

# CHARX T2HBI12-3AC32DC200-2,0M2 - Vehicle charging inlet



1162144

<https://www.phoenixcontact.com/us/products/1162144>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



CHARX connect universal, AC/DC CCS Typ 2, Vehicle charging inlet, up to 500 A in Boost mode, 200 A permanent, 1000 V DC, 32 A , 480 V AC, Single wires, length: 2 m, locking actuator: 12 V, 4-pos., Front and rear mounting, M6, housing: black, for charging with alternating current (AC) and with direct current (DC), IEC 62196-2, IEC 62196-3, 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                          | 1162144       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | EM01          |
| Product key                          | XWCAID        |
| GTIN                                 | 4063151169985 |
| Weight per piece (including packing) | 6,240 g       |
| Weight per piece (excluding packing) | 6,130 g       |
| Customs tariff number                | 85444290      |
| Country of origin                    | PL            |

# CHARX T2HBI12-3AC32DC200-2,0M2 - Vehicle charging inlet



1162144

<https://www.phoenixcontact.com/us/products/1162144>

## 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)<br>for installation in electric vehicles (EV) |
| Technology          | Combined Charging System  |
| Charging standard   | AC/DC CCS Typ 2   |
| Charging mode       | Mode 2, 3, 4  |
| Customer variations | On request  |

### 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 3-phase   |
| Charging power                | 26.6 kW  |
| Charging current              | 32 A AC (3-phase)  |
| Type of charging current      | DC   |
| Charging power                | 200 kW   |
| Charging current              | 200 A DC   |
| 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 DC   |

### Power contact

|               |                                    |
|---------------|------------------------------------|
| Number        | 7 (L1, L2, L3, N, PE, DC+, DC-)    |
| Rated voltage | 480 V AC<br>1000 V DC              |
| Rated current | 32 A AC<br>200 A DC (DC+, DC-, PE) |

### Signal contact

# CHARX T2HBI12-3AC32DC200-2,0M2 - Vehicle charging inlet



1162144

<https://www.phoenixcontact.com/us/products/1162144>

|               |            |
|---------------|------------|
| 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 $\Omega$ ... 1420.00 $\Omega$              |
| Resistance                   | max. 1280 $\Omega$ $\pm$ 5 K                      |
| Recommended measured current | $\leq$ 1 mA ( $U_{max}$ = 16 V DC)                |
| Ambient temperature          | -40 $^{\circ}$ C ... 130 $^{\circ}$ 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

|  |                                      |
|--|--------------------------------------|
| Locking actuator                         | 12 V, 4-pos.                         |
|  | Right position                       |
| 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 $^{\circ}$ C ... 40 $^{\circ}$ C |

## Dimensions

### Vehicle charging inlet

|        |           |
|--------|-----------|
| Width  | 108 mm    |
| Height | 140.25 mm |
| Depth  | 128.4 mm  |

### Bore dimensions

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

## Material specifications

# CHARX T2HBI12-3AC32DC200-2,0M2 - Vehicle charging inlet



1162144

<https://www.phoenixcontact.com/us/products/1162144>

|                            |              |
|----------------------------|--------------|
| 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 | 70.00 mm <sup>2</sup> |

### Single-core wires for AC

|                         |                       |
|-------------------------|-----------------------|
| Cable length            | 2 m                   |
| Cable structure         | 4 x 6 mm <sup>2</sup> |
| Single wire, material   | Silicone              |
| Single wire, color      | OG                    |
| External cable diameter | 14.70 mm ±0.2 mm      |
| Cable resistance        | ≤ 3.2 Ω/km            |

### Single-core wires for DC

|                         |                        |
|-------------------------|------------------------|
| Cable length            | 2 m                    |
| Cable structure         | 2 x 70 mm <sup>2</sup> |
| Single wire, material   | Silicone               |
| Single wire, color      | OG                     |
| External cable diameter | 17.90 mm ±0.3 mm       |
| Cable resistance        | ≤ 0.259 Ω/km           |

