

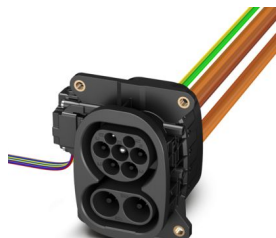
# CHARX T2HBI24-DC250-2,0M6 - Vehicle charging inlet



1396634

<https://www.phoenixcontact.com/in/products/1396634>

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CHARX connect universal, DC CCS Typ 2, Vehicle charging inlet, up to 500 A in Boost mode, 250 A Permanent, 1000 V DC, Single wires, length: 2 m, locking actuator: 24 V, 4-pos., Front and rear mounting, M6, housing: black, for charging with direct current (DC), IEC 62196-2, IEC 62196-3, A protective cap is supplied as standard for the DC 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	1396634
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	*****
Product key	XWCAID
GTIN	4063151781347
Weight per piece (including packing)	107 g
Weight per piece (excluding packing)	107 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 contacts.
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### Product properties

Product type	Vehicle charging inlet
Product family	CHARX connect universal
Application	for charging with direct current (DC) for installation in electric vehicles (EV)
Technology	Combined Charging System
Charging standard	DC CCS Typ 2
Charging mode	Mode 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)
Type of charging current	DC
Charging power	250 kW
Charging current	250 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	3 (PE, DC+, DC-)
Rated voltage	1000 V DC
Rated current	250 A DC

### Signal contact

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

### Temperature sensors (Pt 1000)

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

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## Locking actuator

Locking actuator	24 V, 4-pos.
	Left position
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

## Dimensions

Width	117.65 mm
Height	90 mm
Depth	117.65 mm

## 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-core wires for DC

Cable length	2 m
Cable structure	2 x 95 mm <sup>2</sup>
Single wire, material	Silicone
Single wire, color	OG
External cable diameter	20.60 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 <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

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## Single-core wires for locking actuator

Cable length	0.5 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 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)

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## 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

