

CHARX T2HBI12-1AC32DC125-2,0M2 - Vehicle charging inlet



1270297

<https://www.phoenixcontact.com/us/products/1270297>

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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, 125 A / 1000 V (DC), 32 A / 250 V (AC), Single wires, length: 2 m, locking actuator: 12 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 | 1270297 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | EM01 |
| Product key | XWCAID |
| GTIN | 4063151440213 |
| Weight per piece (including packing) | 4,229 g |
| Weight per piece (excluding packing) | 4,229 g |
| Customs tariff number | 85444290 |
| Country of origin | PL |

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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) |
| Technology | Combined Charging System |
| Charging standard | CCS type 2 |
| Charging mode | Mode 2, 3, 4 |

Data management status

| | |
|------------------|----|
| Article revision | 03 |
|------------------|----|

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 | 125 kW |
| Charging current | 125 A |
| Type of charging current | DC Boost Mode |
| Charging power | up to 250 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 250 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 |

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| | |
|--|----------|
| | 125 A DC |
|--|----------|

Signal contact

| | |
|---------------|------------|
| 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 |
| Measuring range_resistance | 790.00 Ω ... 1420.00 Ω |
| Resistance | max. 1280 Ω \pm 5 K |
| Recommended measured current | \leq 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 | 12 V |
| Note number of positions | 4-pos. |
| Position of the locking actuator | right-side |

Locking actuator

| | |
|--|---------------------|
| Operating voltage | 12 V |
| Note number of positions | 4-pos. |
| Position of the locking actuator | right-side |
| Possible power supply range at the motor | 9 V ... 16 V |
| Maximum voltage for locking detection | 12 V |
| Typical motor current for locking | 0.25 A |
| Reverse current of the motor | max. 1.5 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) | -40 °C ... 40 °C |

Dimensions

| | |
|--------|-----------|
| Width | 117.65 mm |
| Height | 90 mm |
| Depth | 117.65 mm |

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Material specifications

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

Cable/line

| | |
|----------------------------|-----------------------|
| Cable length | 2 m |
| Cable type | Single wires |
| Single wire, cross section | 35.00 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 | 12.60 mm ±0.2 mm |
| Cable resistance | ≤ 3.2 Ω/km |

Single-core wires for DC

| | |
|-------------------------|------------------------|
| Cable length | 2 m |
| Cable structure | 2 x 35 mm ² |
| Single wire, material | Silicone |
| Single wire, color | OG |
| External cable diameter | 14.10 mm ±0.3 mm |
| Cable resistance | ≤ 0.527 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 | 8.60 mm ±0.1 mm |
| Cable resistance | ≤ 0.743 Ω/km |

Single-core wires for locking actuator

| | |
|-------------------------|----------------------------|
| Cable length | 1.5 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 | 1.60 mm ±0.20 mm |
| Cable resistance | ≤ 37.1 Ω/m |

Single-core wires for PTC temperature sensors

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

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| | |
|-------------------------|-------------------------|
| Cable structure | 2 x 0.5 mm ² |
| Single wire, material | PVC |
| Single wire, color | BN/GY |
| | BN/YE/GN |
| External cable diameter | 1.60 mm ±0.20 mm |
| Cable resistance | ≤ 37.1 Ω/m |

Single-core wires for Pt 1000 temperature sensors

| | |
|-------------------------|-------------------------|
| Cable length | 1 m |
| Cable structure | 3 x 0.5 mm ² |
| Single wire, material | PVC |
| Single wire, color | BN |
| | GN |
| | YE |
| External cable diameter | 1.60 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 | 1.60 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 ensued 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 ... 40 °C () |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Altitude | 4000 m (above sea level) |

Standards and regulations

Standards

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| | |
|-----------------------|-------------|
| 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 | 6.80 mm (ø) |
| Fixing screws | M6 |
| Screws included in the scope of delivery | none |