### Single-core wire for PE

|                         |                        |
|-------------------------|------------------------|
| Cable length            | 2 m                    |
| Cable structure         | 1 x 25 mm <sup>2</sup> |
| 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 <sup>2</sup>    |
| 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                     |
| Cable structure       | 2 x 0.5 mm <sup>2</sup> |
| Single wire, material | PVC                     |

# CHARX T2HBI12-3AC32DC200-2,0M2 - Vehicle charging inlet



1162144

<https://www.phoenixcontact.com/us/products/1162144>

|                         |                  |
|-------------------------|------------------|
| 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 <sup>2</sup> |
| 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 <sup>2</sup> |
| 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 (60°C, maximum (current reduction required, observe the DC contact temperature limit value of 90°C))  |
| Ambient temperature (storage/transport)       | -40 °C ... 85 °C   |
| Altitude                                      | 4000 m (above sea level)   |

## Standards and regulations

### Standards

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

# CHARX T2HBI12-3AC32DC200-2,0M2 - Vehicle charging inlet



1162144

<https://www.phoenixcontact.com/us/products/1162144>

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

# CHARX T2HBI12-3AC32DC200-2,0M2 - Vehicle charging inlet

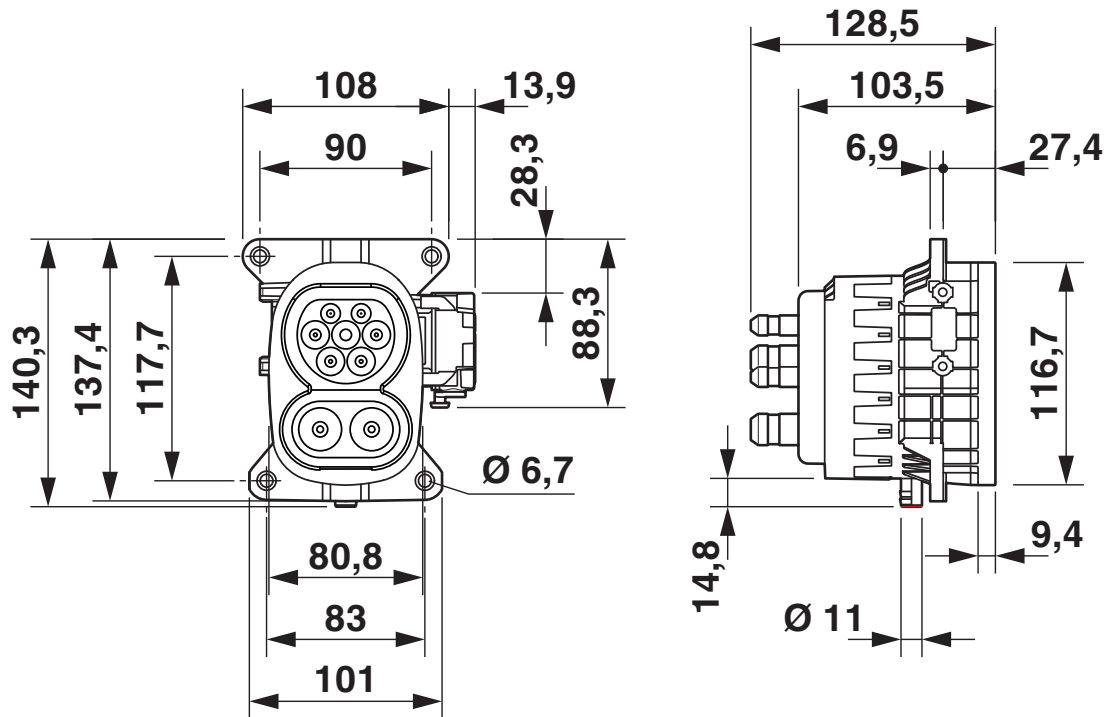


1162144

<https://www.phoenixcontact.com/us/products/1162144>

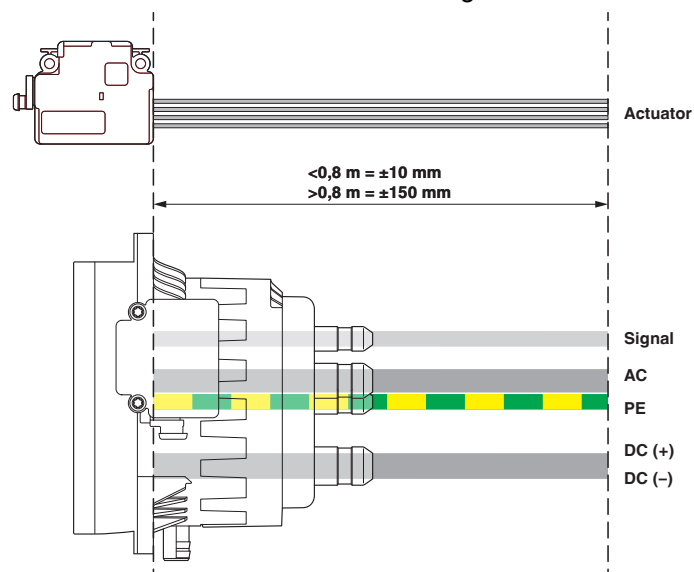
## Drawings

Dimensional drawing



Dimensional drawing

Dimensional drawing

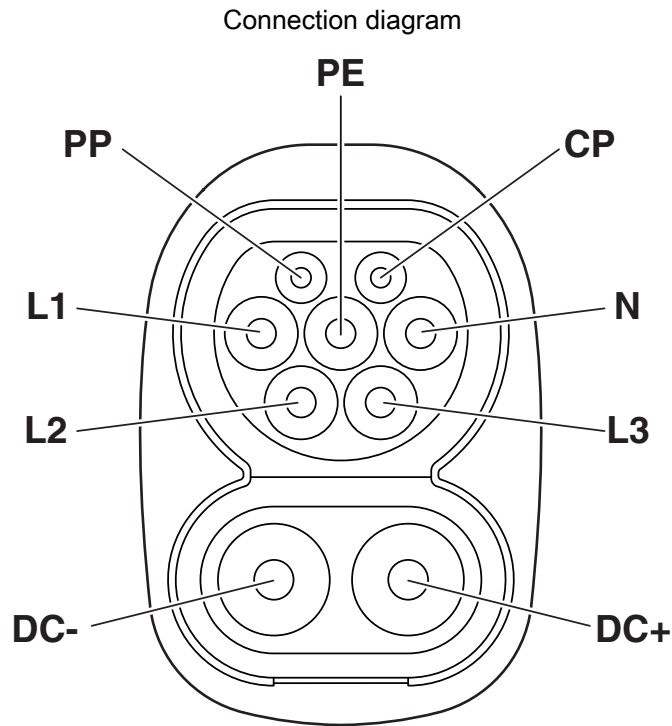


Reference points for measuring the line length

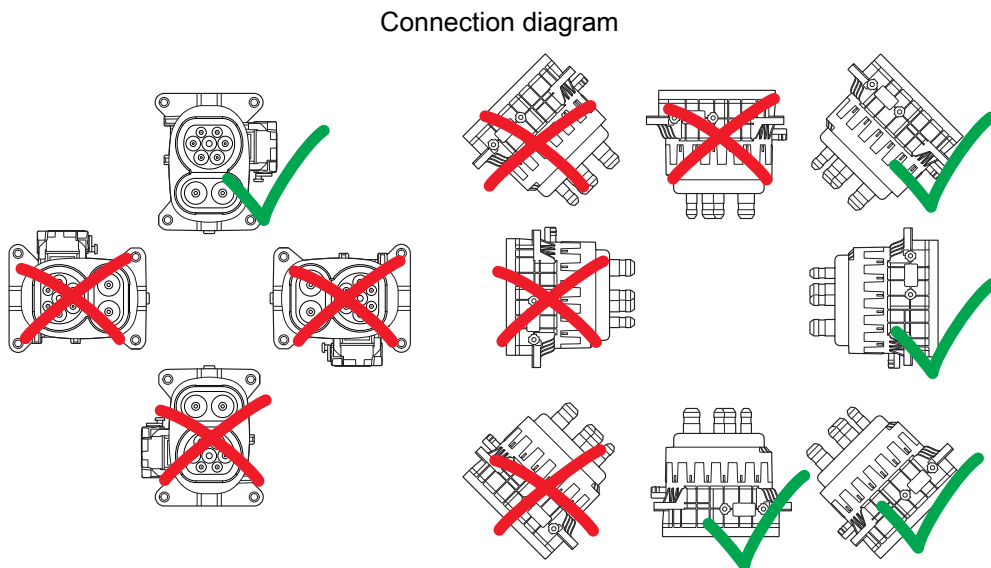
# CHARX T2HBI12-3AC32DC200-2,0M2 - Vehicle charging inlet