# CHARX T2HBI24-DC250-2,0M6 - Vehicle charging inlet

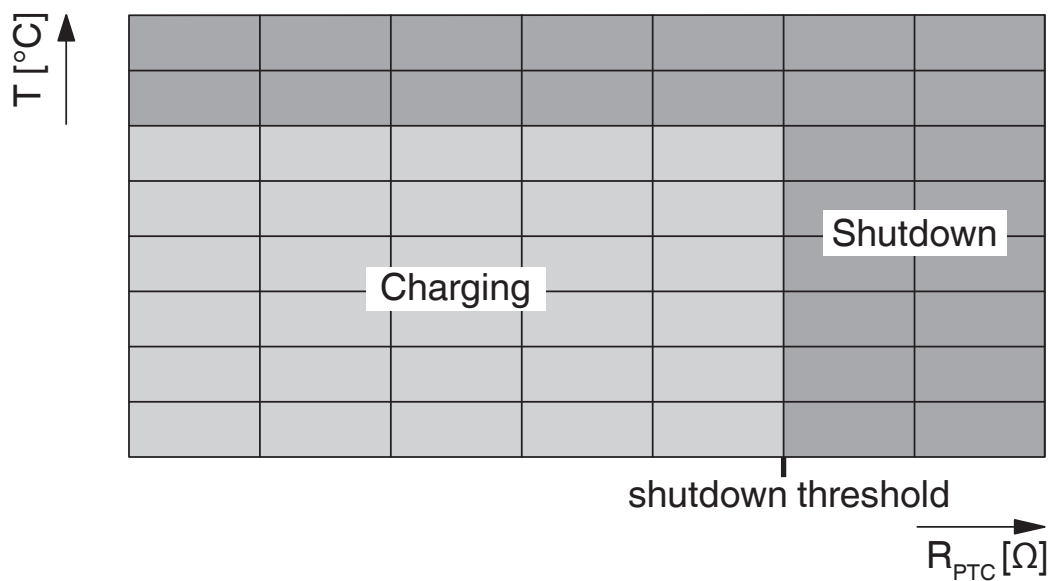


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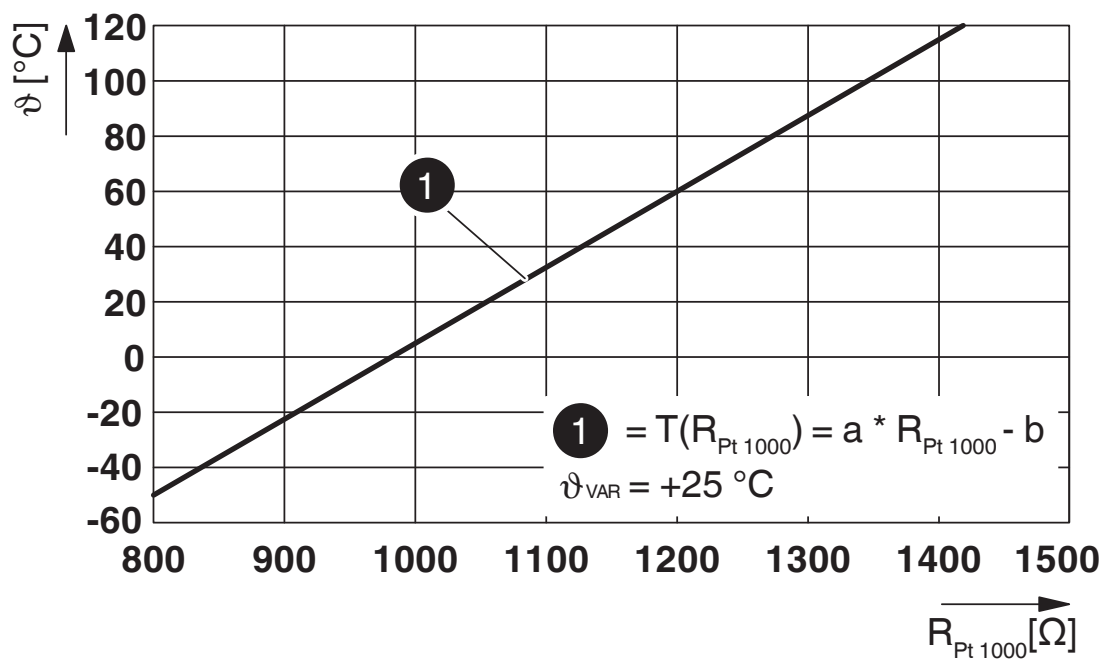
## Drawings

