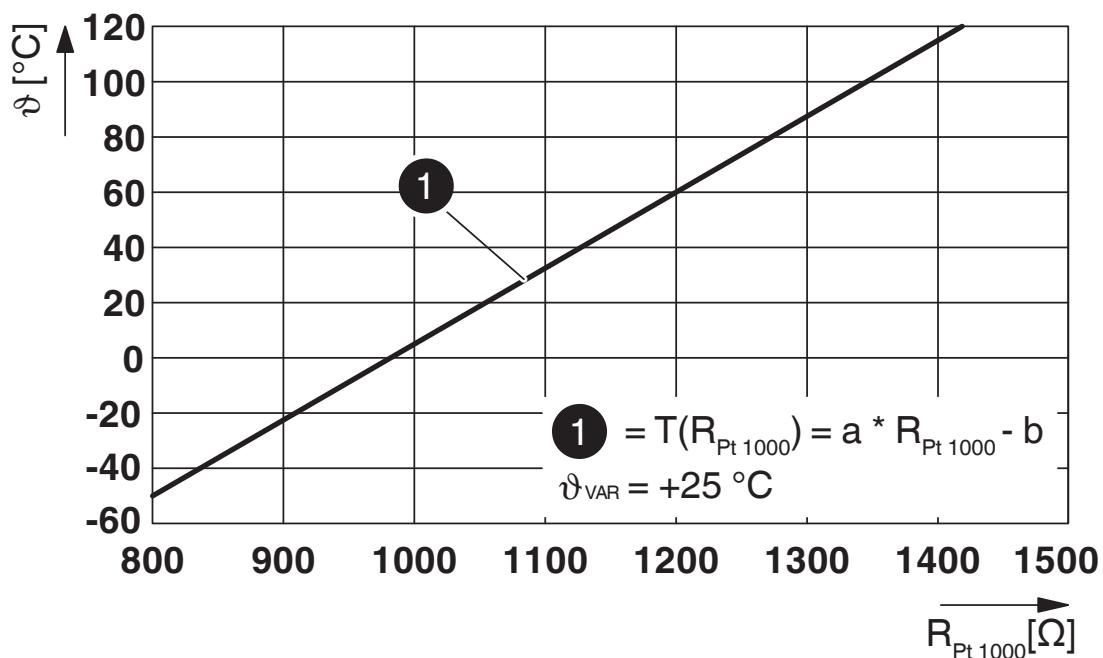
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Schematic diagram



Temperature sensor technology resistance range at AC contacts

Diagram



Pt 1000 characteristic curve at an ambient temperature of 25°C for temperature measurement at the DC contacts

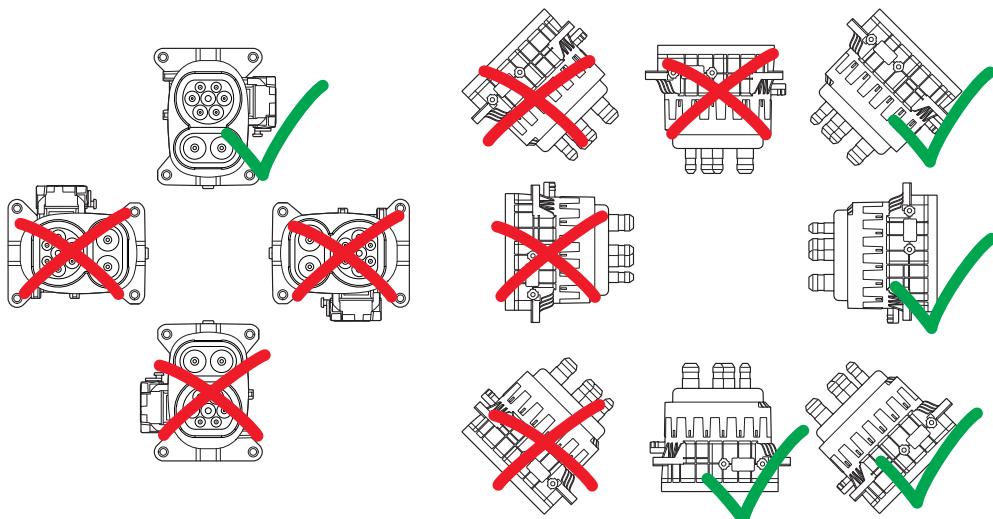
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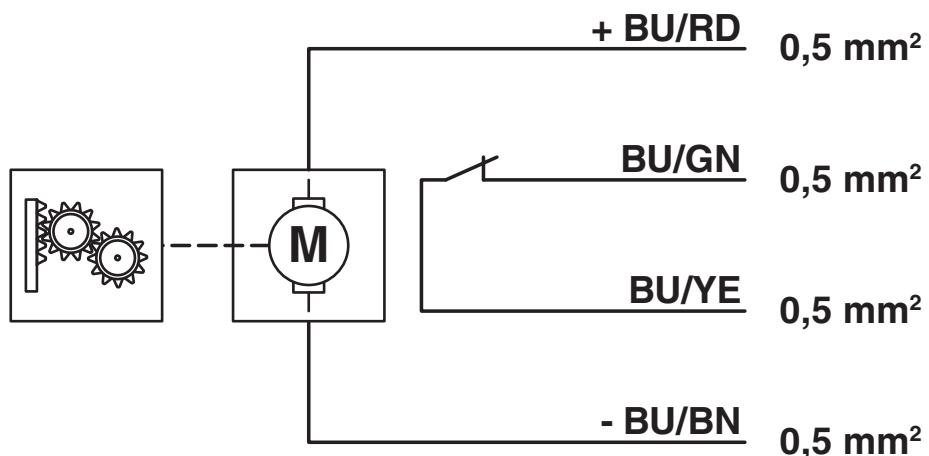
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Connection diagram