1162144

<https://www.phoenixcontact.com/us/products/1162144>



Pin assignment of vehicle charging inlets



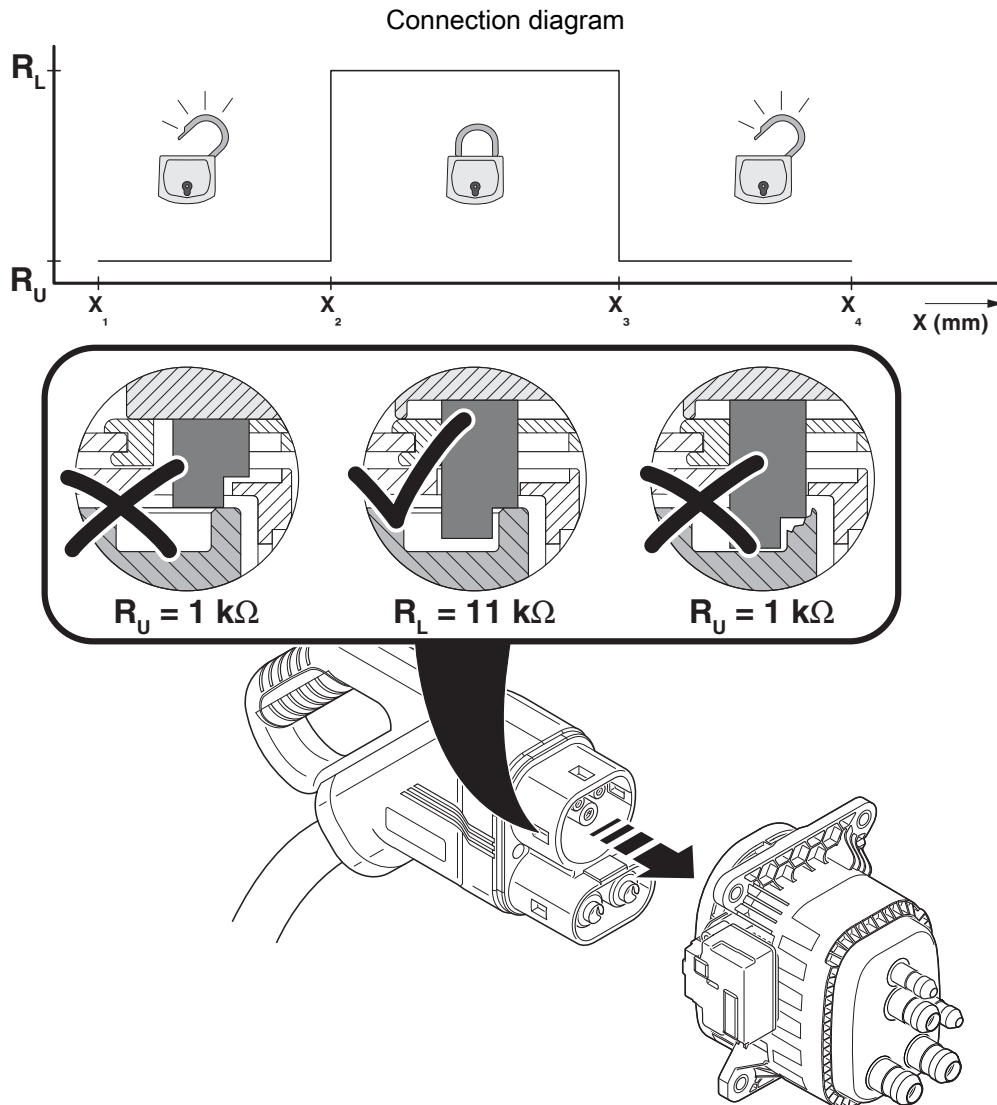
Installation positions



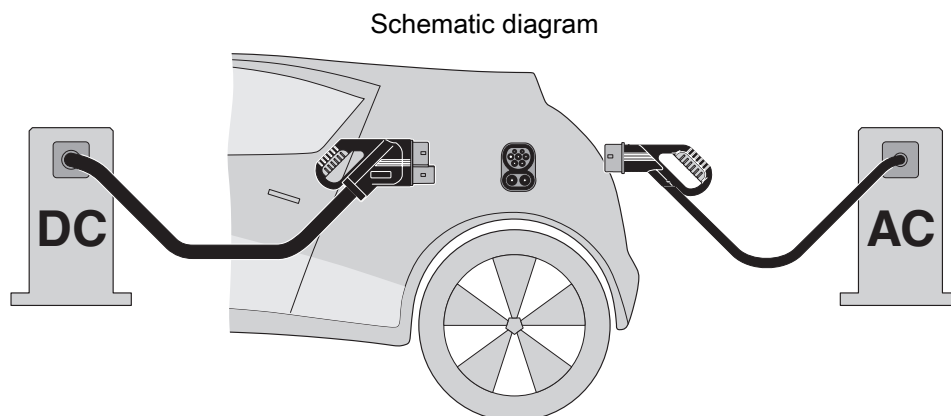
# CHARX T2HBI12-3AC32DC200-2,0M2 - Vehicle charging inlet

1162144

<https://www.phoenixcontact.com/us/products/1162144>



