

DC charging cable - EV-GBG4C-DC250A-5,0M70ESBK01 - 1031379

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DC charging cable, with vehicle charging connector and open cable end, Housing color black-gray, with protective cap, with temperature sensors, For charging electric vehicles (EV) with direct current (DC), for installation at charging stations for electromobility (EVSE), GB/T, GB/T 20234.1-2015, GB/T 20234.3-2015, 250 A / 1000 V (DC), Generation 2, "PHOENIX CONTACT" logo, cable: 5 m, black, straight

Product Description

DC charging cable with Vehicle Connector and open cable end for fast charging of electric vehicles (EV) with direct current (DC) via GB/T Vehicle Inlets, for installation at charging stations for E-Mobility (EVSE)

Your advantages

- ✓ Consistent design of all Phoenix Contact Vehicle Connectors and Infrastructure Plugs
- ✓ Silver-plated surface of the power and signal contacts
- ✓ Certified in accordance with IATF 16949:2016 and ISO 9001:2015
- ✓ Convenient handling, thanks to the ergonomic handle and additional, rubber grip components
- ✓ Integrated temperature sensors for monitoring the temperature at the power contacts
- ✓ Integrated interlock during charging



Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4055626534664

Technical data

Product definition

Type	DC charging cable
	with vehicle charging connector and open cable end
	Housing color black-gray
	with protective cap
	with temperature sensors
Application	For charging electric vehicles (EV) with direct current (DC)
	for installation at charging stations for electromobility (EVSE)
Affixed logo	"PHOENIX CONTACT" logo

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Technical data

Product definition

Design	Generation 2
Standards/regulations	GB/T 20234.1-2015, GB/T 20234.3-2015
Charging standard	GB/T
Charging mode	Mode 4

Dimensions

Height	137.8 mm (Vehicle charging connector)
Width	77 mm (Vehicle charging connector)
Depth	279.4 mm (Vehicle charging connector)
Conductor length	5 m
Stripping length	150 mm ±20 mm

Ambient conditions

Ambient temperature (operation)	-30 °C ... 50 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Max. altitude	5000 m (above sea level)
Degree of protection	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)
	IP54 (Protective cap)

Electrical properties

Maximum charging power	250 kW
Number of power contacts	3 (PE, DC+, DC-)
Rated current of power contacts	250 A
Rated voltage for power contacts	1000 V DC
Number of signal contacts	6 (S+, S-, A+, A-, CC1, CC2)
Rated current for signal contacts	20 A ((A+, A-))
	2 A ((S+, S-, CC1, CC2))
Rated voltage for signal contacts	30 V
Type of signal transmission	according to GB/T 27930-2015
Note on the connection method	Crimp connection, cannot be disconnected
Resistor coding	1000 Ω (between PE and CC1 / PE and CC2)
Temperature monitoring	2x Pt 1000

Mechanical properties

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

Design

Design line	Standard
Housing color	black
Mating face color	black

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Design

Color handle area	gray
Actuating element color	black
Color protective cap	black
Label	14.1 mm x 44.8 mm (customer logo on request)
Customer variations	On request

Material

Housing material	Plastic
Material handle area	Soft plastic
Actuating lever material	Metal
Material protective cap	Plastic
Material mating face	Plastic
Flammability rating	V0
Material surface of contacts	Ag

Cable

Cable structure	2 x 70 mm ² + 1 x 25 mm ² + 2 x 4 mm ² + (2 x 0.75 mm ²) P + 10 x 0.75 mm ²
Wiring standards/regulations	GB/T 33594-2017
Wiring class	Class 5/6
Wiring certifications	CQC1105-2015
External cable diameter	34.9 mm ±0.4 mm
Type of conductor	straight
Cable resistance	≤ 0.000272 Ω/m (based on a power core, at an ambient temperature of 20°C)
Outer sheath, material	TPU
External sheath, color	black
Minimum bending radius	174.5 mm (5 x diameter)

Locking

Locking type	Locking option for actuating lever with actuators integrated in the Vehicle Connector
Locking current	2 A
Current supply duration	50 ms ... 100 ms (NOTE: Continuous current supply > 100 ms damages the locking actuator)
Locking detection	Maximum of 24 V / 14 mA via signal lines Lock Detection+ (WHOG) and Lock Detection- (WHBN)
	Spower+ (WHBU) and Spower- (WHPK) must also be supplied with 12 V on a continuous basis

