

## Vehicle inlet - EV-T2GBIE24-1ACDC-20A200A2,0M2 - 1004802



Vehicle Inlet for charging with alternating current (AC) and direct current (DC), for installation in electric vehicles (EV), CCS type 2, Combined Charging System, IEC 62196-3, 200 A / 850 V (DC), 20 A / 250 V (AC), 24 V Locking actuator, length: 2 m, Front and rear mounting, This product cannot be ordered online. Should you have any questions, please contact our sales team at PHOENIX CONTACT E-Mobility GmbH, [emobility@phoenixcontact.com](mailto:emobility@phoenixcontact.com), phone: + 49 5235 3-43890.

### Article description

Vehicle Inlet for charging with alternating current (AC) and direct current (DC), compatible with type 2 AC and CCS Vehicle Connectors (EVSE), for installation in electric vehicles for E-Mobility (EV). This product cannot be ordered online. Should you have any questions, please contact our sales team at PHOENIX CONTACT E-Mobility GmbH, [emobility@phoenixcontact.com](mailto:emobility@phoenixcontact.com), phone: + 49 5235 3-43890.

### Your advantages

- Uniform, space-saving dimensions for the installation space and the screw connection points of all Phoenix Contact Vehicle Inlets
- Silver-plated surface of the power and signal contacts
- Certified in accordance with IATF 16949:2016 and ISO 9001:2015
- Material data available in the IMDS (International Material Data System of the automotive industry)
- Tested in accordance with selected tests of automotive standards LV124, LV214, LV215-2
- Manual emergency release of the locking actuator
- Integrated interlock during charging
- Integrated temperature sensors for monitoring the temperature at the power contacts



### Key commercial data

package_quantity	1
GTIN	4055626475356

### Technical data

#### Product definition

Product type	Vehicle Inlet for charging with alternating current (AC) and direct current (DC), for installation in electric vehicles (EV)
Standards/regulations	IEC 62196-3
Charging standard	CCS type 2
	Combined Charging System
Charging mode	Mode 2, 3, 4
Note	This product cannot be ordered online. Should you have any questions, please contact our sales team at PHOENIX CONTACT E-Mobility GmbH, <a href="mailto:emobility@phoenixcontact.com">emobility@phoenixcontact.com</a> , phone: + 49 5235 3-43890.
	A protective cap is supplied as standard for the DC contacts.
Note on the connection method	Crimp connection, cannot be disconnected

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## Technical data

### Dimensions

<b>Height</b>	130.4 mm
<b>Width</b>	111 mm
<b>Depth</b>	107.4 mm
<b>Bore dimensions</b>	94.8 mm x 82.4 mm, 94.8 mm x 111.0 mm
<b>Conductor length</b>	2 m (AC cables)
	2 m (DC cables)
	0.5 m (Locking actuator cables)
	2 m (PE cable)
	1.8 m (Temperature sensors cables)
	2 m (Communications cables)
<b>Cable structure</b>	2 x 70 mm <sup>2</sup> + 1 x 25 mm <sup>2</sup> + 2 x 2,5 mm <sup>2</sup> + 3 x 2 x 0,5 mm <sup>2</sup>

### Ambient conditions

<b>Ambient temperature (operation)</b>	-30 °C ... 50 °C
<b>Ambient temperature (storage/transport)</b>	-40 °C ... 80 °C
<b>Max. altitude</b>	5000 m (above sea level)
<b>Degree of protection</b>	IP55 (plugged in)
	IP55 (with protective cap)

### Electrical properties

<b>Maximum charging power</b>	200 kW
<b>Type of charging current</b>	DC, AC 1-phase
<b>Number of phases</b>	1
<b>Number of power contacts</b>	5 (L1, N, PE, DC+, DC-)
<b>Rated current of power contacts</b>	200 A DC
	20 A AC
<b>Rated voltage for power contacts</b>	250 V AC
	850 V DC
<b>Number of signal contacts</b>	2 (CP, PP)
<b>Rated current for signal contacts</b>	2 A
<b>Rated voltage for signal contacts</b>	30 V AC
<b>Type of signal transmission</b>	Pulse width modulation with modulated Powerline communication according to ISO/IEC 15118 / DIN SPEC 70121
<b>Insulation resistance of neighboring contacts</b>	> 5 MΩ
<b>Resistor coding</b>	4.7 kΩ (between PE and PP)
<b>Temperature measurement</b>	DC contacts: Pt 1000 (DIN EN 60751)
<b>Temperature monitoring</b>	AC contacts: PTC chain (DIN EN 60738-1)