Detection for Vehicle Connector



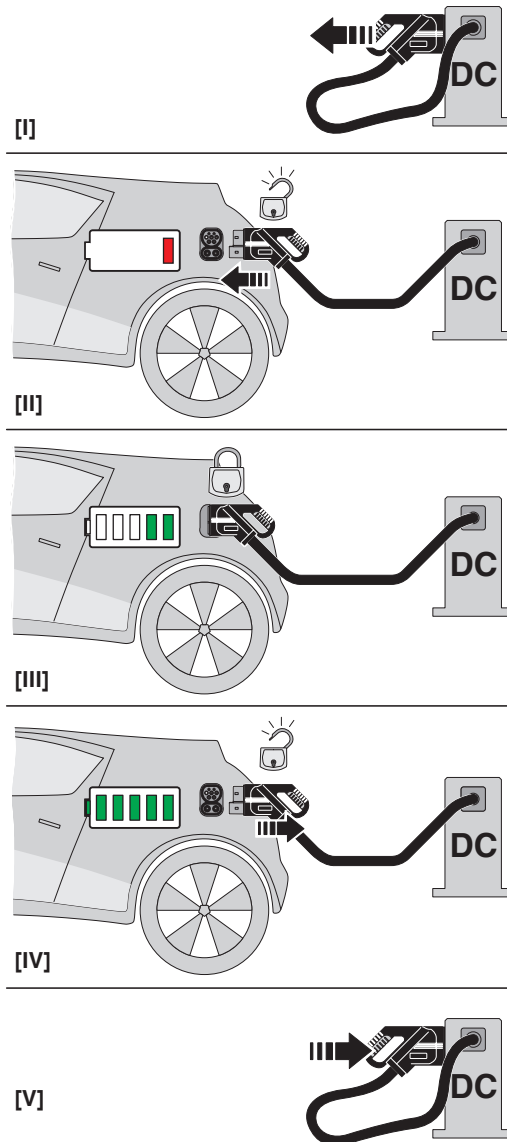
The Combined Charging System (CCS) principle - standard-compliant charging system for electric vehicles, which supports both conventional AC charging and fast DC charging. Both Vehicle Connectors fit into the CCS Vehicle Inlet.