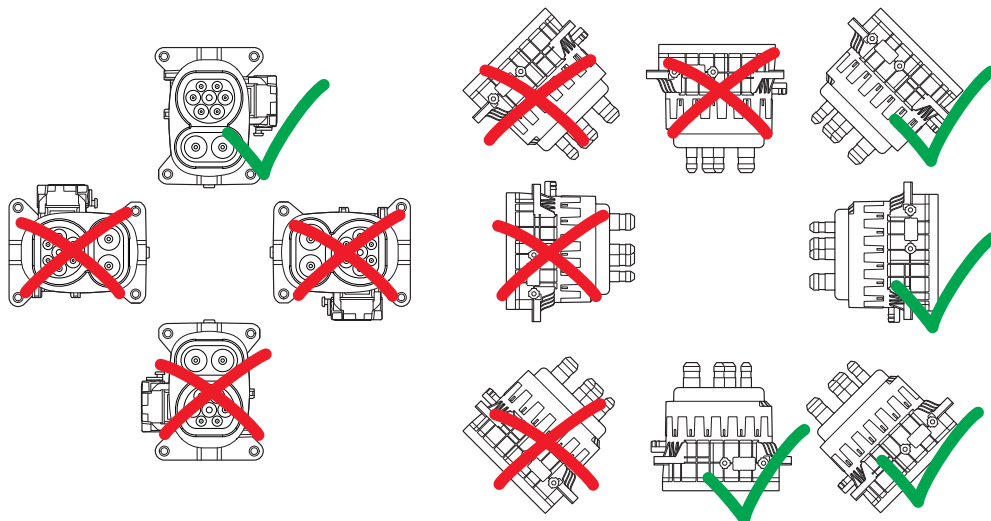
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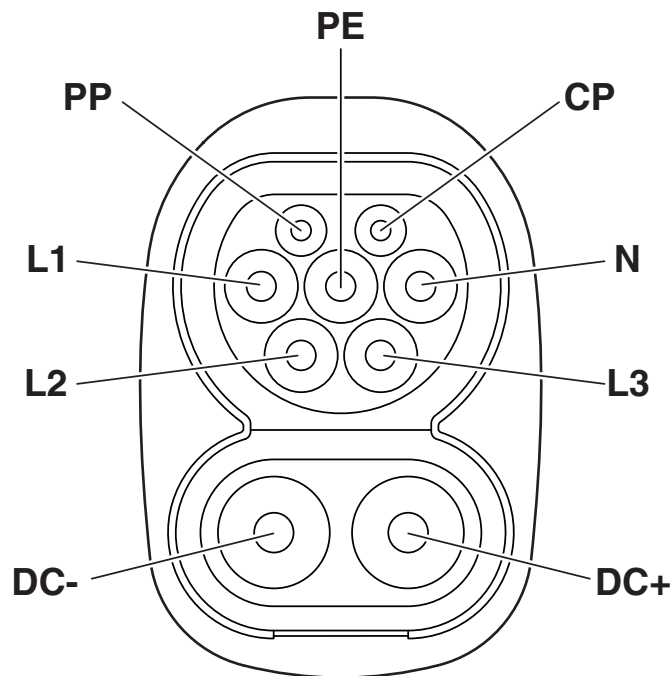
Drawings