### Mechanical properties

<b>Insertion/withdrawal cycles</b>	> 10000
<b>Insertion force</b>	< 100 N
<b>Withdrawal force</b>	< 100 N

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### Technical data

#### Mounting

Possible mounting positions	Front and rear mounting
Restrictions to mounting position	Only 0 to 90 degree frontal inclination possible, see figure
Mounting position of the locking actuator	Right-side
Mounting hole diameter	6.80 mm (ø)

#### Design

Design line	Generation 2
Housing color	black
Customer variations	On request

#### Material

Material	Plastic
Material surface of contacts	Ag

#### Locking

Locking type	Locking in the inserted state with a locking mechanism
Locking voltage	24 V
Locking detection	available
Mechanical emergency release	available

#### Locking actuator

Typical power supply at the motor	24 V
Possible power supply range at the motor	22 V ... 26 V
Typical motor current for locking	0.05 A
Max. reverse current of the motor	0.5 A
Max. dwell time with reverse current	1000 ms
Recommended adaptation time	600 ms
Pause time after entry or exit path	3 s
Maximum voltage for locking detection	30 V
Service life	> 10000 load cycles
Ambient temperature (operation)	-30 °C ... 50 °C
Length of cable	0.5 m

#### Temperature sensors

Type of sensor	Pt 1000
Standards/regulations	DIN EN 60751
Recommended measured current	1 mA (1 V at 0°C)
Tolerance at the sensor with the recommended measured current	±1K
Temperature range	-50 °C ... 130 °C
Temperature coefficient (TCR)	3850 ppm/K
Long-term stability (max. R0-Drift)	0.06 % (After 1000 hours at 130°C)
Shutdown temperature	90 °C equivalent to a Pt 1000 value of 1346.5 Ω

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### Technical data

#### Temperature monitoring

Type of sensor	PTC chain
Standards/regulations	DIN EN 60738-1
Recommended measured current	< 1 mA
Maximum permitted power dissipation	20 mW
Temperature range	-40 °C ... 125 °C
Resistance range	200 Ω ... 2200 Ω
Switch-off threshold	1500.00 Ω
Diagnostic capability	Short circuit, cable break

### Accessories

#### DC charging cable

EV-T2M4CC-DC125A-5,0M50ESBK00 - 1409060



DC charging cable with vehicle connector, open cable end, CCS type 2, Combined Charging System, IEC 62196-3, 125 A / 1000 V (DC), design line Standard, cable: 5 m, black, straight, mating face: black, handle area: gray

#### AC charging cable

EV-T2M3PC-1AC20A-5,0M2,5ESBK00 - 1622118



Mobile AC charging cable with vehicle connector and infrastructure plug, with protective cap, Type 2, IEC 62196-2, 20 A / 250 V (AC), design line D-Line, cable: 5 m, black, straight, mating face: gray, handle area: gray

EV-T2G3PC-1AC20A-5,0M2,5ESBK01 - 1627982

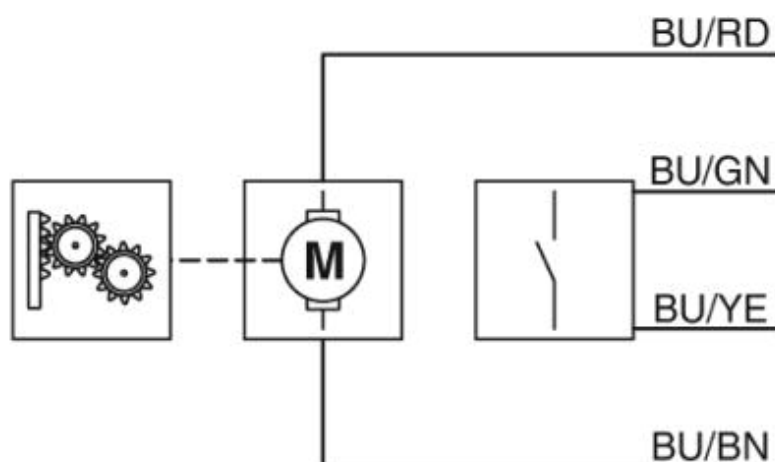


Mobile AC charging cable with vehicle connector and infrastructure plug, with protective cap, Type 2, IEC 62196-2, 20 A / 250 V (AC), design line C-Line, cable: 5 m, black, straight, mating face: black, handle area: gray

