

CHARX T2HBI24-DC250-2,0M2 - Vehicle charging inlet



1211220

<https://www.phoenixcontact.com/us/products/1211220>

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, Vehicle charging inlet, for charging with direct current (DC), CCS type 2, IEC 62196-2, IEC 62196-3, 250 A / 1000 V (DC), 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 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	1211220
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	EM01
Product key	XWCAID
GTIN	4063151284411
Weight per piece (including packing)	6,483.666 g
Weight per piece (excluding packing)	6,495 g
Customs tariff number	85444290
Country of origin	PL

CHARX T2HBI24-DC250-2,0M2 - Vehicle charging inlet



1211220

<https://www.phoenixcontact.com/us/products/1211220>

Technical data

Notes

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

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	CCS type 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
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	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

CHARX T2HBI24-DC250-2,0M2 - Vehicle charging inlet



1211220

<https://www.phoenixcontact.com/us/products/1211220>

Attachment point	2 sensors for the DC contacts
Recommended measured current	$\leq 1 \text{ mA}$ ($U_{\text{max}} = 16 \text{ V DC}$)
Coefficient	3850 ppm/K
Ambient temperature	-40 °C ... 130 °C

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

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 ²
Single wire, material	Silicone
Single wire, color	OG

CHARX T2HBI24-DC250-2,0M2 - Vehicle charging inlet



1211220

<https://www.phoenixcontact.com/us/products/1211220>

External cable diameter	20.60 mm $\pm$ 0.3 mm
Cable resistance	$\leq$ 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	8.60 mm $\pm$ 0.1 mm
Cable resistance	$\leq$ 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	1.60 mm $\pm$ 0.20 mm
Cable resistance	$\leq$ 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 $\pm$ 0.20 mm
Cable resistance	$\leq$ 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 $\pm$ 0.20 mm
Cable resistance	$\leq$ 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

CHARX T2HBI24-DC250-2,0M2 - Vehicle charging inlet



1211220

<https://www.phoenixcontact.com/us/products/1211220>

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

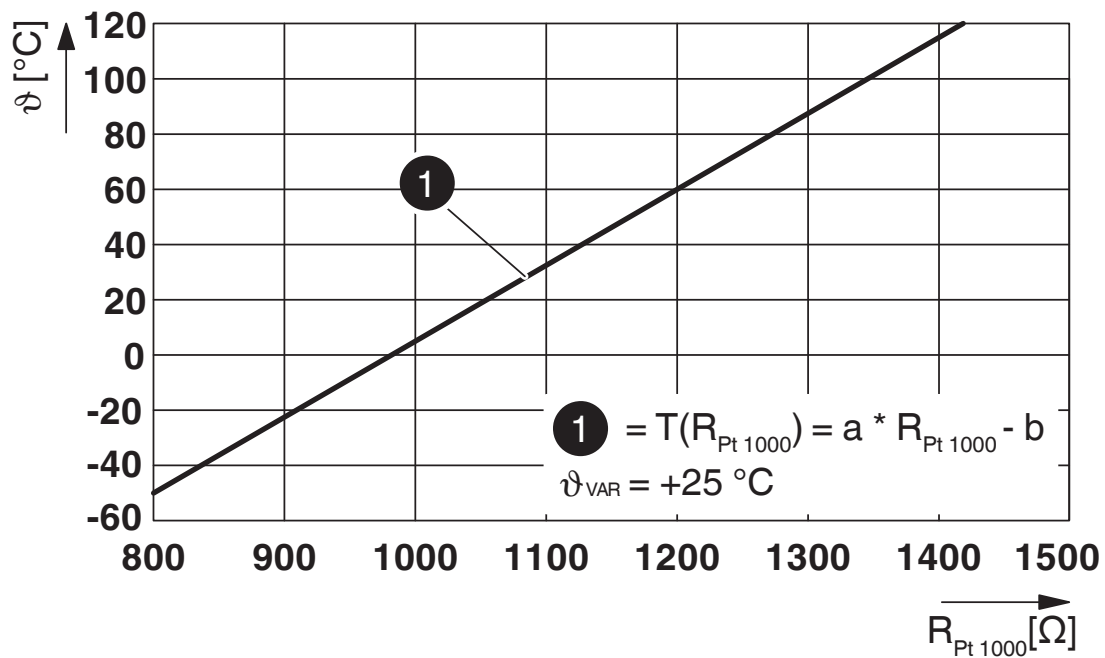
Standards/regulations	IEC 62196-2
	IEC 62196-3