Connection diagram



Installation positions

Connection diagram

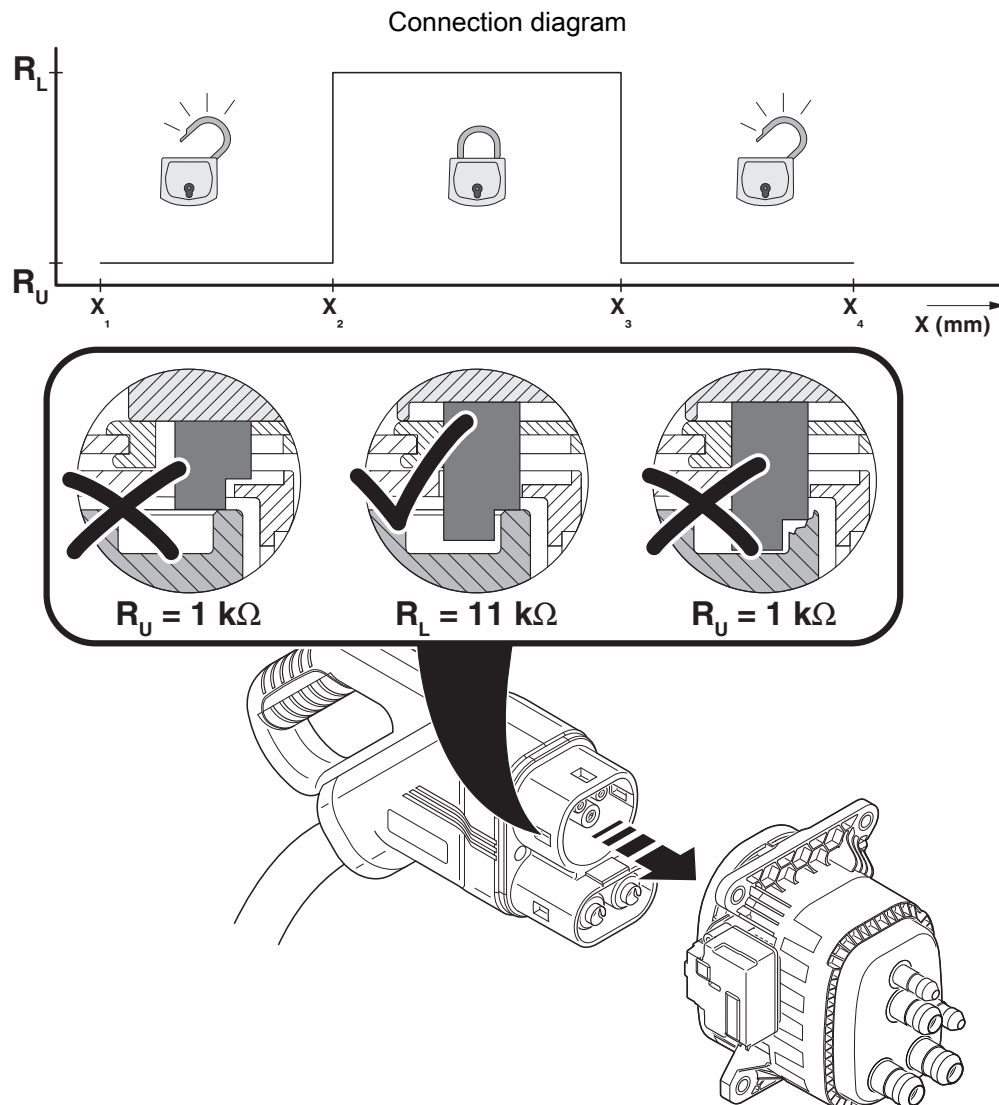


Pin assignment of vehicle charging inlets

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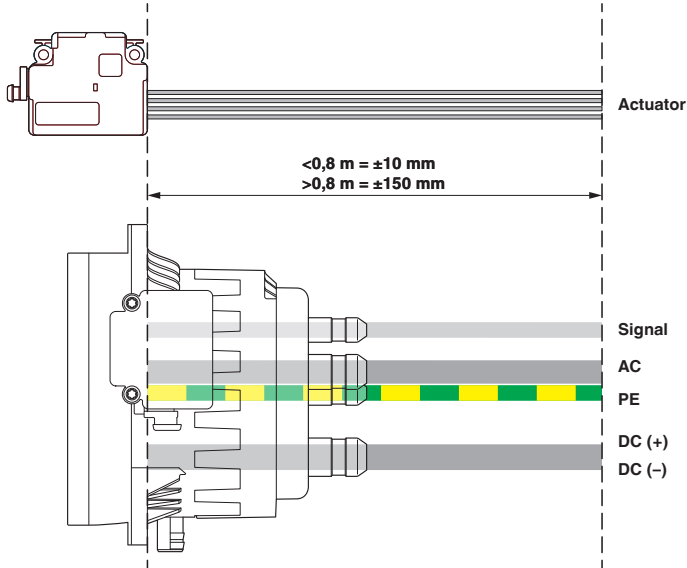
Detection for Vehicle Connector