### Drawings

## Vehicle inlet - EV-T2GBIE24-1ACDC-20A200A2,0M2 - 1004802

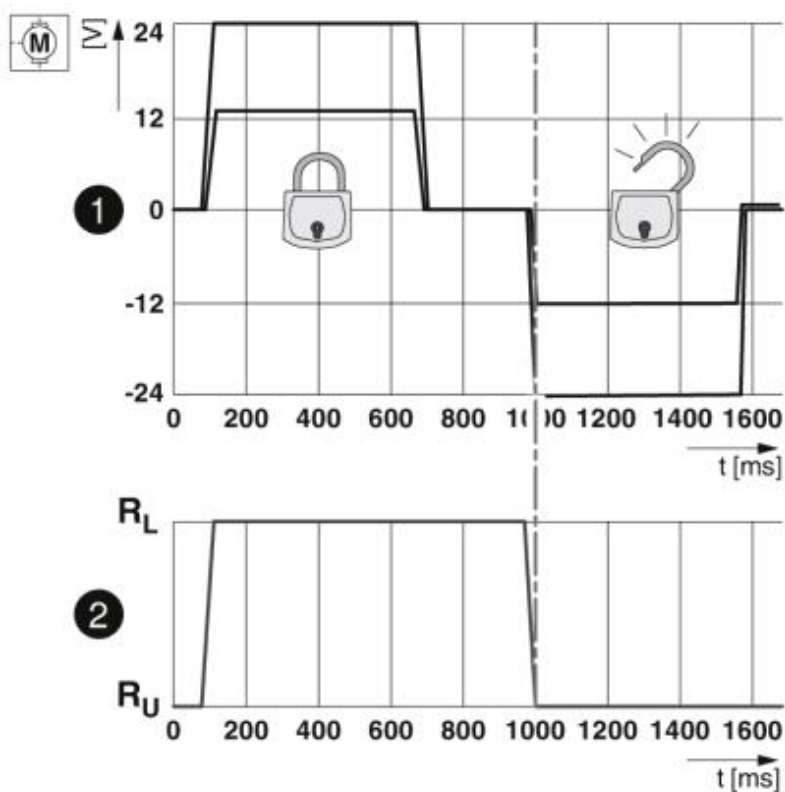
Block diagram



Block diagram of the locking actuator

## Drawings

Diagram

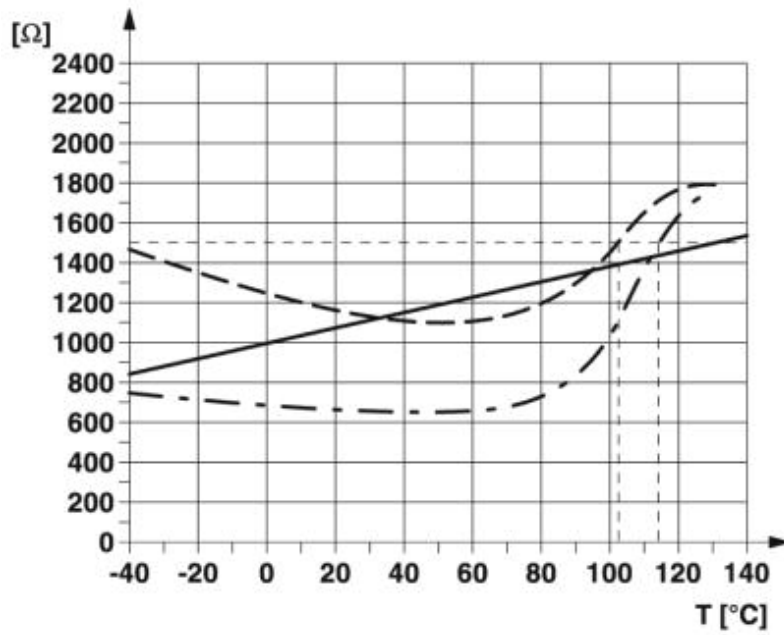


Locking states of the locking actuator

## Drawings

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Diagram

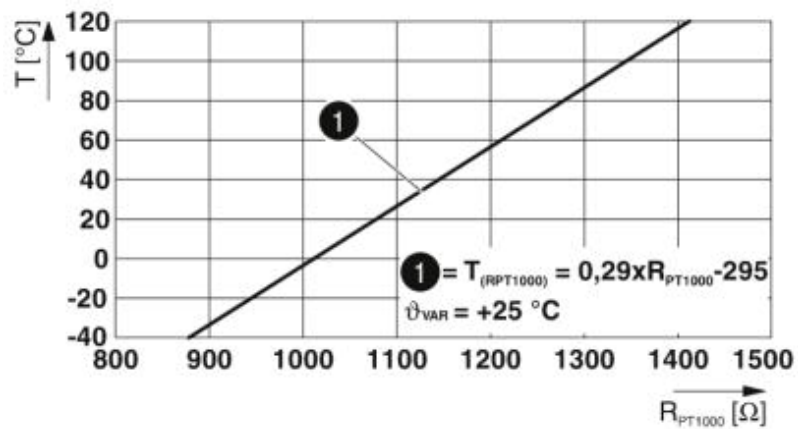