# CHARX T2HBI12-3AC32DC200-2,0M2 - Vehicle charging inlet

1162144

<https://www.phoenixcontact.com/us/products/1162144>

Schematic diagram



Operating instructions

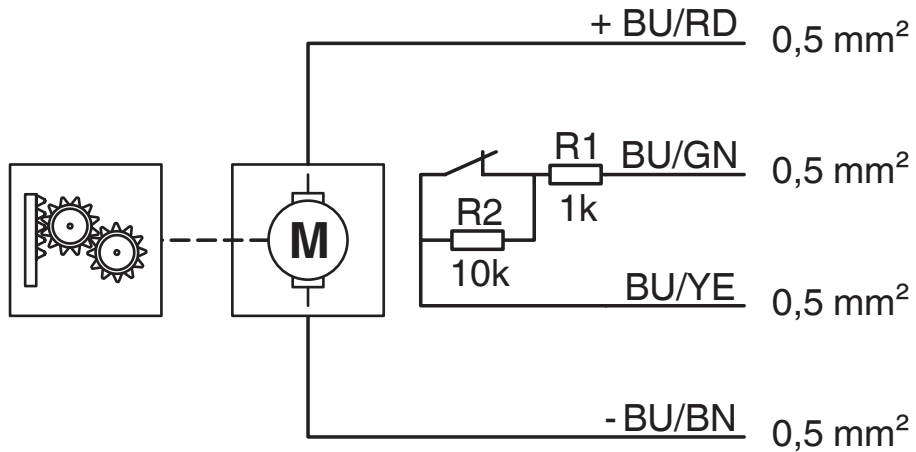
# CHARX T2HBI12-3AC32DC200-2,0M2 - Vehicle charging inlet



1162144

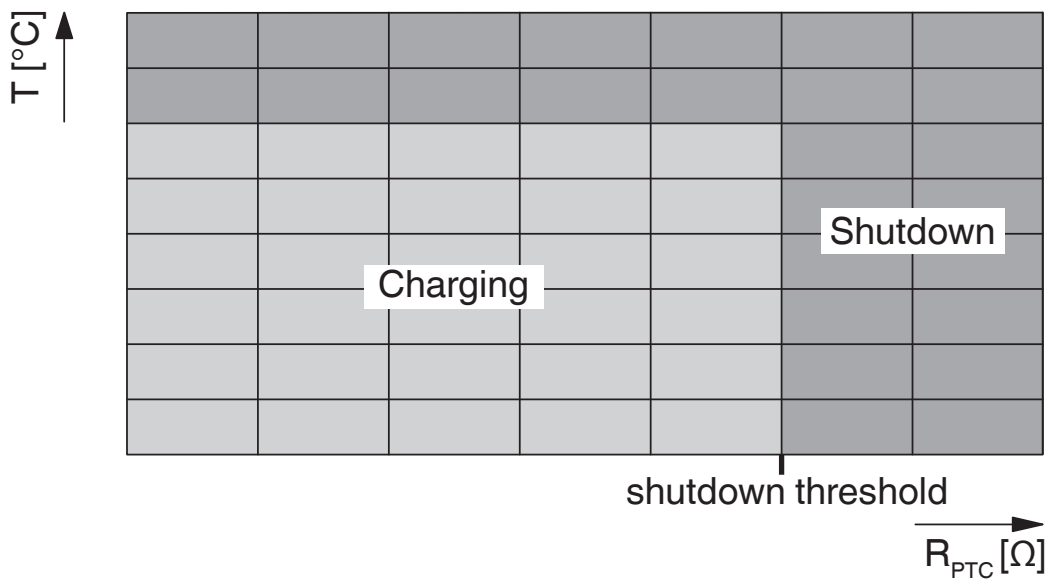
<https://www.phoenixcontact.com/us/products/1162144>

