

# Vehicle charging inlet - CHARX T1HBI12-1AC80DC200-2,0M1



1210900

<https://www.phoenixcontact.com/gb/products/1210900>

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CHARX connect, Vehicle charging inlet, for charging with alternating current (AC) and with direct current (DC), CCS type 1, IEC 62196-2, IEC 62196-3, 200 A / 1000 V (DC), 80 A / 250 V (AC), length: 2 m (AC cables), locking actuator: 12 V, 4-pos., Front and rear mounting, M6, X-Line, housing: black, A protective cap is supplied as standard for the DC and AC contacts.

## Product Description

Vehicle charging inlet for charging with alternating current (AC) and direct current (DC), compatible with type 1 AC and CCS vehicle charging connectors (EVSE), for installation in electric vehicles for electromobility (EV).

## Commercial Data

Item number	1210900
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	XWCAIB
Product Key	XWCAIB
GTIN	4063151281663
Weight per Piece (including packing)	6,236 g
Weight per Piece (excluding packing)	6.11 g
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.
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### Product properties

Product type	Vehicle charging inlet
Application	for charging with alternating current (AC) and with direct current (DC) for installation in electric vehicles (EV) Combined Charging System
Locking type	Locking in the inserted state with a locking mechanism
Charging standard	CCS type 1
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	2.7 kΩ (between PE and CS)
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	20 kW
Charging current	80 A
Type of charging current	DC
Charging power	200 kW
Charging current	200 A

### Power contact

Number	5 (L1, N, PE, DC+, DC-)
Rated voltage	250 V AC 1000 V DC
Rated current	80 A AC 200 A DC

### Signal contact

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

### (PTC chain)

Sensor type	PTC chain
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Standards/regulations	DIN EN 60738-1
Messbereich_Widerstand	790 Ω ... 1420 Ω
Resistance	max. 1200 Ω ±5 K
TEST Umgebungstemperatur Neu	-40 °C ... 130 °C
Cable structure	5 x 0,5 mm <sup>2</sup>
External cable diameter	1.6 mm -0.2 mm
Bending radius	min. 15 mm
Cable weight	7 kg/km
Cable resistance	≤ 37.1 Ω/km
Single wire, color	brown, gray brown, yellow, green

(Pt 1000)

Sensor type	Pt 1000
Standards/regulations	DIN EN 60751

Locking actuator

Operating voltage	12 V
Note number of positions	4-pos.
Position of the locking actuator	top center

## Dimensions

Dimensional drawing	
Width	108 mm
Height	151.2 mm
Depth	122.8 mm
Bore dimensions	117.6 mm x 90 mm, 117.6 mm x 83 mm

## Material specifications

Material	Plastic Silver
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## Connector

Insertion/withdrawal cycles	> 10000
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## Cable / line

Cable length	2 m (AC cables) 2 m (DC cables) 2 m (PE cable)
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	1 m (Locking actuator cables)
	1 m (Temperature sensors cables)
	1 m (Communications cables)

## AC cable

Cable weight	approx. 226 kg/km
Conductor structure	2 x 16 mm <sup>2</sup>
External cable diameter	9.9 mm ±0.3 mm
Outer sheath, material	Silicone
External sheath, color	orange
Conductor resistance	≤ 1.16 Ω/km

## DC cable

Cable weight	approx. 889 kg/km
Conductor structure	2 x 70 mm <sup>2</sup>
External cable diameter	17.9 mm ±0.3 mm
Outer sheath, material	Silicone
External sheath, color	orange
Conductor resistance	≤ 0.259 Ω/km
Cable weight	approx. 251 kg/km
Conductor structure	1 x 25 mm <sup>2</sup>
External cable diameter	8.6 mm ±0.1 mm
Outer sheath, material	Silicone
External sheath, color	green-yellow
Conductor resistance	≤ 0.743 Ω/km
Cable weight	7 kg/km
Conductor structure	4 x 0.5 mm <sup>2</sup>
External cable diameter	1.6 mm -0.2 mm
Outer sheath, material	PVC
Conductor resistance	≤ 37.1 Ω/km