PTC characteristic curve at an ambient temperature of 25 $^{\circ}\text{C}$  for temperature monitoring at the AC contacts

## Drawings

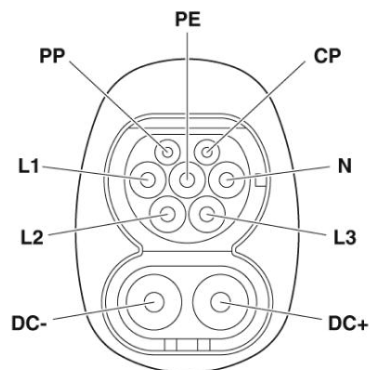
# Vehicle inlet - EV-T2GBIE24-1ACDC-20A200A2,0M2 - 1004802

Diagram



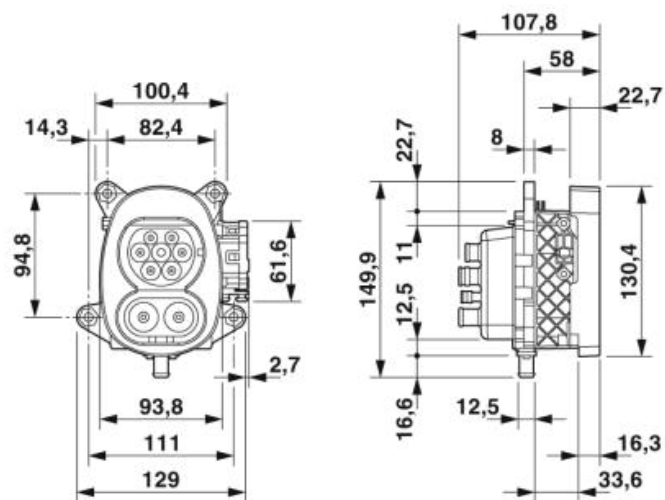
Pt 1000 characteristic curve at an ambient temperature of 25°C for temperature measurement at the DC contacts