Installation positions

Block diagram



Block diagram of the locking actuator

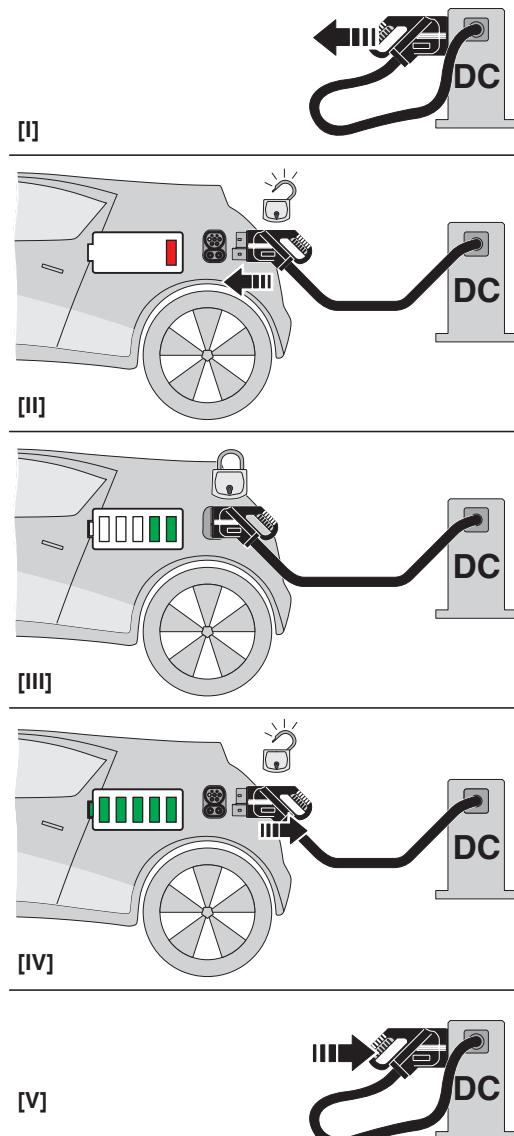
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Schematic diagram