## Communication cable

Cable weight	7 kg/km
Conductor structure	0.5 mm <sup>2</sup> + 0.5 mm <sup>2</sup>
External cable diameter	1.6 mm -0.2 mm
Outer sheath, material	PVC
Conductor resistance	≤ 37.1 Ω/km
Single wire, cross section	6 mm <sup>2</sup>

## Mechanical properties

### Mechanical data

Insertion force	< 100 N
Withdrawal force	< 100 N

## Environmental and real-life conditions

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## Ambient conditions

Degree of protection	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)
Altitude	4000 m (above sea level)

## Standards and regulations

### Standards

Standards/regulations	IEC 62196-2
	IEC 62196-3
	SAE J1772

## 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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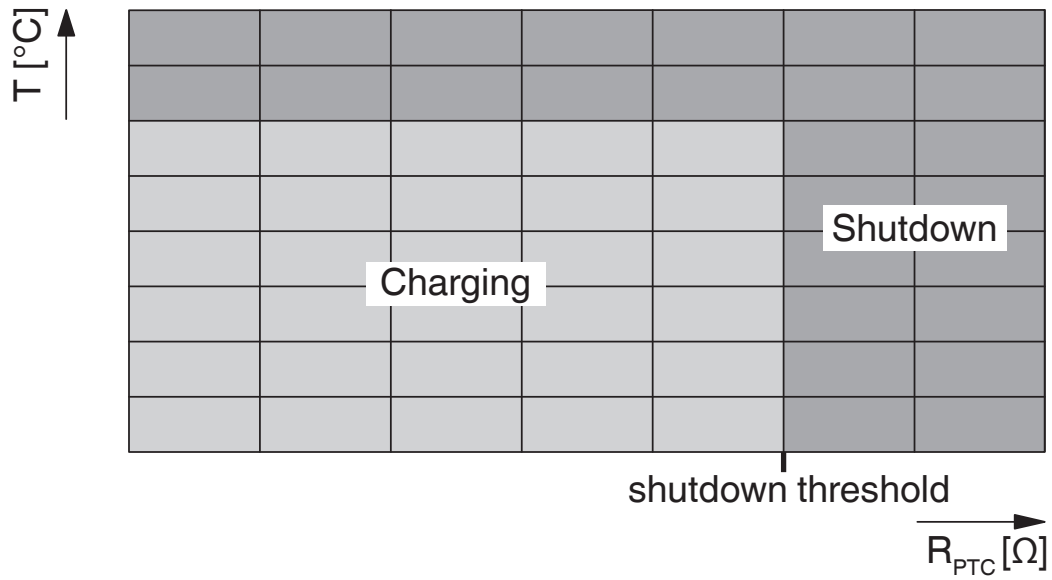


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## Drawings

Schematic diagram



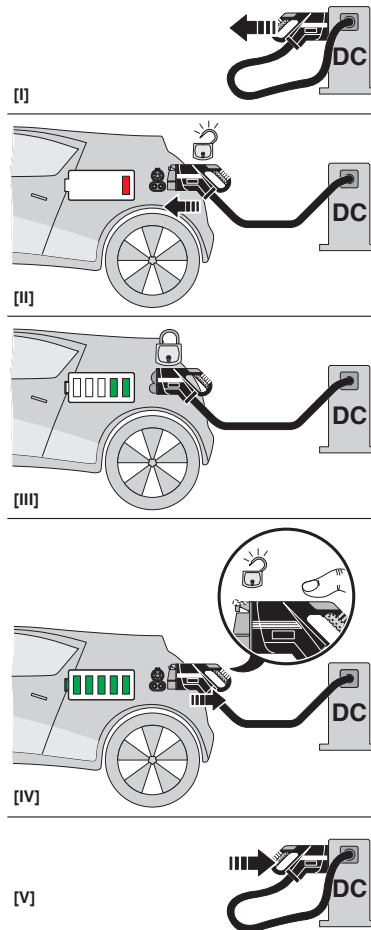
Temperature sensor technology resistance range at AC contacts