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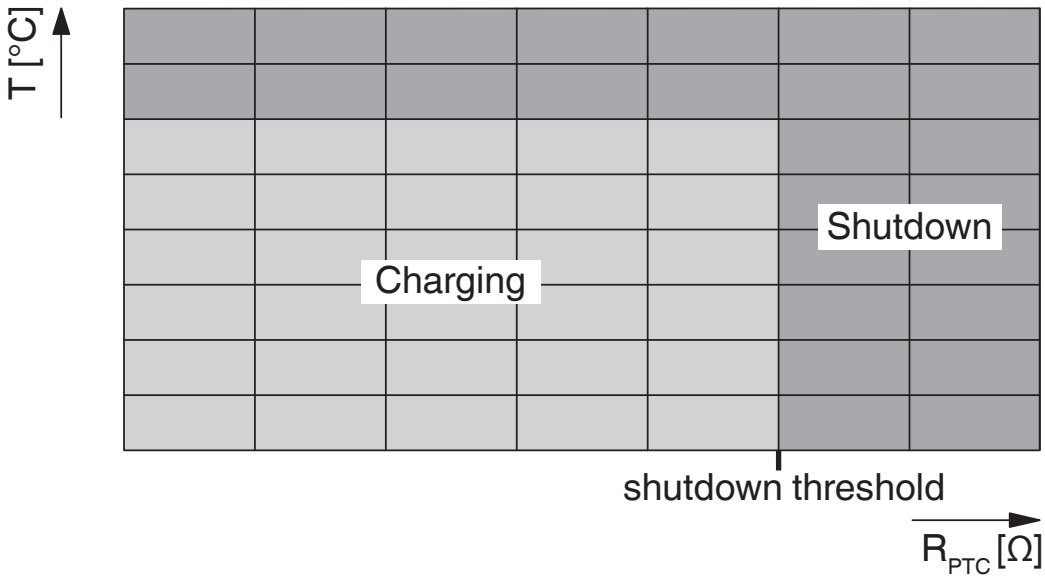
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Dimensional drawing