Schematic diagram



Block diagram of the locking actuator

Schematic diagram



Temperature sensor technology resistance range at AC contacts

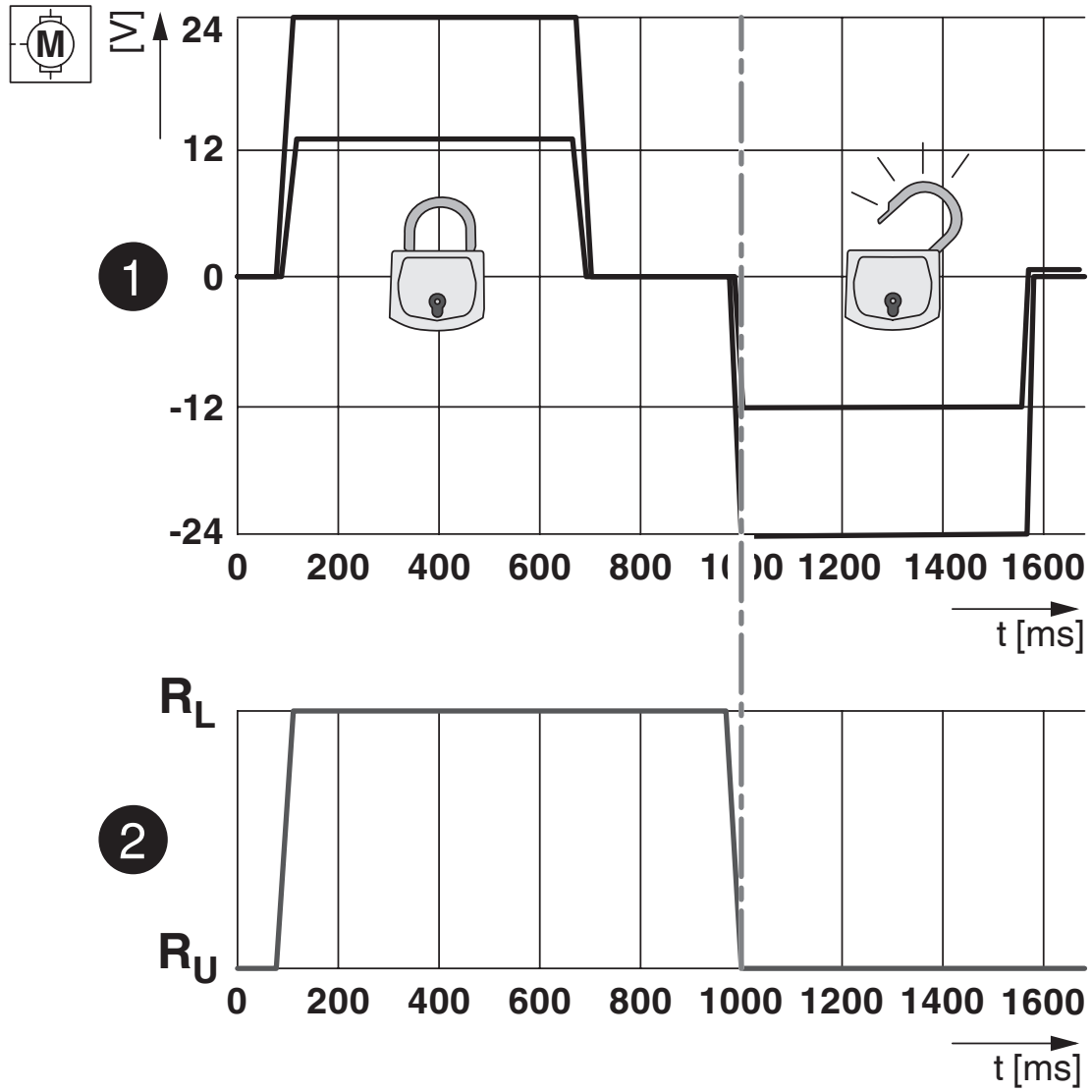
# CHARX T2HBI12-3AC32DC200-2,0M2 - Vehicle charging inlet



