EV-T2HPCC-DC500A-5,0M50ECBK11L - DC charging cable

1085637

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CHARX connect professional, HPC DC charging cable, with cooled vehicle charging connector and cooled cable, for charging electric vehicles (EV) with direct current (DC), with replaceable mating face frame, with replaceable DC power contacts, with left-hand angled panel feed-through, with variable-speed fan, with digital temperature sensors, CCS type 2, IEC 62196-3-1, 500 A / 1000 V (DC), PHOENIX CONTACT logo, cable: 5 m, black, straight

Product description

DC charging cable with vehicle charging connector and free cable end for fast charging of electric vehicles (EV) with direct current (DC) via CCS type 2 vehicle charging inlets, for installation at charging stations for e-mobility (EVSE)

Your advantages

- Complete product range
- The right charging cable for every application, from the carport to the charging park
- Ultra-fast HPC charging, with temporary power up to 500 kW
- Convenient handling due to the ergonomic design
- Available with your logo on request – for consistent branding of your charging station
- Developed and produced in accordance with the IATF 16949 automotive standard and ISO 9001
- Additional safety thanks to integrated leakage sensors and a wear indicator in the cable sheath
- Convenient communication interfaces via CAN bus and digital output
- Maintenance-friendly replacement of the mating face frame without draining the coolant
- Integrated strain relief of single-core wires directly in the panel feed-through
- Pre-assembled busbar screw connection for straightforward connection of the customer’s busbars or cable lug solutions

Commercial data

Item number	1085637
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	EM01
Product key	XWBALD
Catalog page	Page 16 (C-7-2019)
GTIN	4055626835181
Weight per piece (including packing)	15,882 g
Weight per piece (excluding packing)	15,882 g
Customs tariff number	85444290
Country of origin	DE

Technical data

Product properties

Product type	DC charging cable
Product family	CHARX connect professional
Application	for charging electric vehicles (EV) with direct current (DC)
	for installation at charging stations for electromobility (EVSE)
Type	HPC DC charging cable
	with cooled vehicle charging connector and cooled cable
Design	with replaceable mating face frame
	with replaceable DC power contacts
	with left-hand angled panel feed-through
	with variable-speed fan
	with digital temperature sensors
Technology	Combined Charging System
	High Power Charging
Affixed logo	PHOENIX CONTACT logo
Label	8.9 mm x 28.9 mm (customer logo on request)
Charging standard	CCS type 2
Charging mode	Mode 4

Cooling system

Cooling	in the vehicle charging connector and in the cable
Coolant	50% water, 50% glycol (Glysofor N)
Cooling capacity	600 W (Cable length: 3 m)
	800 W (Cable length: 4 m)
	900 W (Cable length: 5 m)
	1050 W (Cable length: 6 m)
Cooling hose diameter	1x 11.50 mm Supply hose
	2x 8.80 mm Return hoses
Flow rate	2 l/min
Operating pressure	1.00 bar ... 2.00 bar
Relief pressure	2.00 bar
Maximum permissible pressure	4.00 bar
Flow-in temperature	15 °C

Fan

Cooling	The fan provides additional cooling inside the panel feed-through to increase the charging current.
	The fan can be attached to the panel feed-through as an option.
Cable structure	2 x AWG 26
Nominal voltage U_N	24 V
Nominal voltage range	18 V AC ... 24 V AC
Fan speed indication	4400 min-1

Mechanical service life	70.000 h (at 40 °C)
Ambient temperature	-20 °C ... 40 °C

Electrical properties

Type of signal transmission	Pulse width modulation with modulated Powerline communication in accordance with ISO/IEC 15118 / DIN SPEC 70121
Coding	1500 Ω (between PE and PP)
Type of charging current	DC
Charging power	500 kW
Charging current	500 A
Type of charging current	DC Boost Mode
Charging power	up to 700 kW (Boost Mode, depending on the ambient conditions. For further information on implementation, please contact your local Phoenix Contact office and see the packing slip in the download area for this item.)
Charging current	up to 700 A (Boost Mode, depending on the ambient conditions. For further information on implementation, please contact your local Phoenix Contact office and 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	500 A (up to 40 °C)

Signal contact

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

Temperature sensors (NTC)

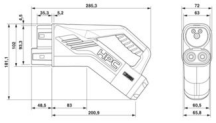
Sensor type	NTC
Attachment point	2 sensors for the replaceable front DC contacts
	2 sensors for the internal DC power wires
	1 sensor on the PCB in the housing
Switch-off temperature	90 °C