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

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Temperature sensors

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

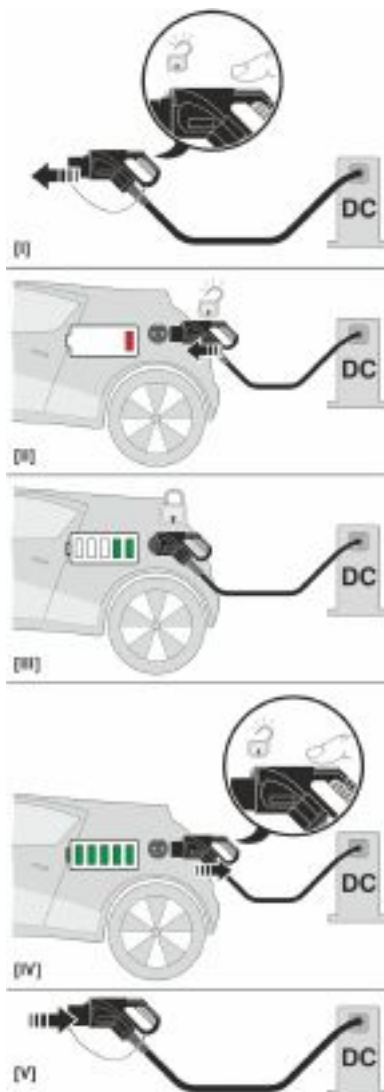
Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 10;
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

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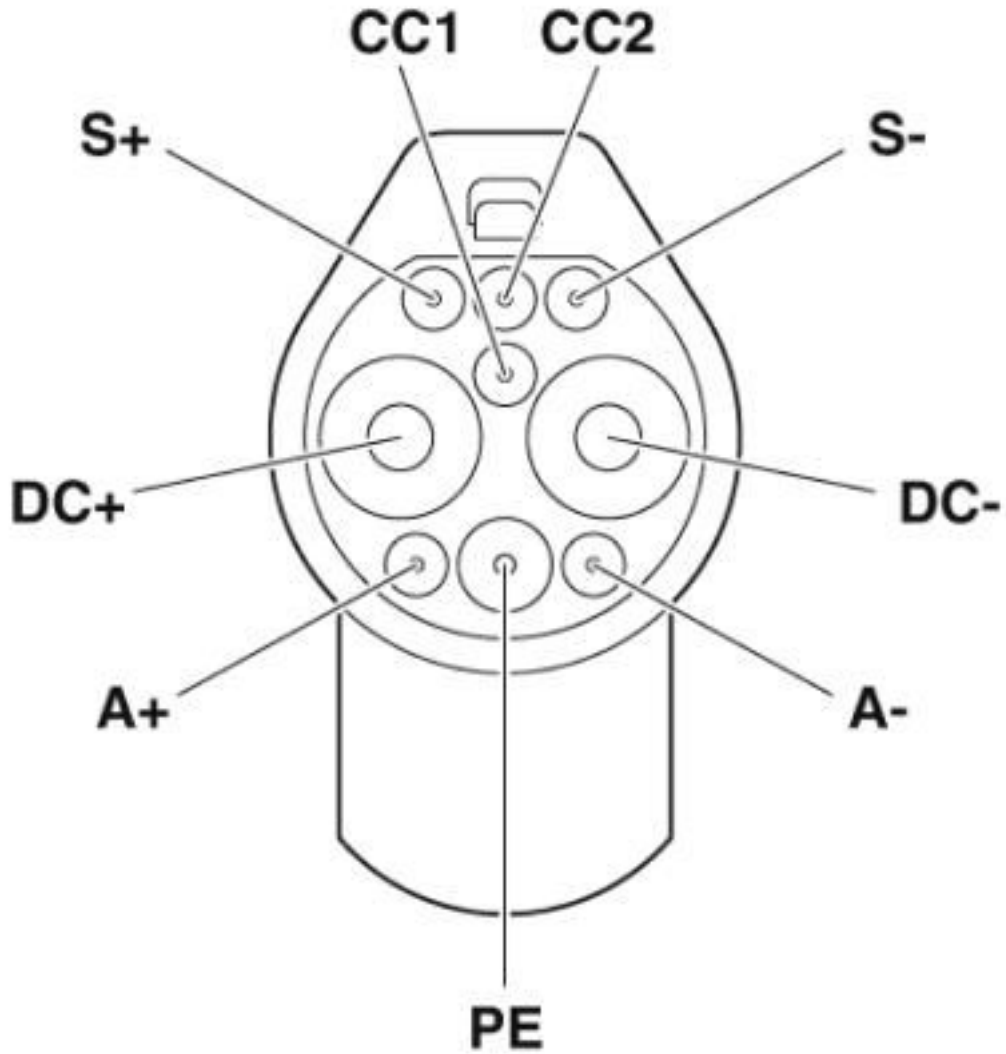
Schematic diagram