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

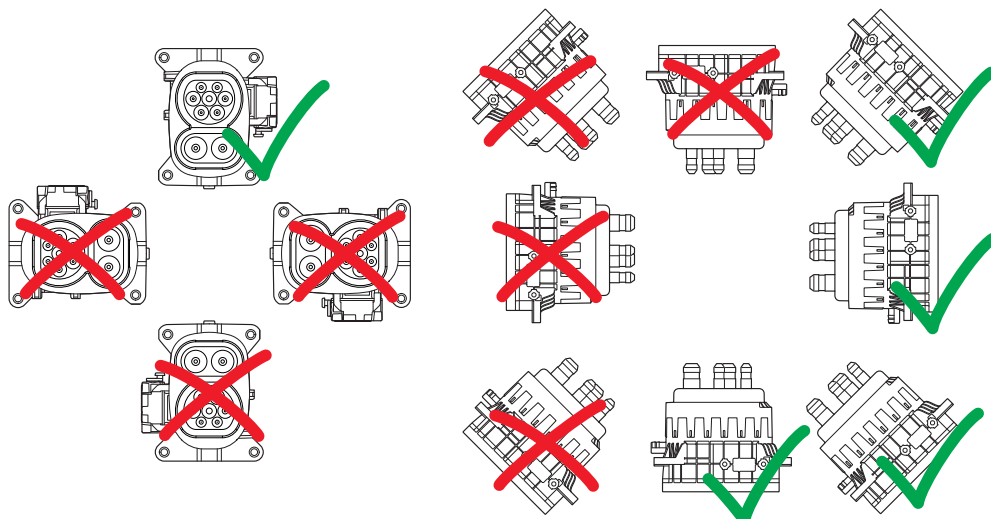
Drawings

Diagram



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

Connection diagram

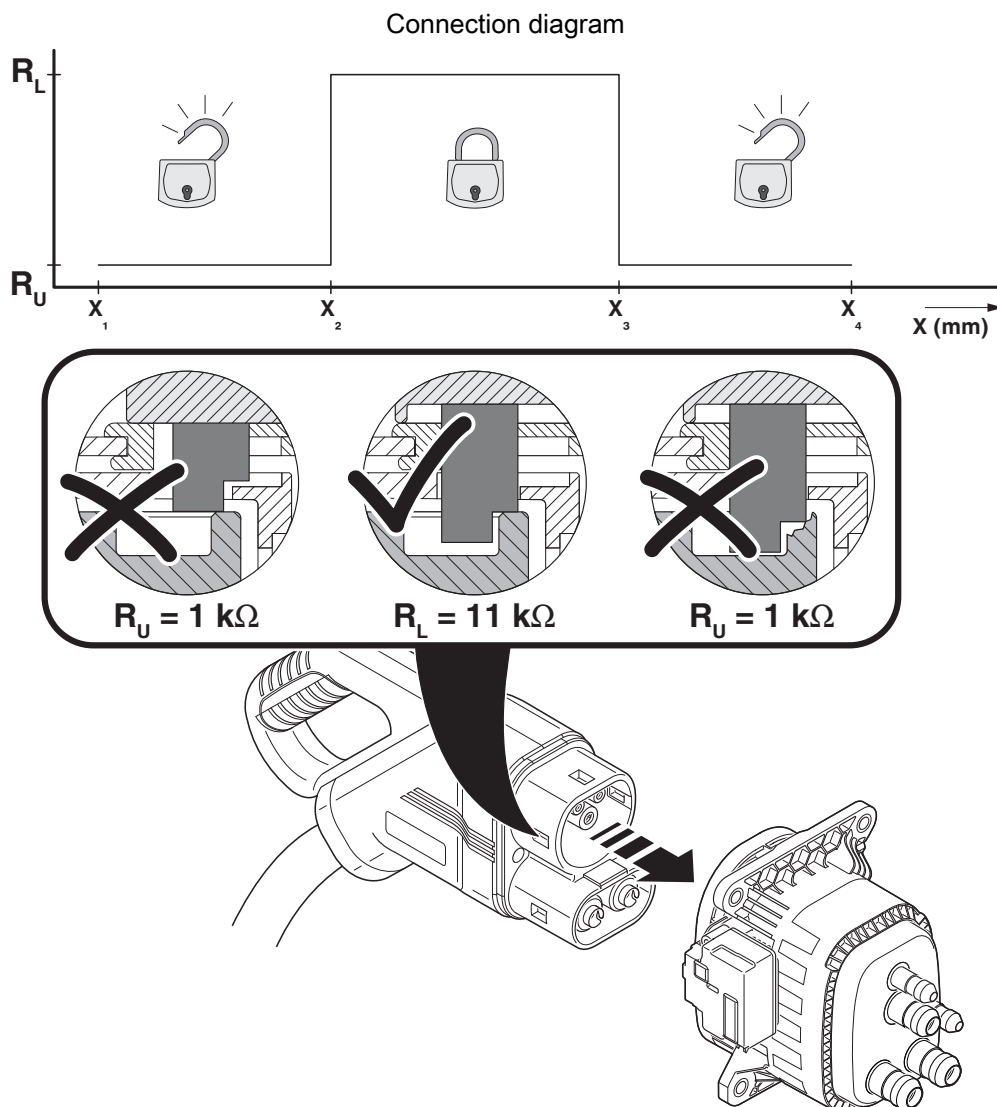


Installation positions

CHARX T2HBI24-DC250-2,0M2 - Vehicle charging inlet