Temperature sensors (Pt 1000)

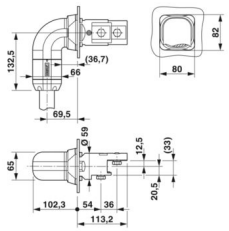
Sensor type	Pt 1000
Standards/regulations	DIN EN 60751
Attachment point	Sensor in the panel feed-through
Switch-off temperature	90 °C ±1 K (equivalent to a Pt 1000 value of 1346.5 Ω)
Long-term stability	0.06 % (after 1000 hours at 130 °C)
Recommended measured current	1 mA (1 V at 0°C)
Coefficient	3850 ppm/K
Ambient temperature	-50 °C ... 130 °C (Operation)

Dimensions

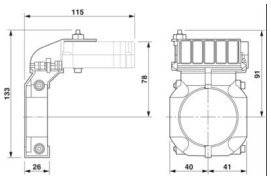
Vehicle charging connector

Dimensional drawing	 Make sure that the vehicle charging connector is placed in an appropriate charging connector holder, which ensures a minimum protection rating of IP24 in accordance with IEC 61851-1, for the entire time between charging. To create this charging connector holder, use the dimensions of the vehicle charging connector. Detailed dimensions can also be found in the Download area.
Width	72 mm
Height	181.1 mm
Depth	285.3 mm

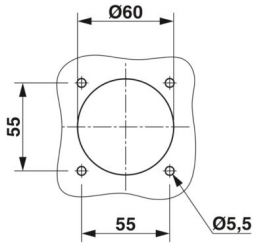
Panel feed-through

Dimensional drawing	
Width	80 mm
Height	82 mm
Depth	215.5 mm

Cooling fan

Dimensional drawing	
Width	81 mm
Height	133 mm
Depth	115 mm

Bore dimensions

Dimensional drawing	 Drill hole spacing
Width	55 mm
Height	55 mm
Diameter	60 mm

Material specifications

Color (Housing)	black (9005)
Color (Handle area)	black (9005)
Color (Mating face)	black (9005)
Color (Cable)	black (9005)
Color (Panel feed-through)	black (9005)
Material (Vehicle charging connector)	Plastic
Material (Cable outer sheath)	EVM-1 in accordance with EN 50620
Material (Panel feed-through)	Plastic
Material (Contact surface)	Silver
Flammability rating according to UL 94	V0 (Mating face)

Cable/line

Cable length	5 m ±45 mm
Wiring standards/regulations	Based on UL 62 (File E515623, Vol 1)
	Based on IEC 62893
Cable weight	max. 1938.00 kg/km
Cable type	straight
Cable structure	5 x 25 mm² + 7 x 0.75 mm²
External cable diameter	35.70 mm ±0.4 mm
Outer sheath, material	TPE-U in accordance with IEC 62893-1
Cable resistance	≤ 0.00078 Ω/m (based on a power core, at an ambient temperature of 20°C)
Bending radius	min. 357 mm (10x Ø)

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	> 10000 (based on IEC 62196-1)
Insertion force	< 100 N
Withdrawal force	< 100 N

Environmental and real-life conditions

Ambient conditions

Degree of protection (Vehicle charging connector)	IP54 (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)
Degree of protection (Panel feed-through)	IP54
Ambient temperature (operation)	-30 °C ... 40 °C
	max. 55 °C (Current reduction required, observe the DC contact temperature limit value of 90°C)
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	5000 m (above sea level)

Standards and regulations

Standards

Standards/regulations	IEC 62196-3-1

Mounting

Mounting type Panel feed-through	Rear panel mounting
Mounting type Fans	Rear panel mounting (optional for increasing the charging current up to 500 A)
Max. wall thickness	max. 5.00 mm
Fixing screws	M5x16

Classifications

ECLASS

ECLASS-11.0	27144705
ECLASS-12.0	27144705
ECLASS-13.0	27144705

ETIM

ETIM 9.0	EC002897

UNSPSC

UNSPSC 21.0	39121500

Environmental product compliance

REACh SVHC	Lead 7439-92-1
	Dechlorane Plus

China RoHS	Environmentally Friendly Use Period = 10;
	For information on hazardous substances, refer to the manufacturer’s declaration available under “Downloads”

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