Schematic diagram



Temperature sensor technology resistance range at AC contacts

Diagram

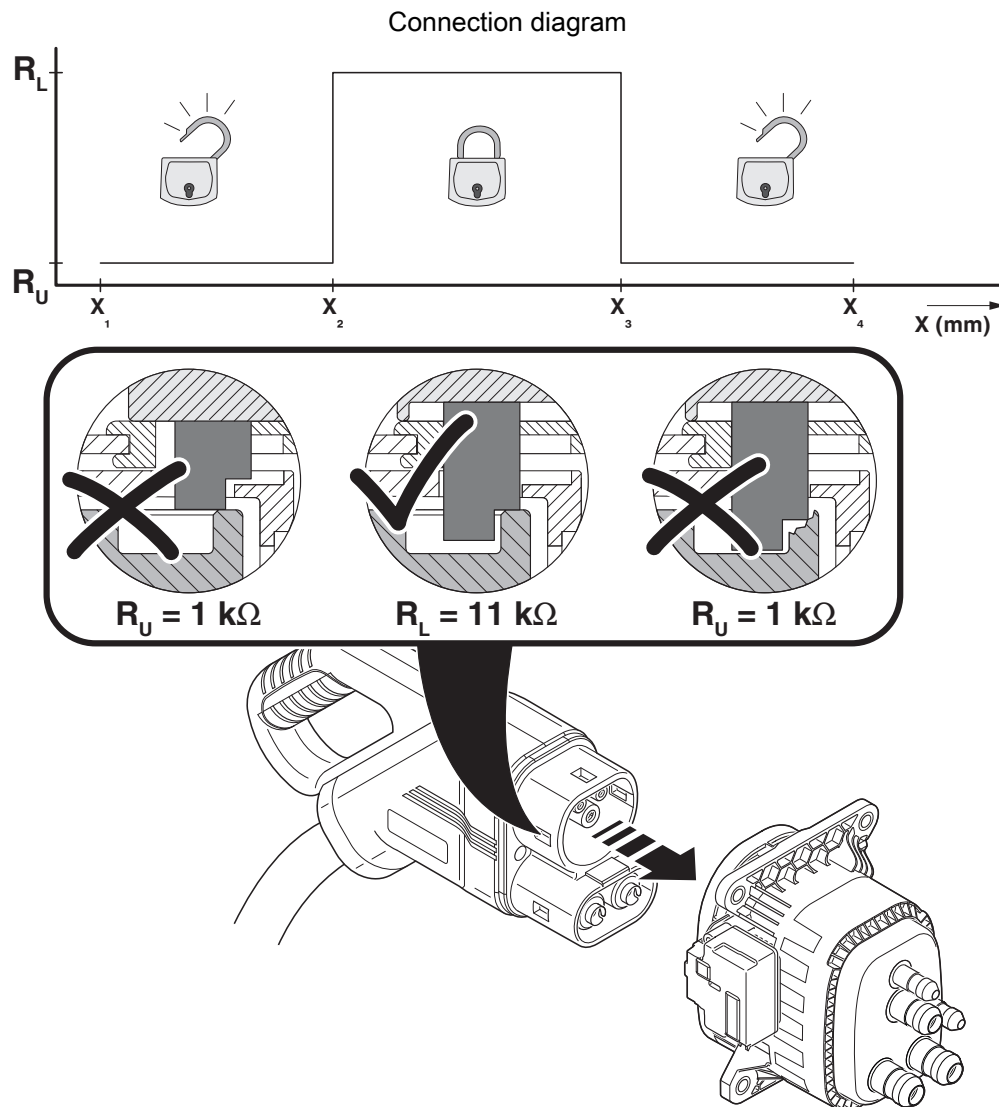


Pt 1000 characteristic curve at an ambient temperature of 25°C for temperature measurement at the DC contacts

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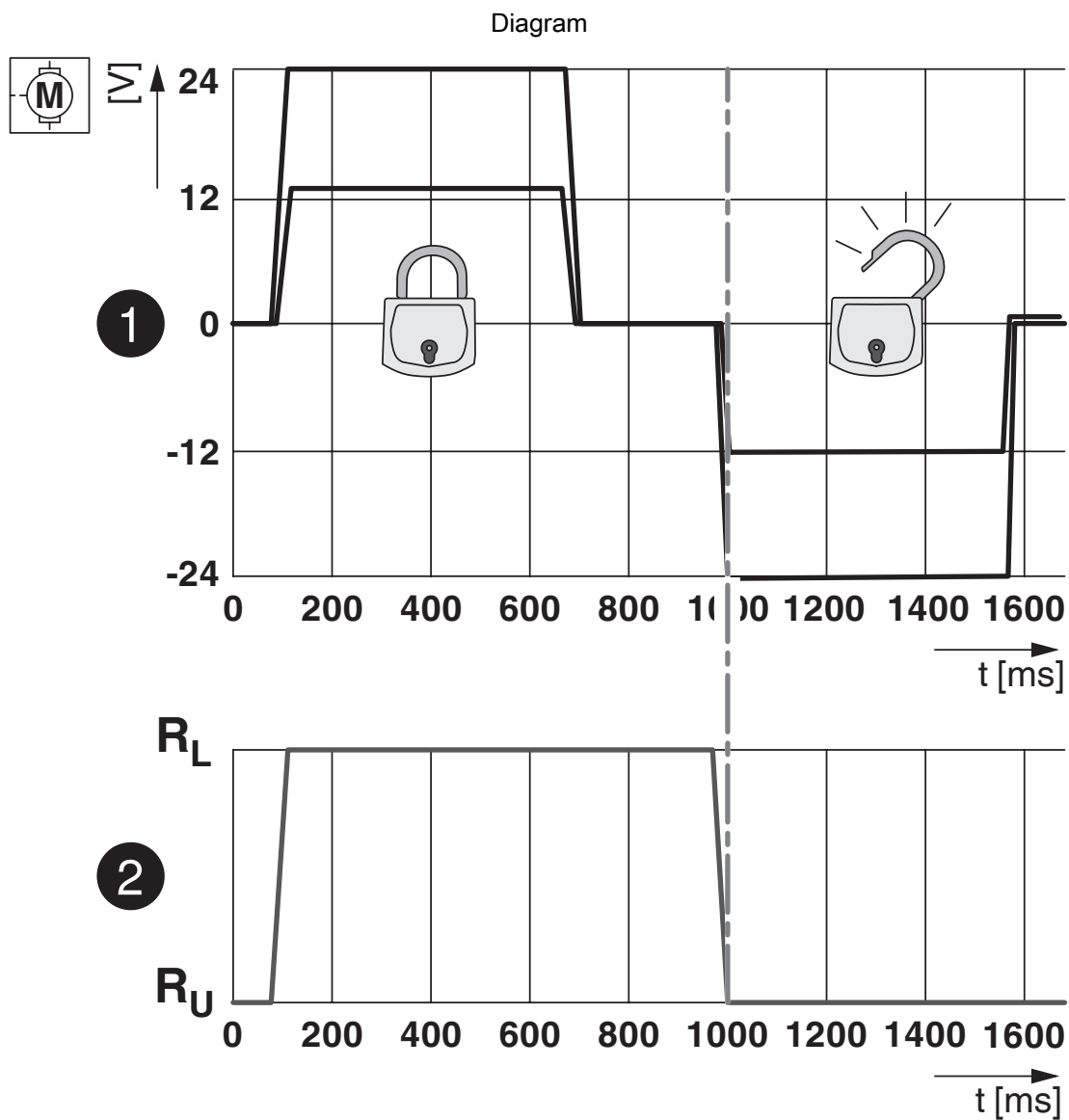
Detection for Vehicle Connector