Operating instructions

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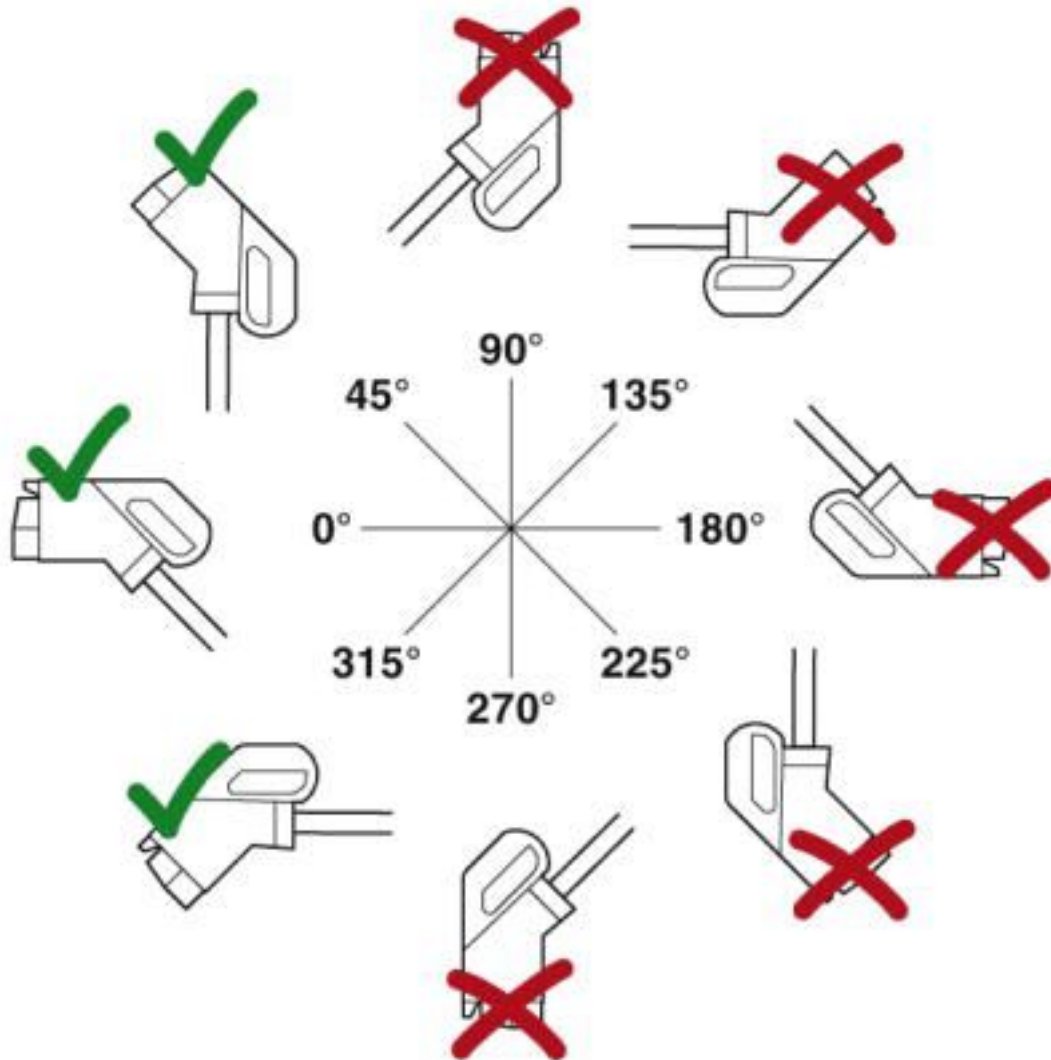
Schematic diagram