Reference points for measuring the line length

Schematic diagram

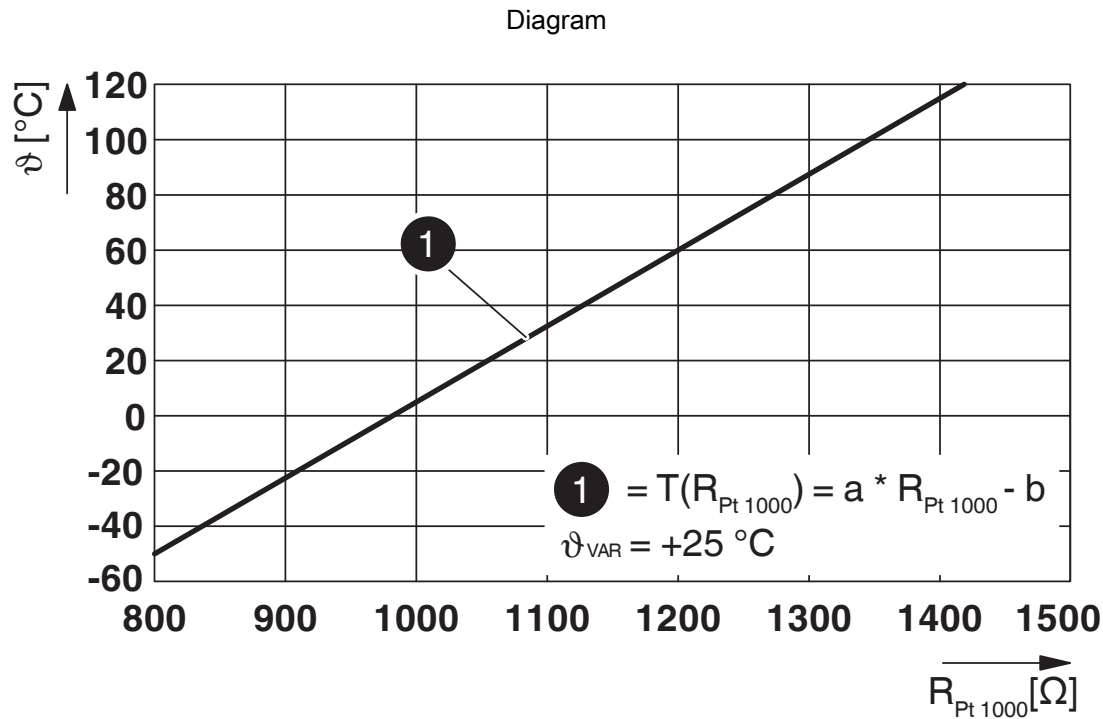


Temperature sensor technology resistance range at AC contacts

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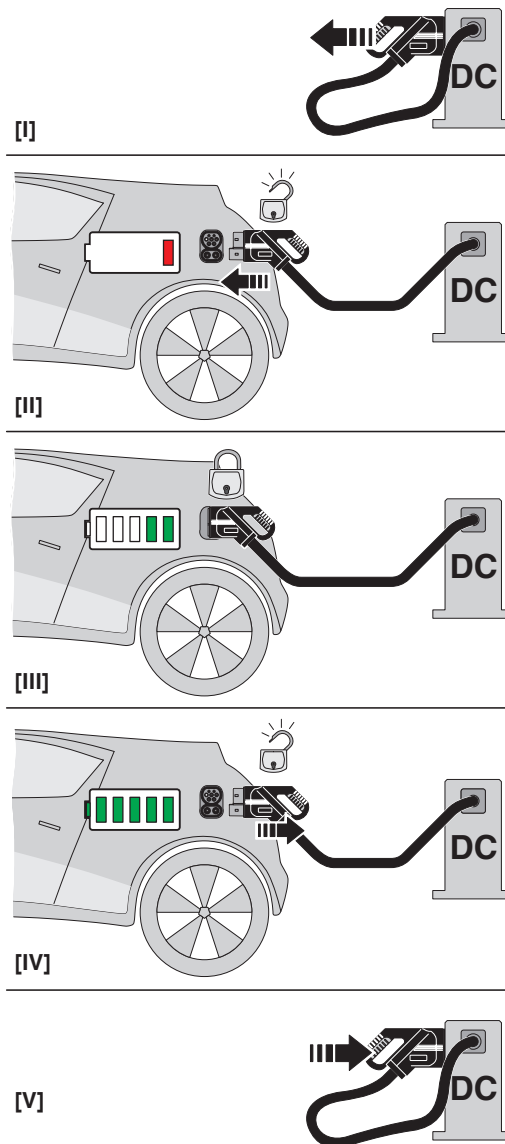
Pt 1000 characteristic curve at an ambient temperature of 25°C for temperature measurement at the DC contacts