# CHARX T2HBI24-DC250-2,0M6 - Vehicle charging inlet



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Locking states of the locking actuator

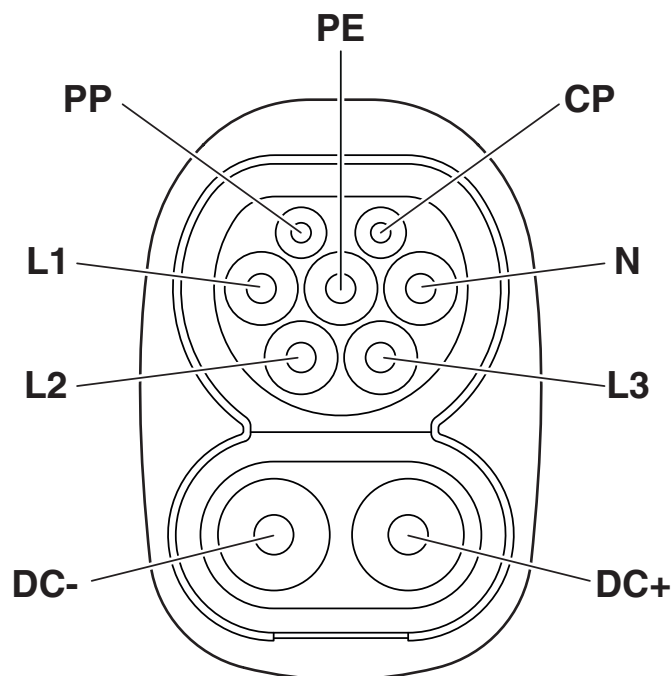


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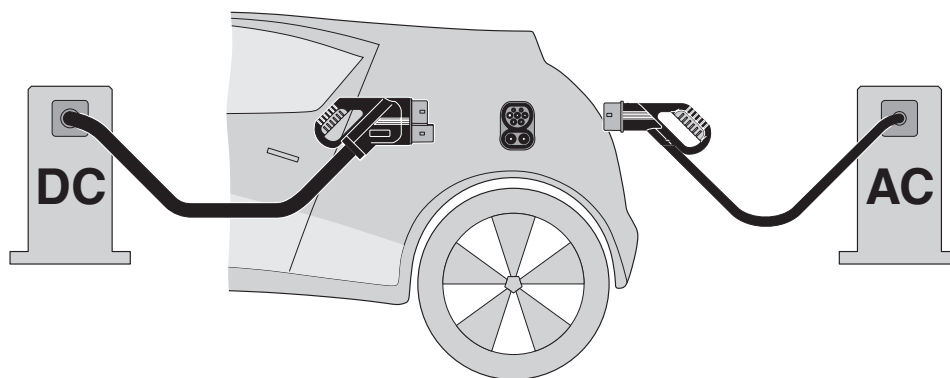
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Connection diagram