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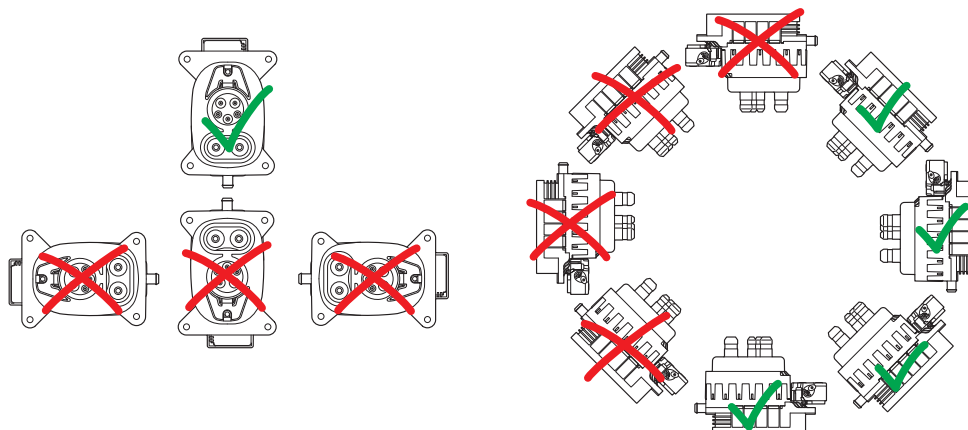
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## Schematic diagram



## Operating instructions

## Connection diagram



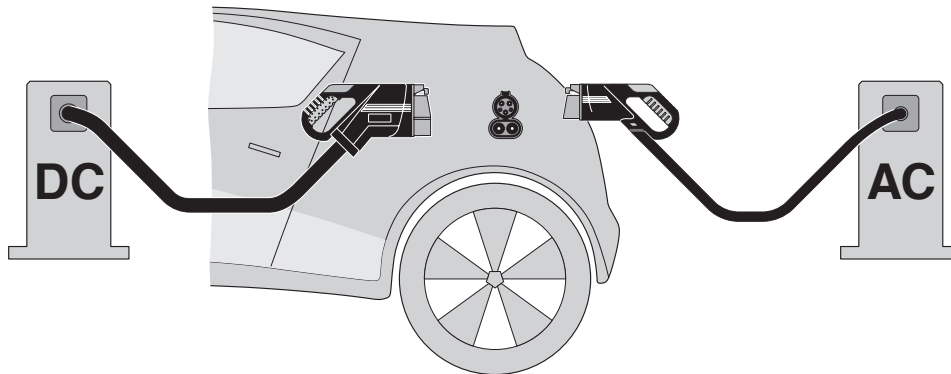
## Installation positions

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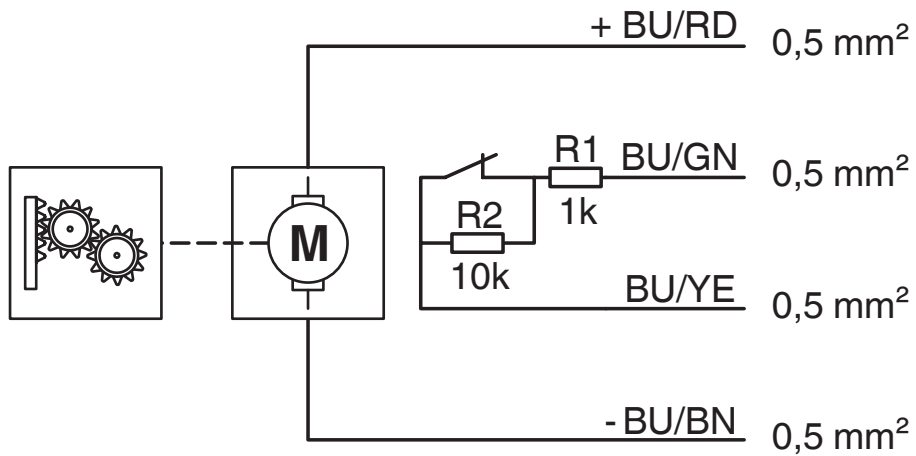
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Schematic diagram