Operating instructions

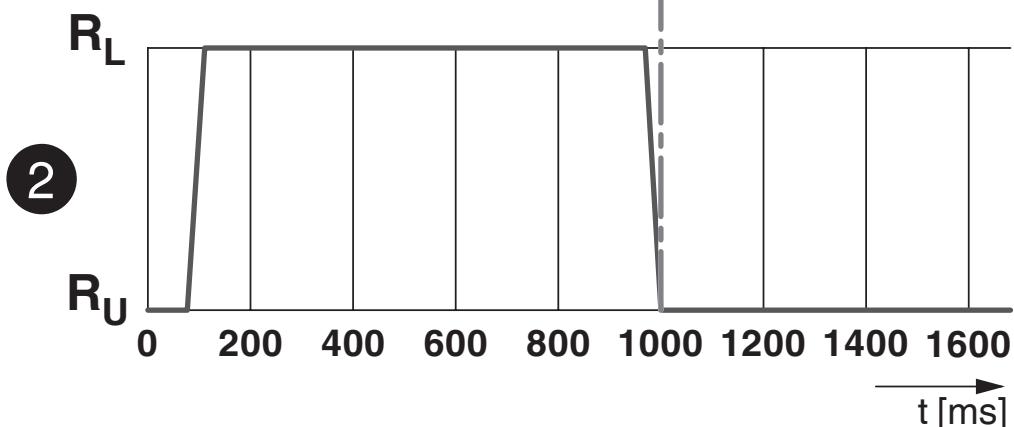
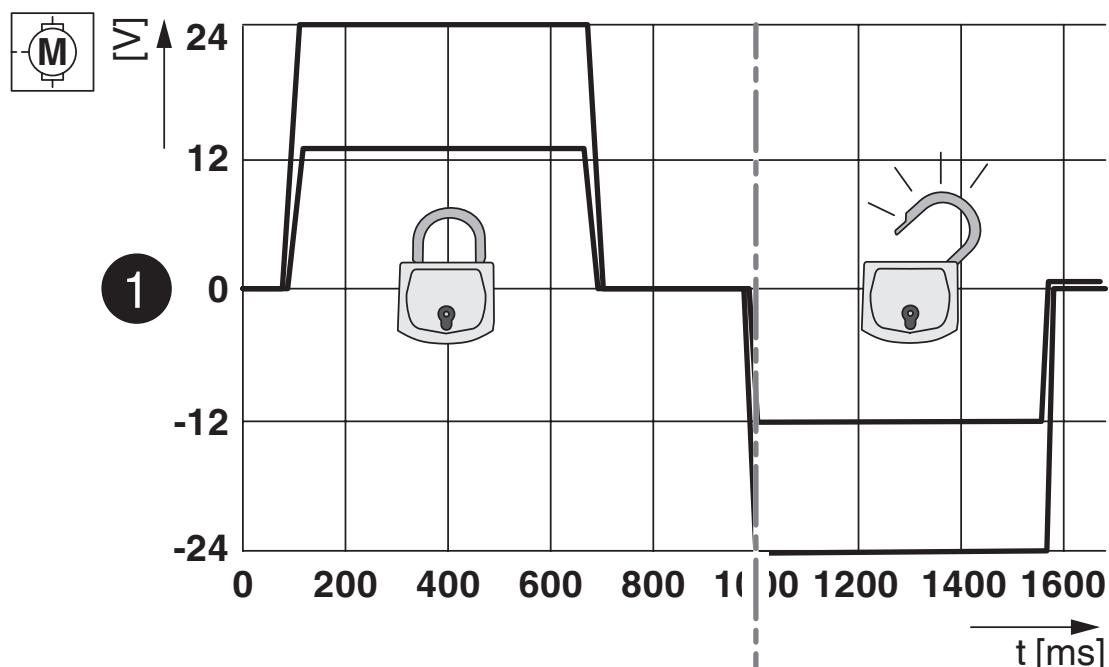
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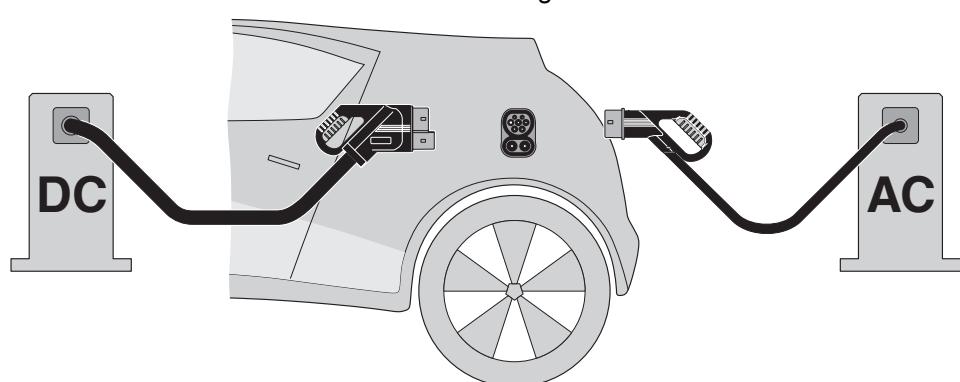
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Diagram



Locking states of the locking actuator

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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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-11.0 | 27144706 |
| ECLASS-12.0 | 27144706 |
| ECLASS-13.0 | 27144706 |

ETIM

| | |
|----------|----------|
| ETIM 8.0 | EC002898 |
|----------|----------|

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Environmental product compliance

| | |
|------------|-----------------|
| REACH SVHC | Lead 7439-92-1 |
| | DOTE 15571-58-1 |
| | Dechlorane Plus |

| | |
|------------|---|
| China RoHS | Environmentally Friendly Use Period = 10; For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads" |
|------------|---|

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Accessories

CHARX T2HBI-DUST-COVER-SET - Protective cover

1305486

<https://www.phoenixcontact.com/us/products/1305486>

CHARX connect universal, Protective cover, Accessories, for vehicle charging inlet, CCS type 2, Plug-on assembly, housing: black



CHARX T2HI-ELOCK24V - Locking

1331524

<https://www.phoenixcontact.com/us/products/1331524>

CHARX connect universal, Locking, Accessories, for mounting on vehicle charging inlets, Type 2, IEC 61851-1, Single wires, length: 1 m, locking actuator: 24 V, 4-pos.



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