Connection diagram



Pin assignment of Vehicle Inlet

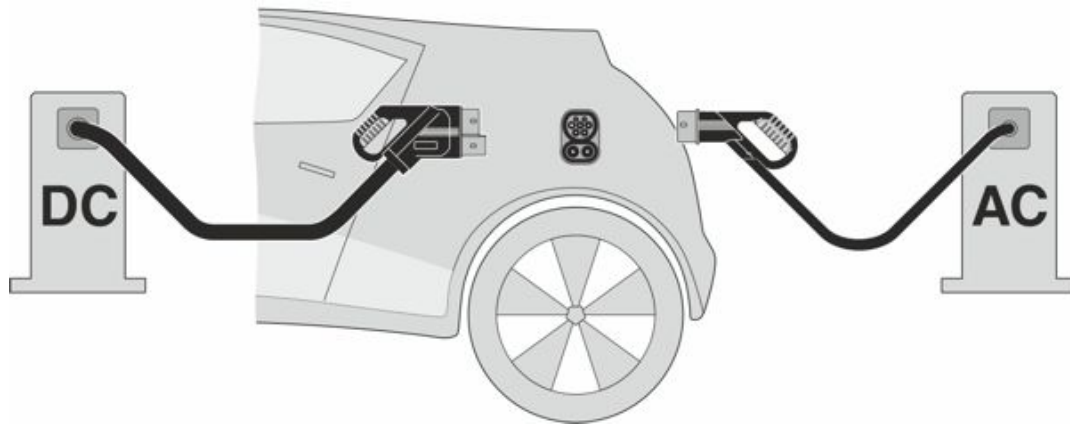
Dimensional drawing



Dimensional drawing

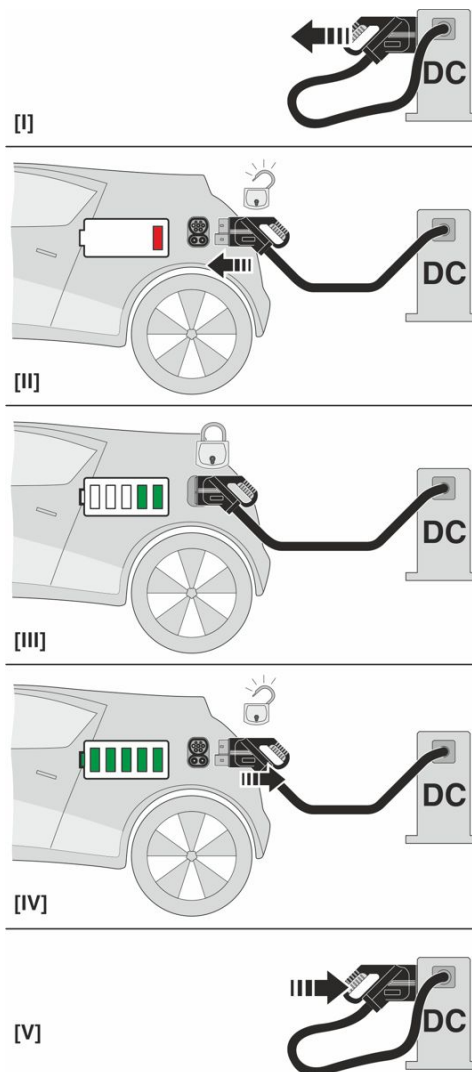
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Schematic diagram



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





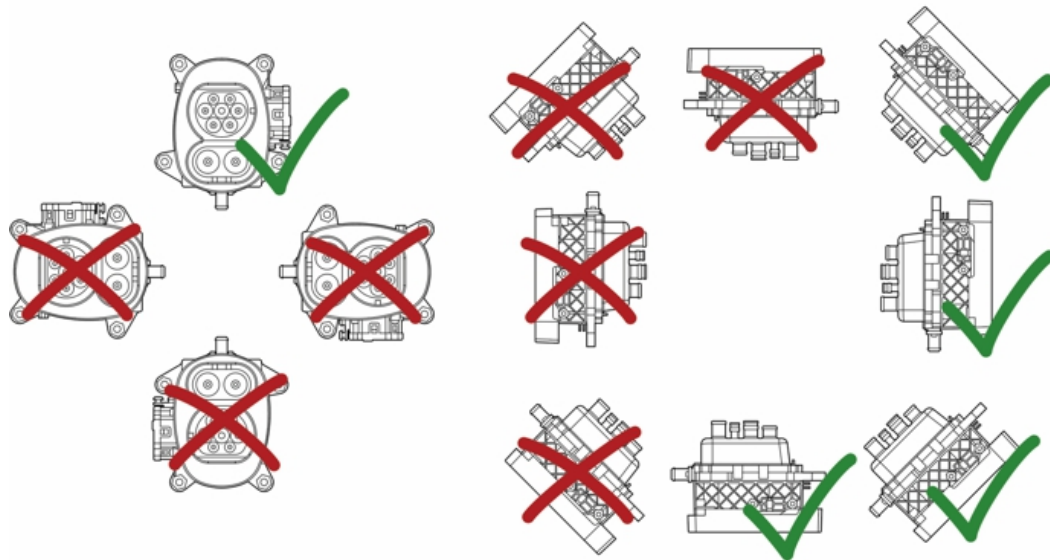
# Vehicle inlet - EV-T2GBIE24-1ACDC-20A200A2,0M2 - 1004802

Operating instructions

Schematic diagram

Detection for Vehicle Connector

Schematic diagram



Installation positions

Schematic diagram



Emergency unlocking of the 24 V locking actuator

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