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.

Schematic diagram



Block diagram of the locking actuator



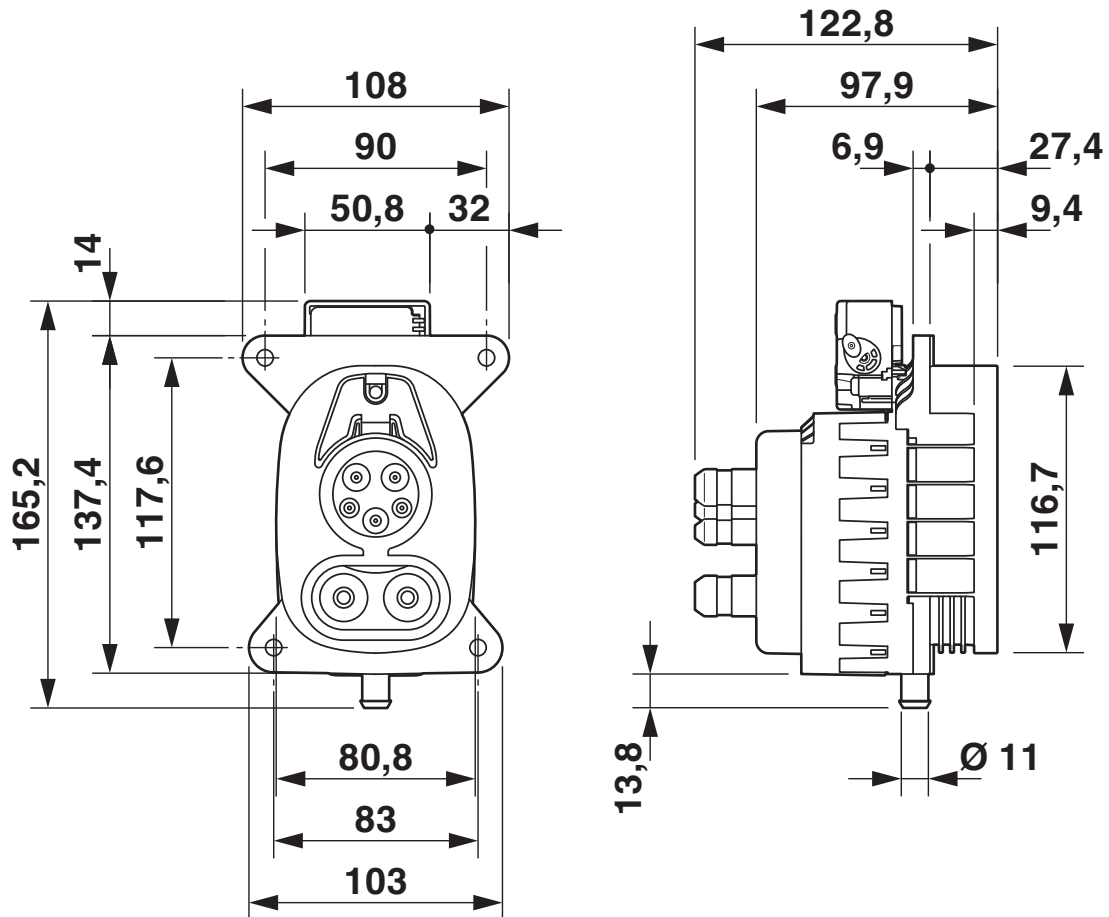
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Dimensional drawing