Pin assignment of the Vehicle Connector

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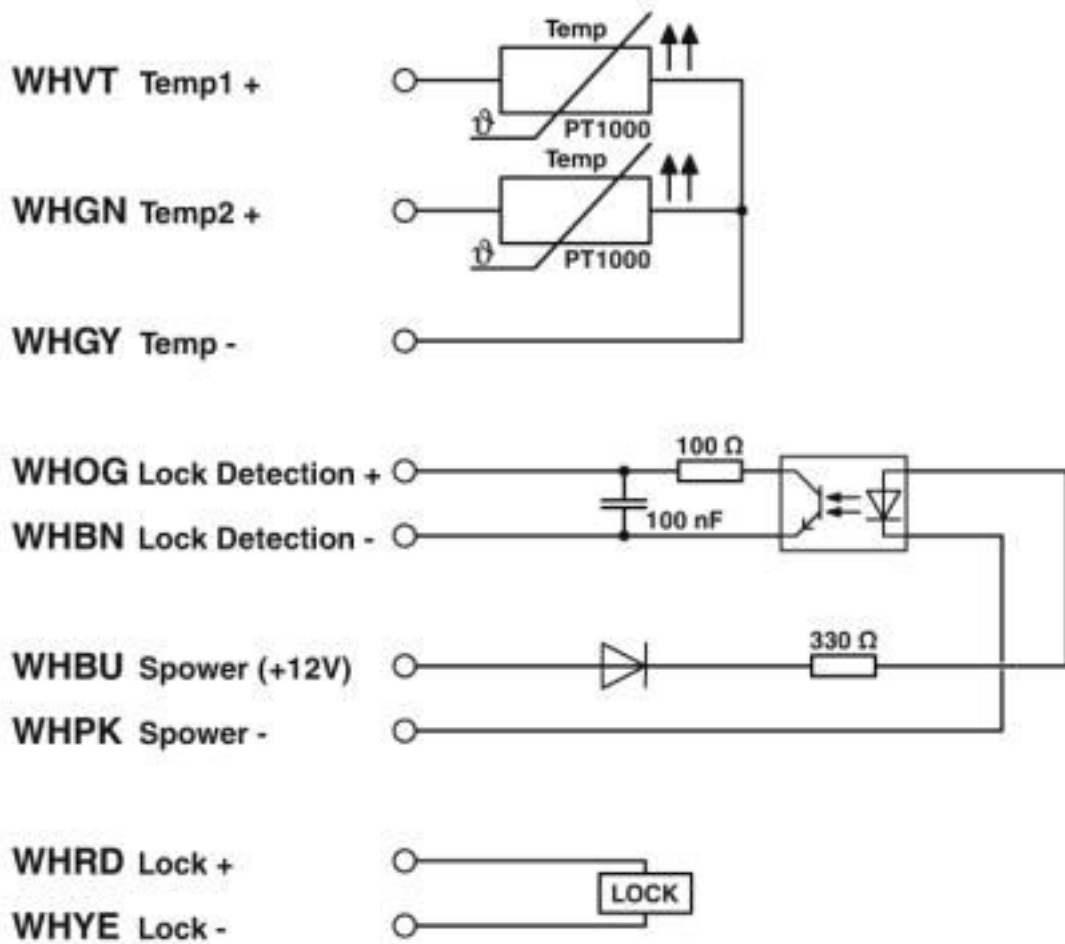
Schematic diagram



The resting position must be installed in the charging station such that the user cannot hang up the vehicle connector upside down (90° to 270°). However, positions rotated upward (45°) or downward (315°) are options for a resting position.

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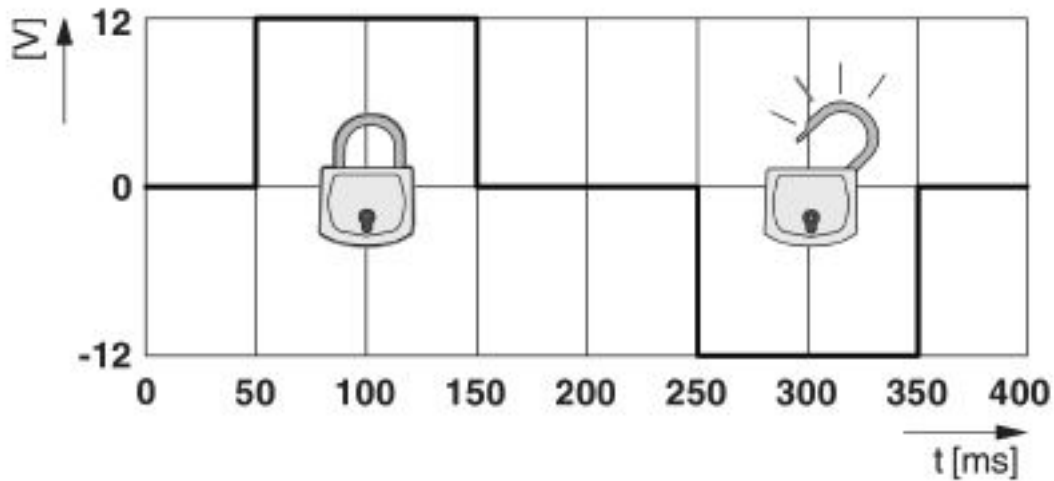
Block diagram