1211220

<https://www.phoenixcontact.com/us/products/1211220>



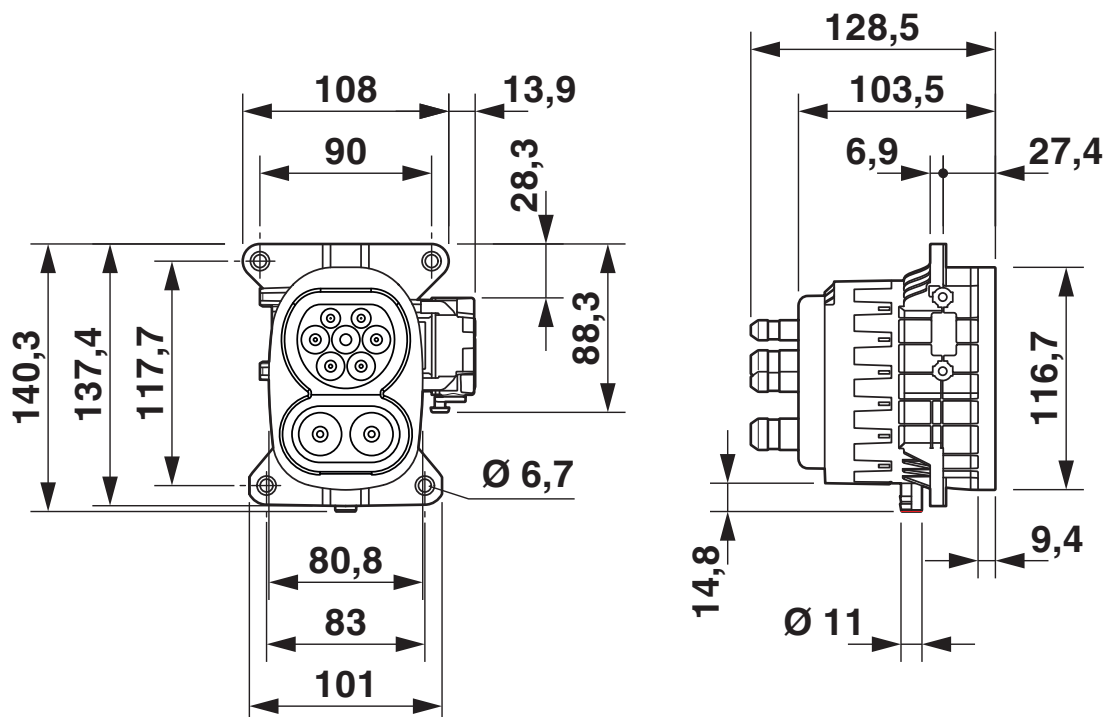
Detection for Vehicle Connector

CHARX T2HBI24-DC250-2,0M2 - Vehicle charging inlet

1211220

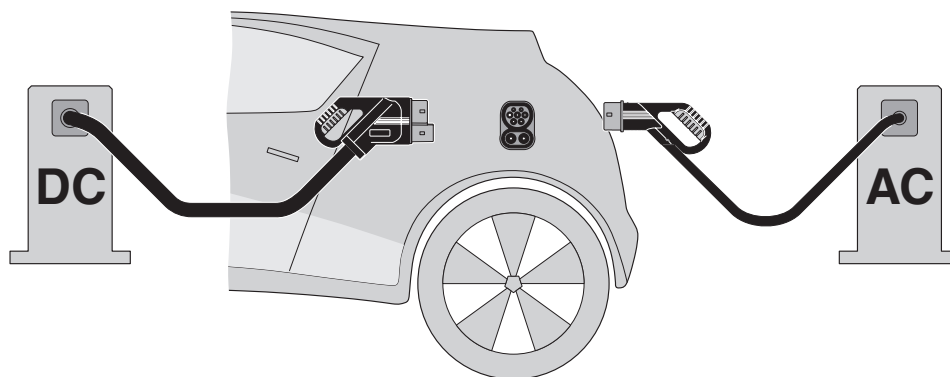
<https://www.phoenixcontact.com/us/products/1211220>

Dimensional drawing