Dimensional drawing

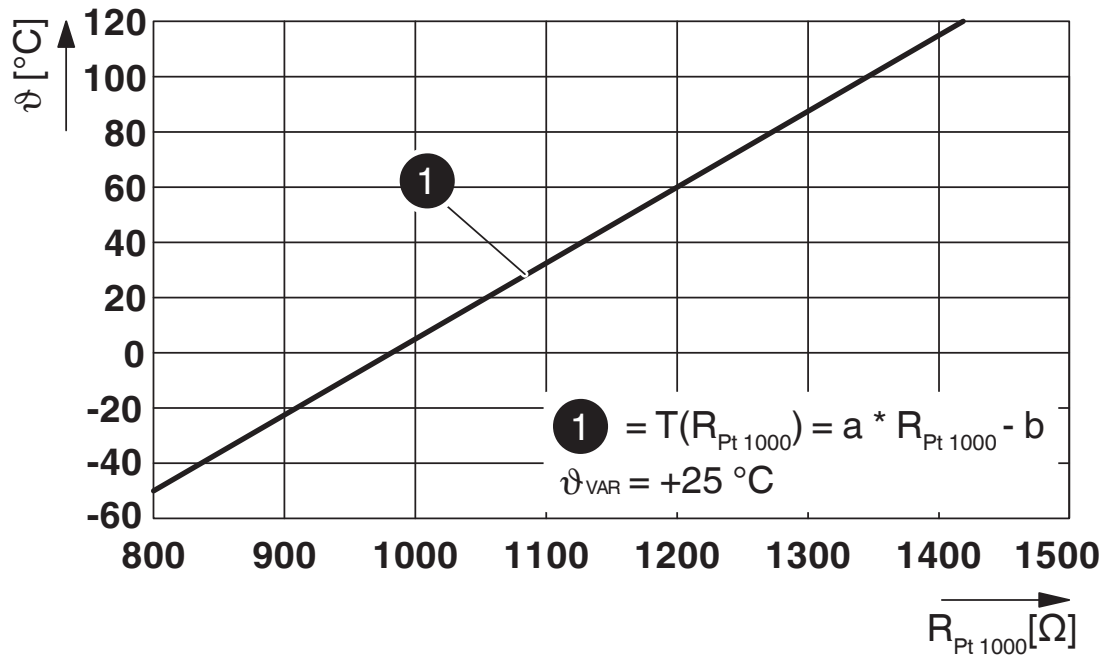
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Diagram