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Schematic diagram

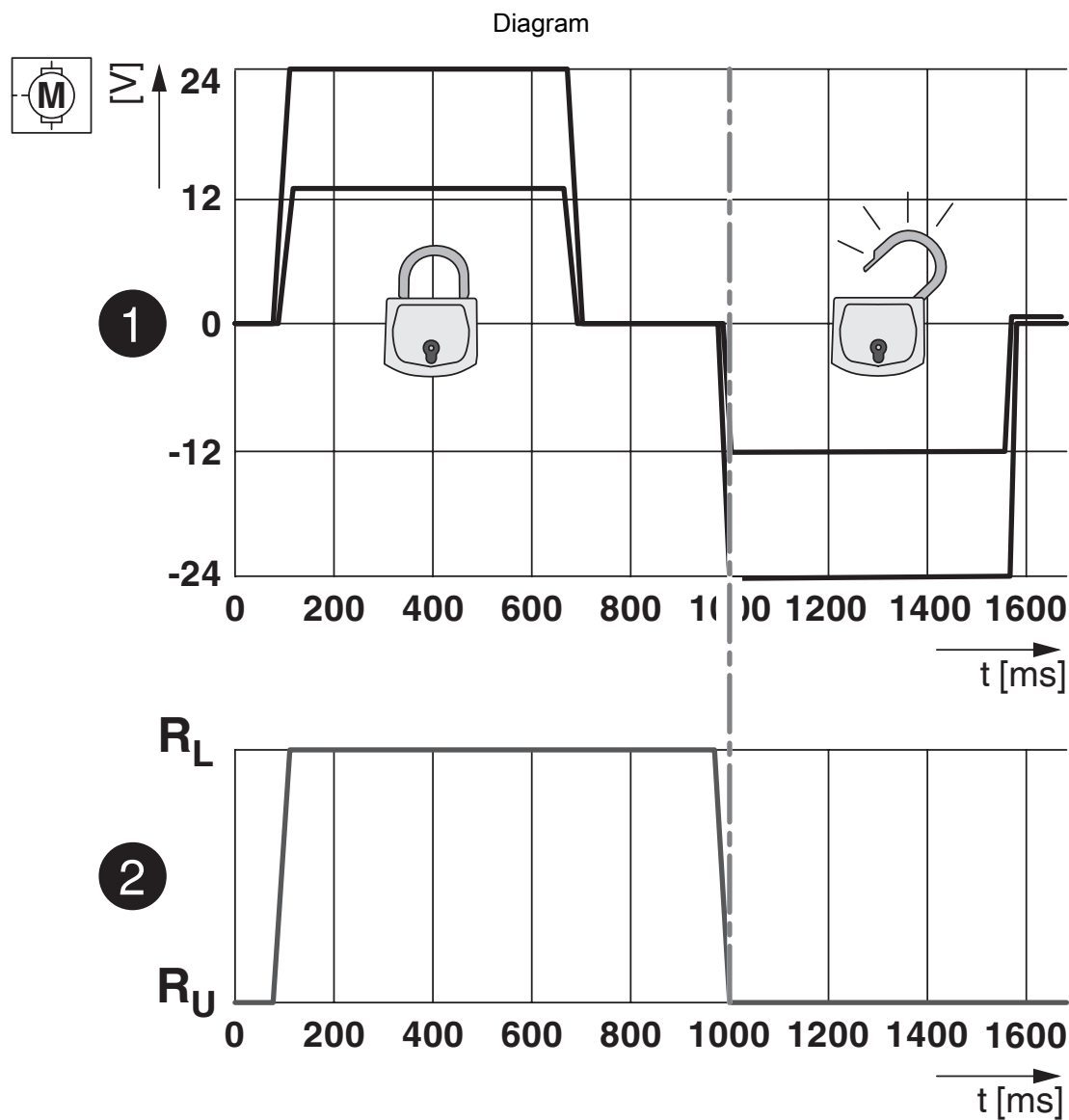


Operating instructions

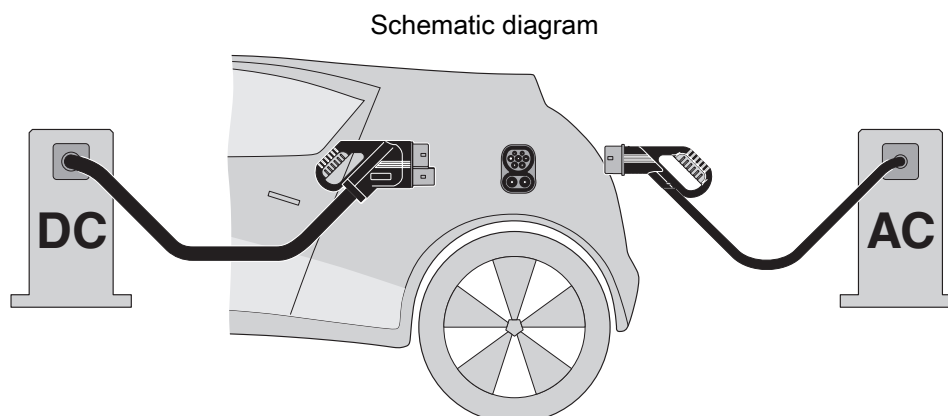
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Locking states of the locking actuator



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.