Dimensional drawing

Schematic diagram



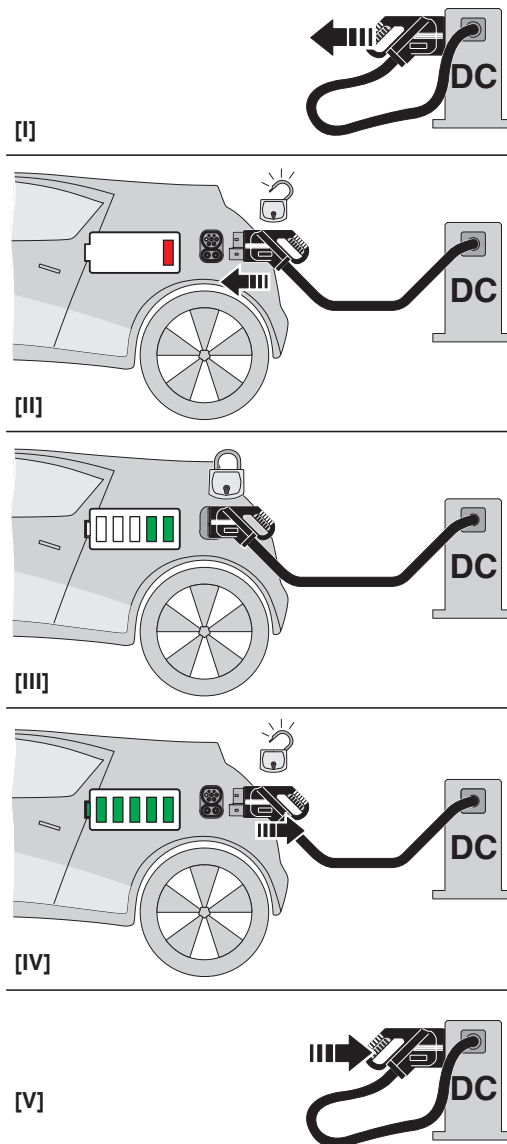
The Combined Charging System (CCS) principle - standard-compliant charging system for electric vehicles, which supports both conventional AC charging and fast DC charging. Both Vehicle Connectors fit into the CCS Vehicle Inlet.