Pin assignment of vehicle charging inlets

Schematic diagram



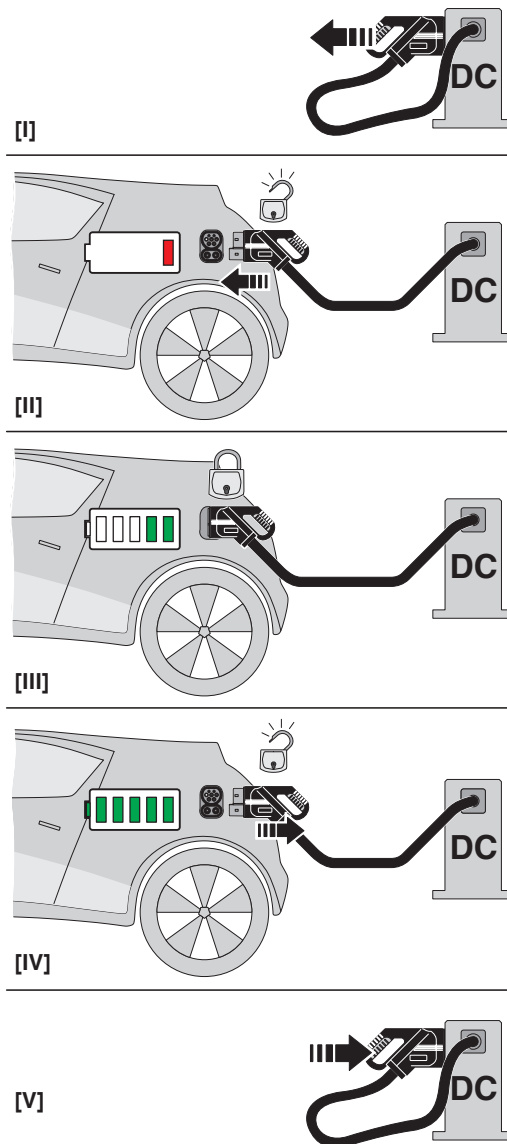
The Combined Charging System (CCS) principle - standard-compliant charging system for electric vehicles, which supports both conventional AC charging and fast DC charging. Both Vehicle Connectors fit into the CCS Vehicle Inlet.