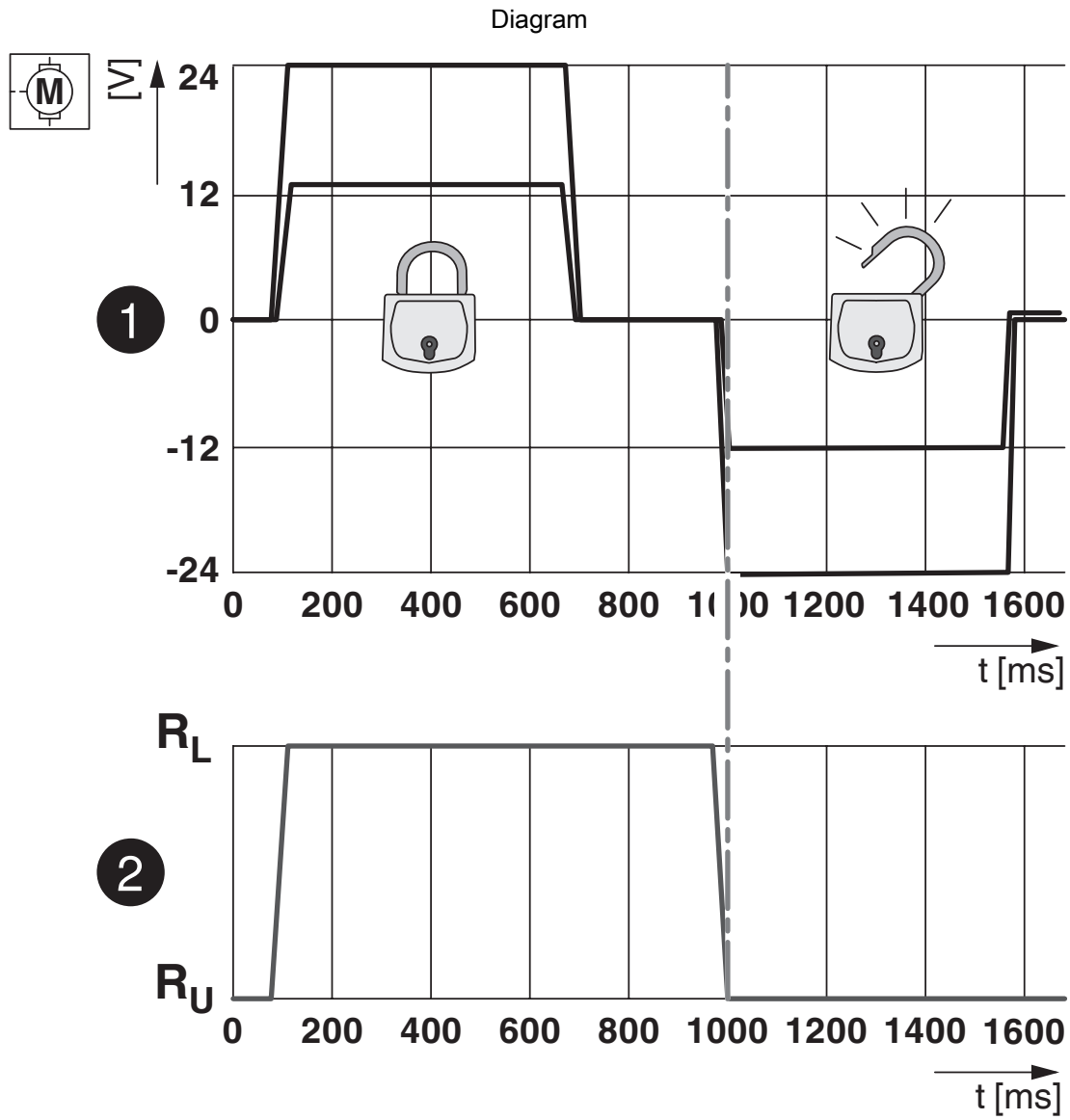


Pt 1000 characteristic curve at an ambient temperature of 25°C for temperature measurement at the DC contacts

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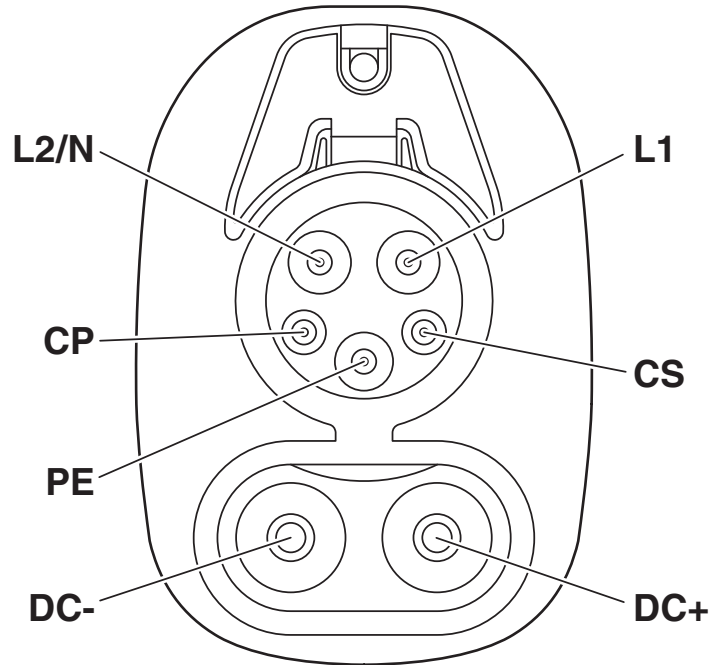
Locking states of the locking actuator