CHARX T2HBI24-DC250-2,0M2 - Vehicle charging inlet

1211220

<https://www.phoenixcontact.com/us/products/1211220>

Schematic diagram



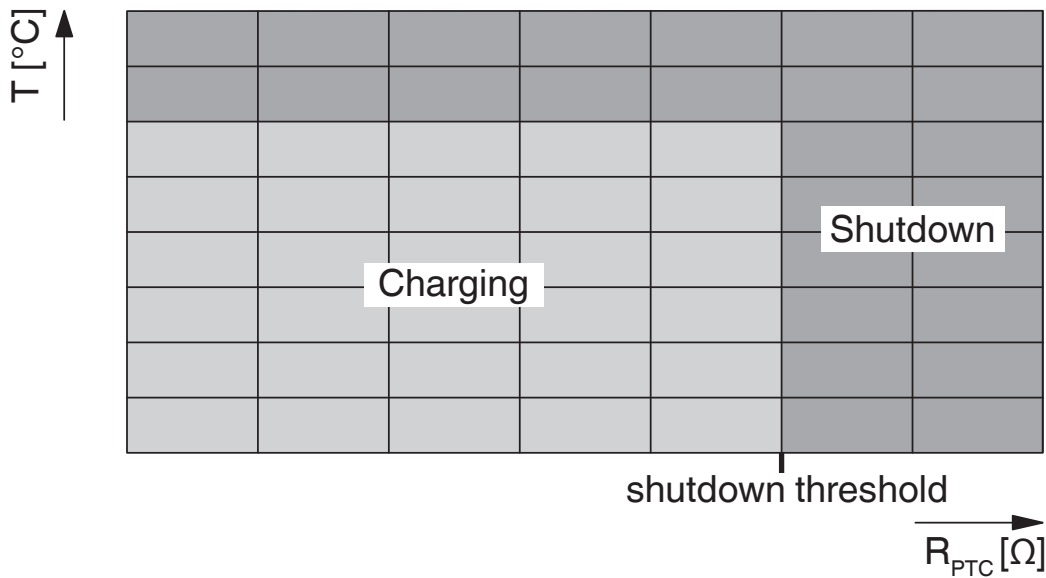
Operating instructions

CHARX T2HBI24-DC250-2,0M2 - Vehicle charging inlet



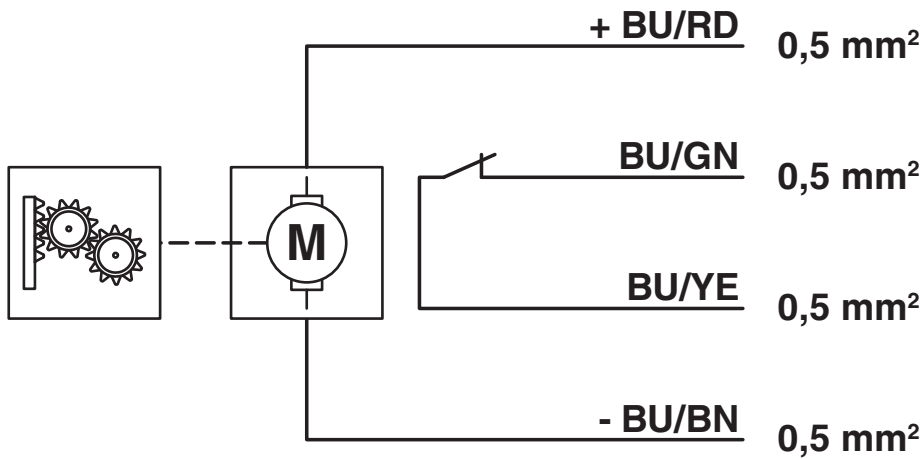
1211220
<https://www.phoenixcontact.com/us/products/1211220>