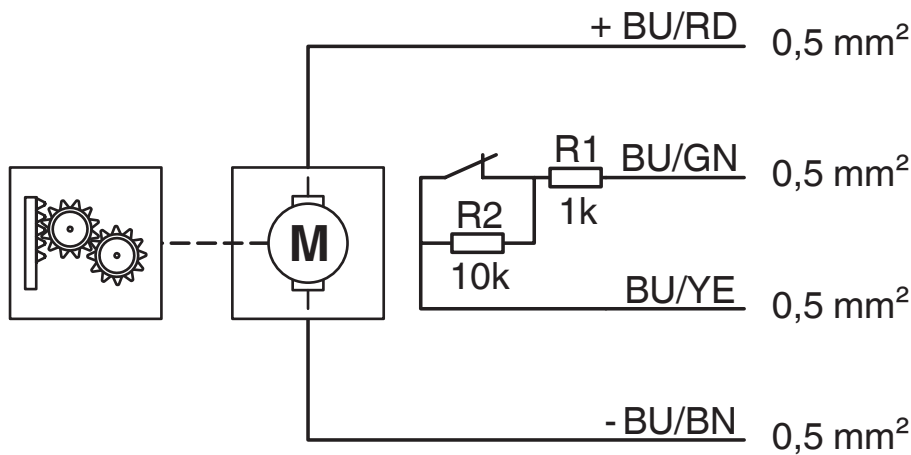
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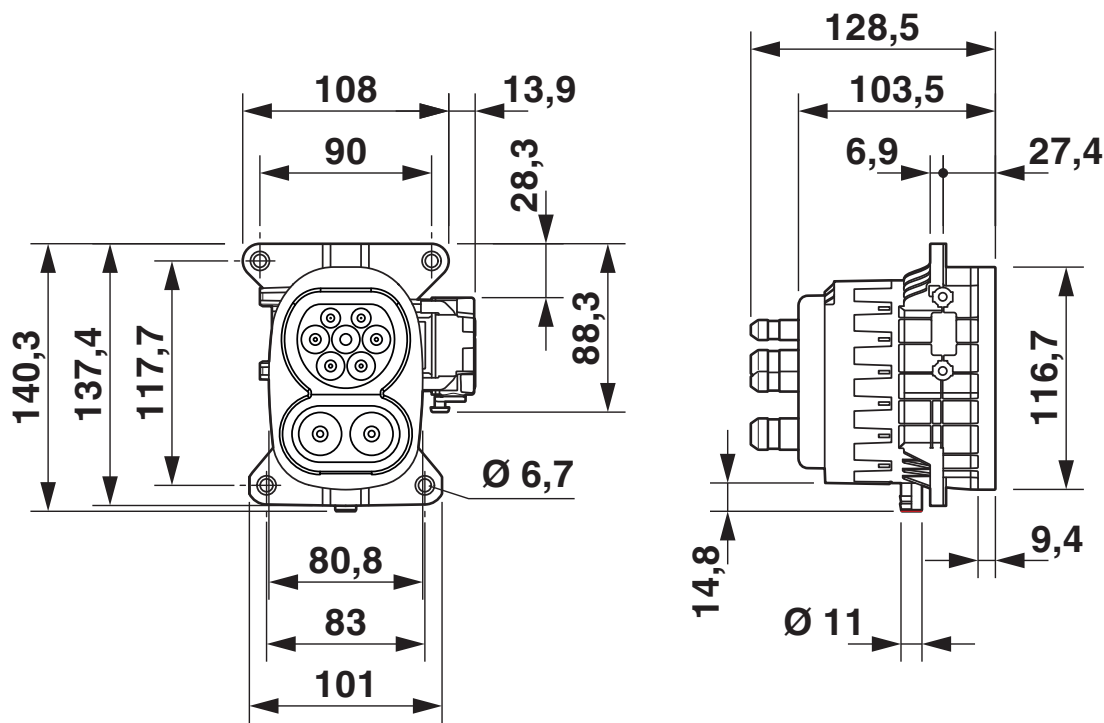
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Schematic diagram



Block diagram of the locking actuator

Dimensional drawing



Dimensional drawing

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Classifications

ECLASS

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

ETIM

| | |
|----------|----------|
| ETIM 9.0 | EC002898 |
|----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 39121800 |
|-------------|----------|

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Environmental product compliance

| | |
|---|---|
| EU RoHS | |
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 6(c), 7(c)-I |
| China RoHS | |
| Environment friendly use period (EFUP) | EFUP-10 |
| | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |
| EU REACH SVHC | |
| REACH candidate substance (CAS No.) | 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)(CAS: 15571-58-1) |
| | Lead(CAS: 7439-92-1) |
| | 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol(CAS: 119-47-1) |
| SCIP | ad83524f-4ed5-415c-9ec9-85dd761c3d27 |

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Accessories

CHARX T2HBI-DUST-COVER-SET - Protective cover

1305486

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

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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com