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Connection diagram

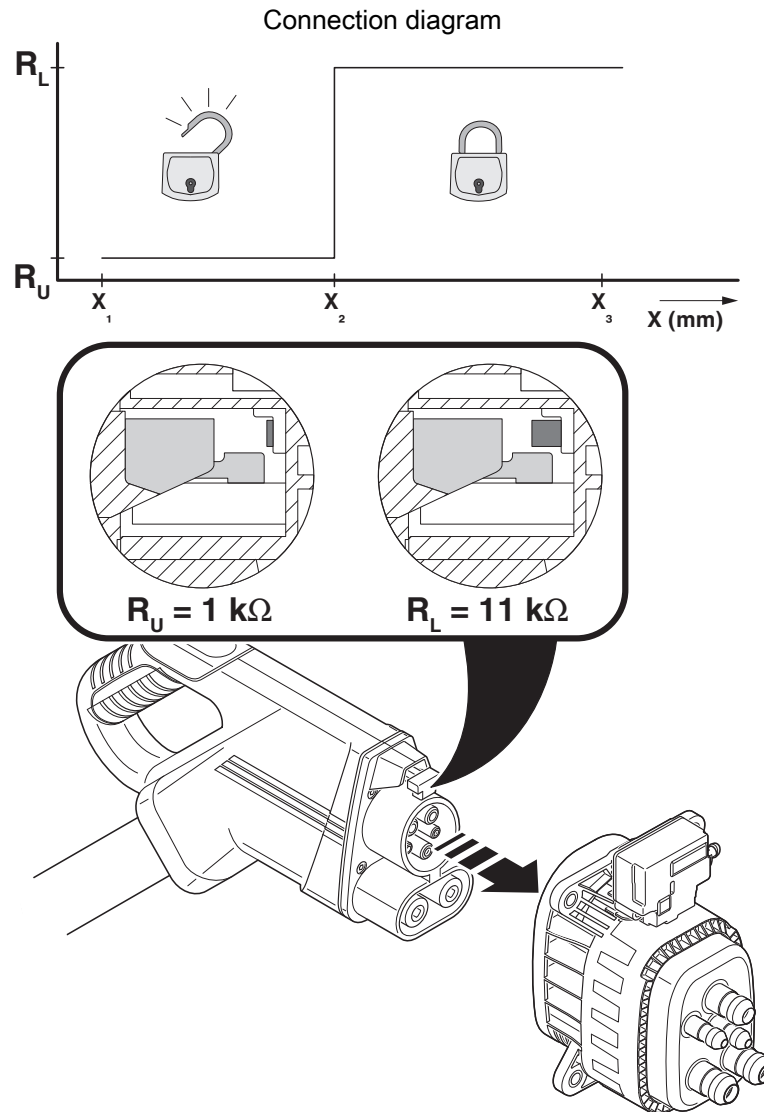


Pin assignment of vehicle charging inlets

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Detection for Vehicle Connector

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## Approvals



**cULus Recognized**

Approval ID: E473195-20210730

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## Classifications

### ECLASS

ECLASS-9.0	27144706
ECLASS-10.0.1	27144706
ECLASS-11.0	27144706

### ETIM

ETIM 8.0	EC002898
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### UNSPSC

UNSPSC 21.0	39121800
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## Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
	DOTe 15571-58-1
	Dechlorane Plus

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