Schematic diagram



Temperature sensor technology resistance range at AC contacts

Block diagram



Block diagram of the locking actuator

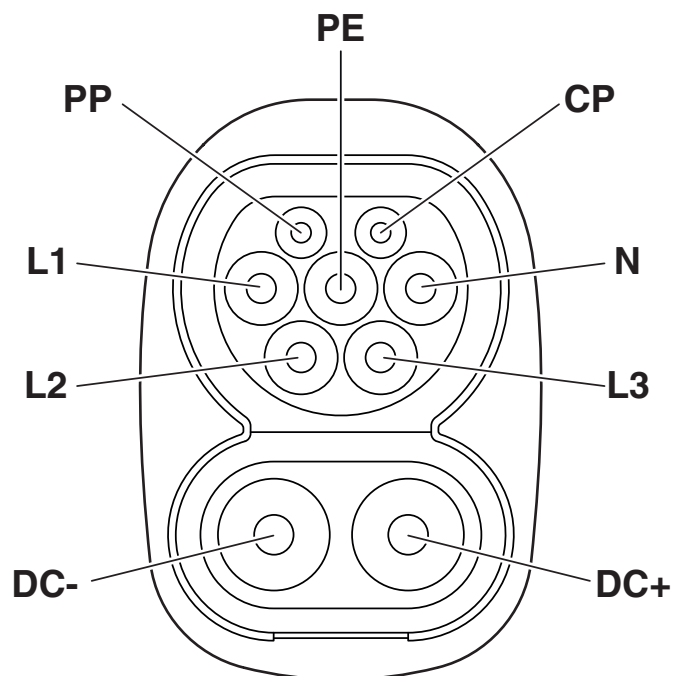
CHARX T2HBI24-DC250-2,0M2 - Vehicle charging inlet



1211220

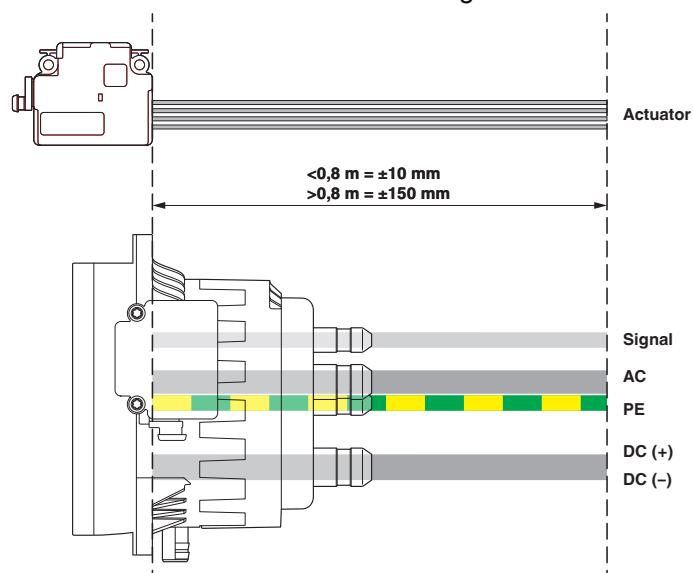
<https://www.phoenixcontact.com/us/products/1211220>