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Schematic diagram



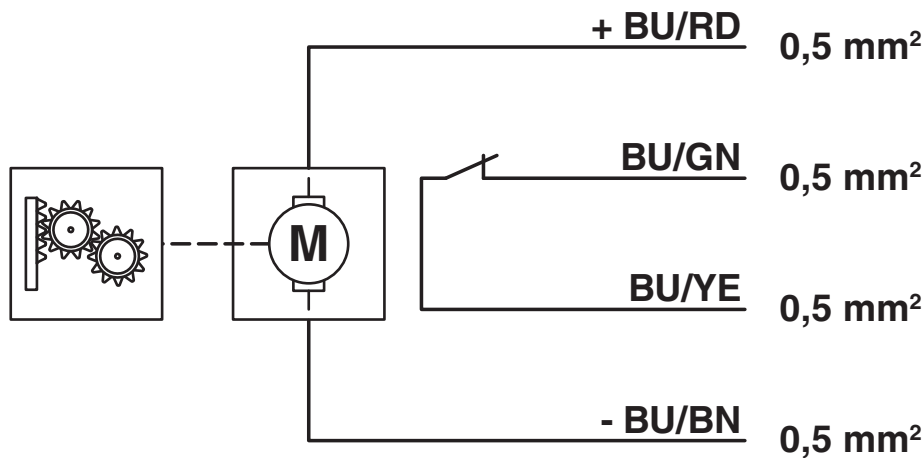
Operating instructions

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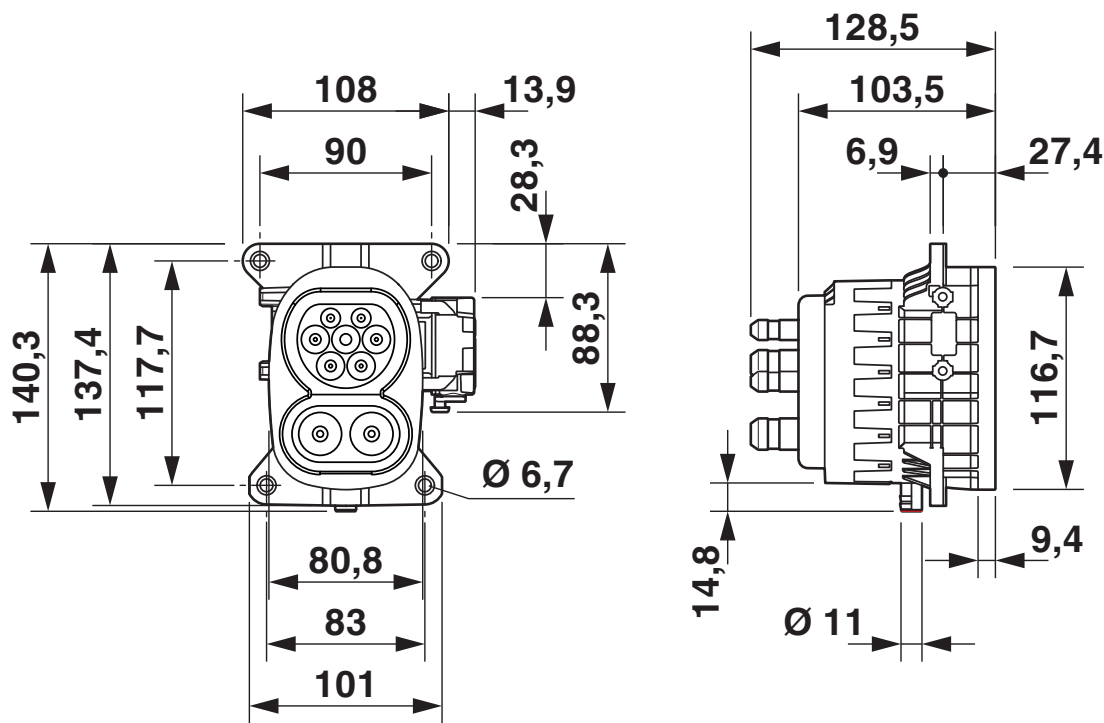
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Block diagram



Block diagram of the locking actuator

Dimensional drawing



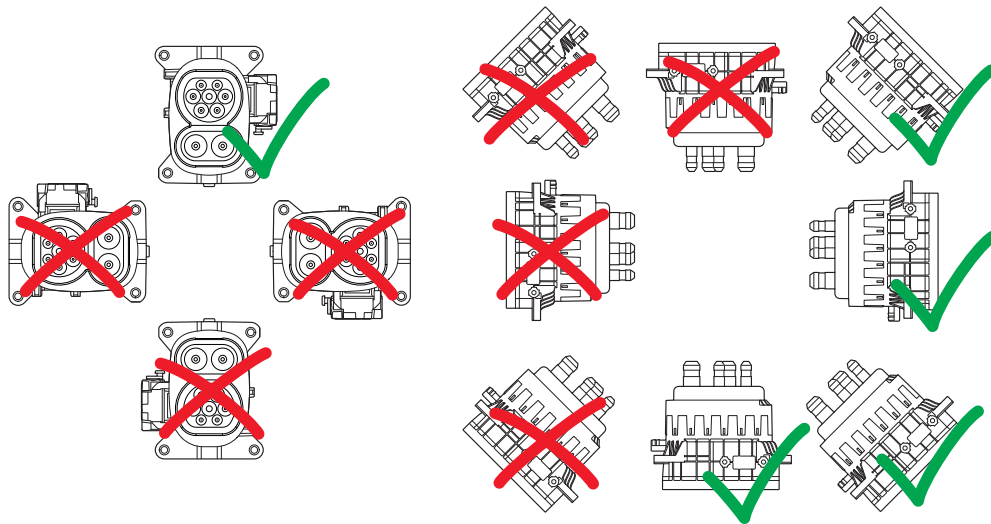
Dimensional drawing

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Connection diagram



Installation positions

# CHARX T2HBI24-DC250-2,0M6 - Vehicle charging inlet



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## Classifications

### ECLASS

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

### ETIM

ETIM 9.0	EC002898
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### 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	348a6e7f-5331-4129-8087-b962b91ccc0c

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## Accessories

### CHARX T2HBI-DUST-COVER-SET - Protective cover

1305486

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



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

### CHARX T2HI-ELOCK24V - Locking

1331524

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



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

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