Block diagram GB/T DC

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Diagram



Locking: The locking lever is locked via the Lock+ (WHRD) and Lock- (WHYE) connecting cables with an operating voltage of 12 V/2 A locked/unlocked.

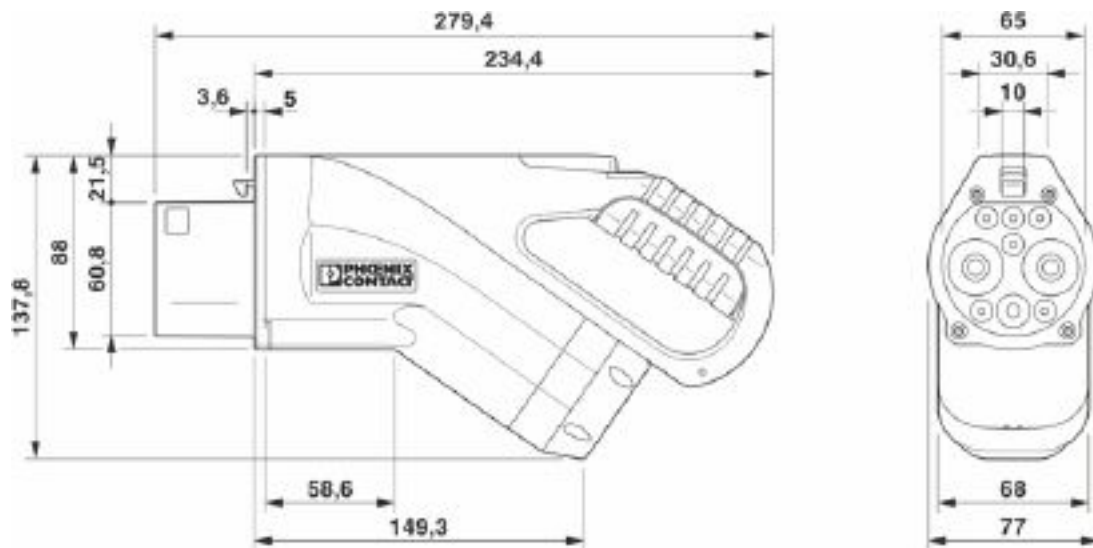
The state is changed (lock <-> unlock) by reversing the polarity of the power supply.

The operating voltage is applied to LOCK + (WHRD) to lock.

The operating voltage is applied to LOCK - (WHYE) to unlock.

During this process, the time window for current supply must be between 50 ms ... 100 ms (continuous energization > 100 ms damages the locking actuator).

Dimensional drawing



Ensure that the vehicle connector is placed in an appropriate resting position that ensures a minimum protection rating of IP24 in accordance with IEC 61851-1 for the entire time between charging. Use the dimensions of the vehicle connector to create this type of resting position. Detailed specifications can also be found in the download area.

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Classifications

eCl@ss

eCl@ss 10.0.1	27144705
eCl@ss 9.0	27144705

ETIM

ETIM 6.0	EC002897
ETIM 7.0	EC002897

Accessories

Accessories

Assembly tool

Tool - EV-GBDC-UNLOCK-TOOL - 1113273



Tool, Emergency unlocking tool for GB/T DC vehicle connectors, GB/T, GB/T 20234.3

Park position

Park position - EV-GBDC-PARK-R - 1623496



Park position, Retainer for Vehicle Connector as parking position at charging stations (EVSE), GB/T, GB/T 20234.3, Front mounting

Park position - EV-GBDC-PARK-SW - 1623497



Park position, Retainer for Vehicle Connector as parking position at charging stations (EVSE), GB/T, GB/T 20234.3, Front mounting

Park position - EV-GBDC-PARK - 1623770



Park position, Retainer for Vehicle Connector as parking position at charging stations (EVSE), GB/T, GB/T 20234.3, Front mounting

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