Connection diagram



Pin assignment of vehicle charging inlets

Dimensional drawing



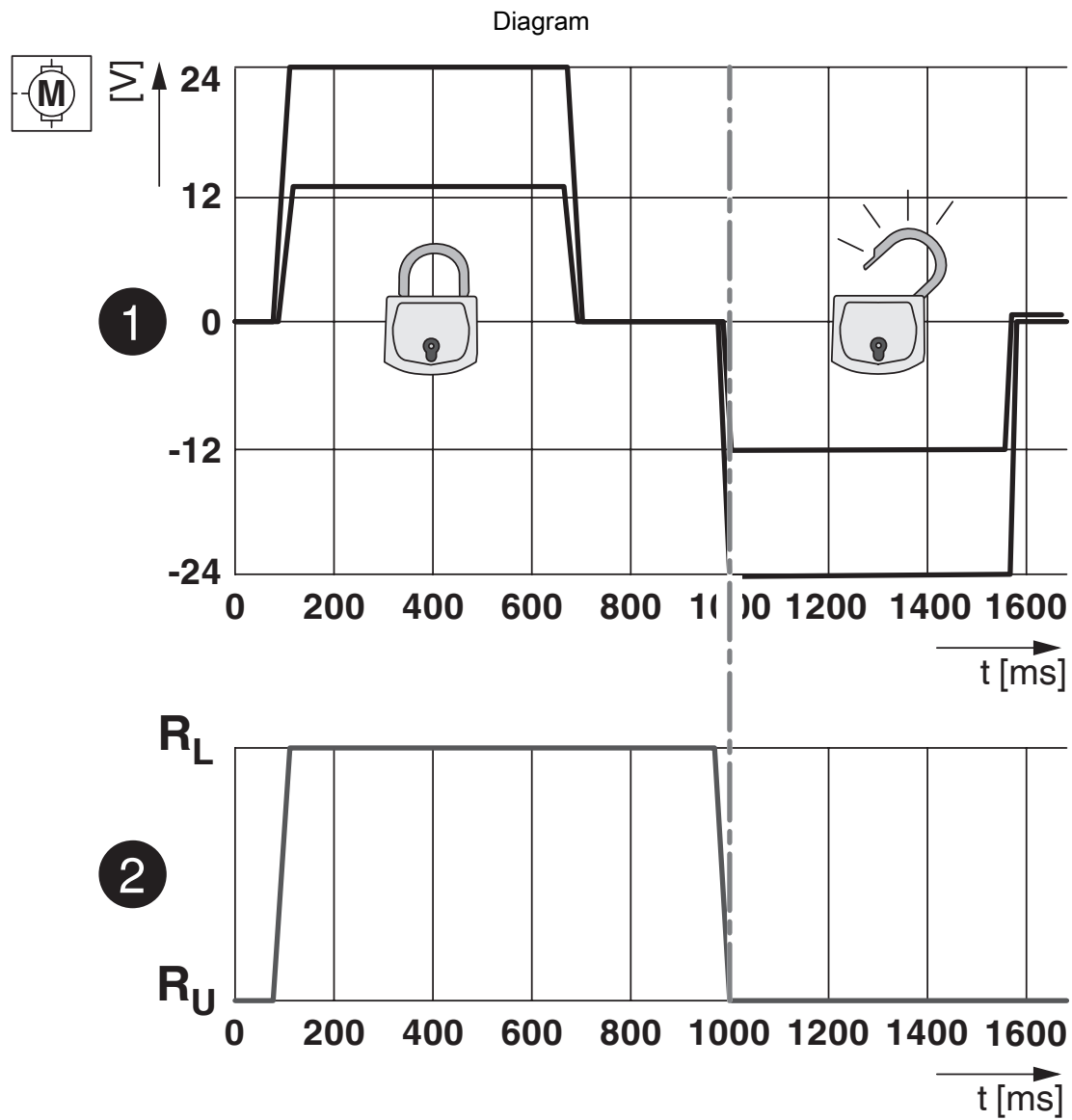
Reference points for measuring the line length

CHARX T2HBI24-DC250-2,0M2 - Vehicle charging inlet



1211220

<https://www.phoenixcontact.com/us/products/1211220>



Locking states of the locking actuator

CHARX T2HBI24-DC250-2,0M2 - Vehicle charging inlet



1211220
<https://www.phoenixcontact.com/us/products/1211220>

Classifications

ECLASS

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

ETIM

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

UNSPSC

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

CHARX T2HBI24-DC250-2,0M2 - Vehicle charging inlet



1211220
<https://www.phoenixcontact.com/us/products/1211220>

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.

CHARX T2HBI24-DC250-2,0M2 - Vehicle charging inlet



1211220

<https://www.phoenixcontact.com/us/products/1211220>

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.

Phoenix Contact 2024 © - 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