1162144

<https://www.phoenixcontact.com/us/products/1162144>

Diagram



Locking states of the locking actuator

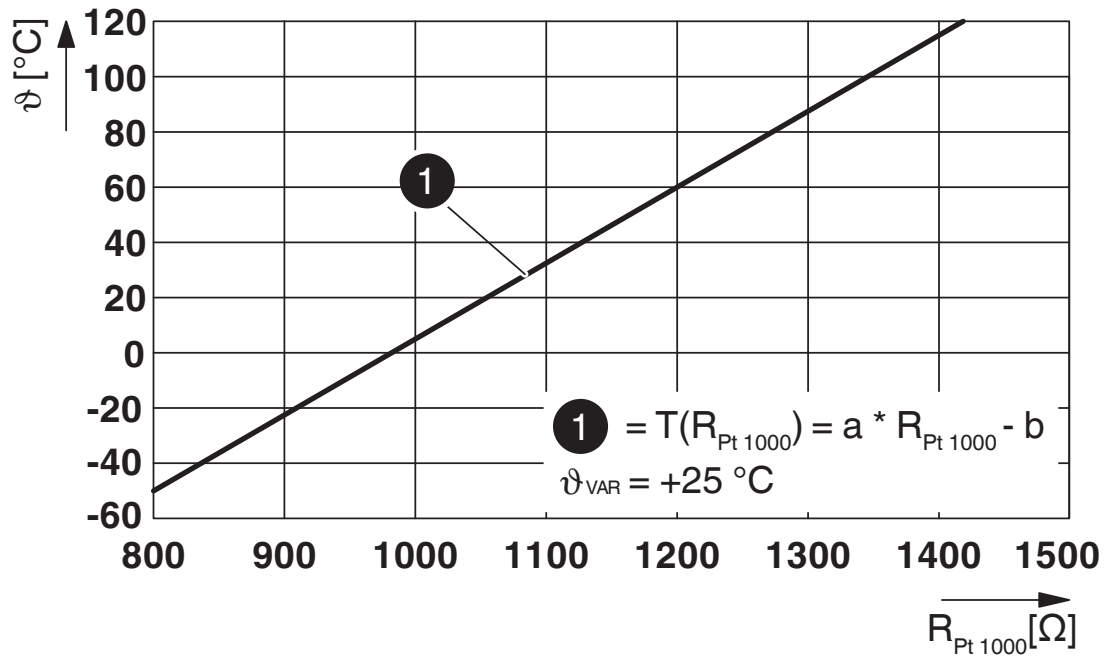
# CHARX T2HBI12-3AC32DC200-2,0M2 - Vehicle charging inlet



1162144

<https://www.phoenixcontact.com/us/products/1162144>

Diagram



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

# CHARX T2HBI12-3AC32DC200-2,0M2 - Vehicle charging inlet



1162144

<https://www.phoenixcontact.com/us/products/1162144>

## Classifications

### ECLASS

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

### ETIM

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

### UNSPSC

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

# CHARX T2HBI12-3AC32DC200-2,0M2 - Vehicle charging inlet



1162144

<https://www.phoenixcontact.com/us/products/1162144>

## 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                                | bd6b3ff1-491b-474d-a33a-0eb42e925da9  |

Phoenix Contact 2025 © - all rights reserved  
<https://www.phoenixcontact.com>

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