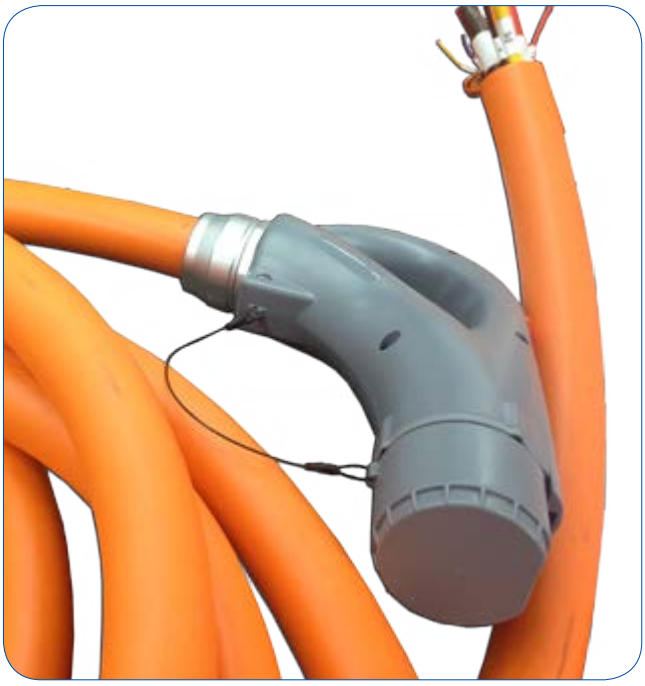
ExcelMate CC

High Voltage Coupler Outlet

AMPHENOL PCD SHENZHEN

CONTENT

PRODUCT INTRODUCTION



- Meets national standard GB/T 20234.1/2/3-2015, reference with IEC 62196-2
- Option for electronic lock available. It prevents the connector from being unplugged while charging
- IP55
- High performance of RADSOK socket contact

MECHANICAL		
Mating cycles	Up to 10,000 times	
Connector (in mated condition) retention force:		
AC coupler	Unmating	Max 100N
	Mating	Min 200N
DC coupler	Unmating	Max 140N
	Mating	Min 200N
ELECTRICAL		
	AC (R6)	DC (R12)
Rated current	63A Max	250A Max
Rated voltage	250V/440V AC	750V/1000V DC
Contact resistance	0.5MΩ Max	0.2MΩ Max
Insulation resistance	>100MΩ (DC500V)	>100MΩ (DC500V)
ENVIRONMENTAL		
Sealing	IP55 (mated)	
Operating temperature	-30°C to 50°C	
MATERIAL		
Shell	Thermoplastic	
Contact	Copper alloy, silver or nickel plating	
Inserts	Thermoplastic	
Sealing gasket	Rubber or silicon rubber	
Insulator inflammability	UL94V0	

ELECTRIC VEHICLE CHARGING MODES AND COUPLER TYPES

Charging Mode 2: When connecting electric vehicle to AC network, the plug and socket-outlet at power supply side shall comply with requirements of GB 2099.1. Phase line, neutral line and protective earth conductor shall be used at power supply side. And in-cable control box is installed in the charging connection cable.
Charging Mode 3: When connecting electric vehicle to AC network, use special power supply equipment. Directly connect the electric vehicle with AC network. And install control guide device on the special power supply equipment.
Charging Mode 4: When connecting electric vehicle to AC network, use non-on-board charger. Indirectly connect the electric vehicle with AC network.

RATED VOLTAGE AND CURRENT FOR DIFFERENCE CHARGING MODE

Charging Mode	Couple Type	Rated Voltage	Rated Current
2	AC coupler	250V AC	16A
3	AC coupler	250V AC	32A
4	DC coupler	750V/1000V DC	80A
	DC coupler	750V/1000V DC	125A
	DC coupler	750V/1000V DC	250A

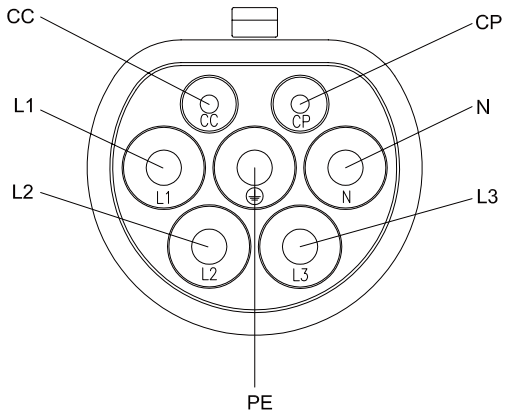
Remarks:

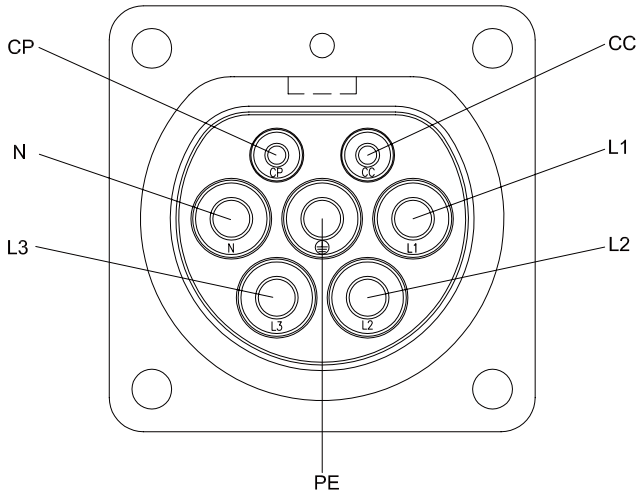
1. All types of charging modes should be connected with residual current operated circuit-breakers and overflow protective device. Residual current operated circuit-breakers should be compliant with GB/T 16916.1 or GB/T 16917.1 requirements.

INSERT ARRANGEMENT

AC Coupler insert arrangement

National standard

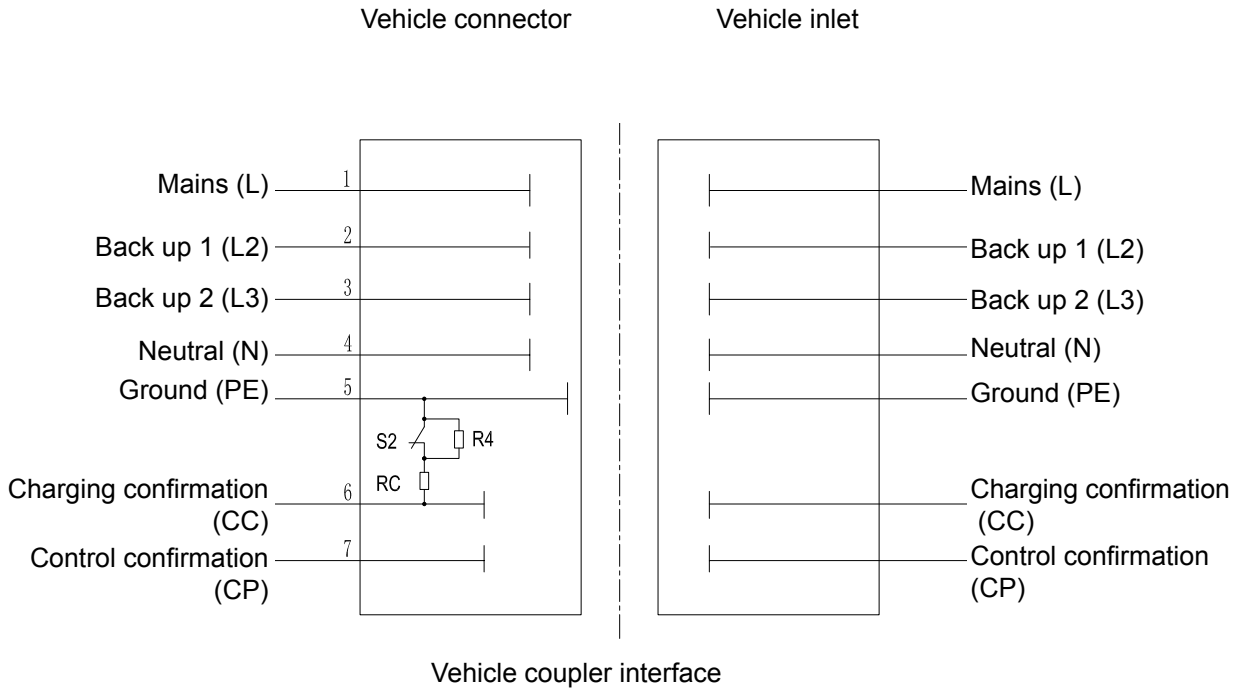




AC Coupler contacts function

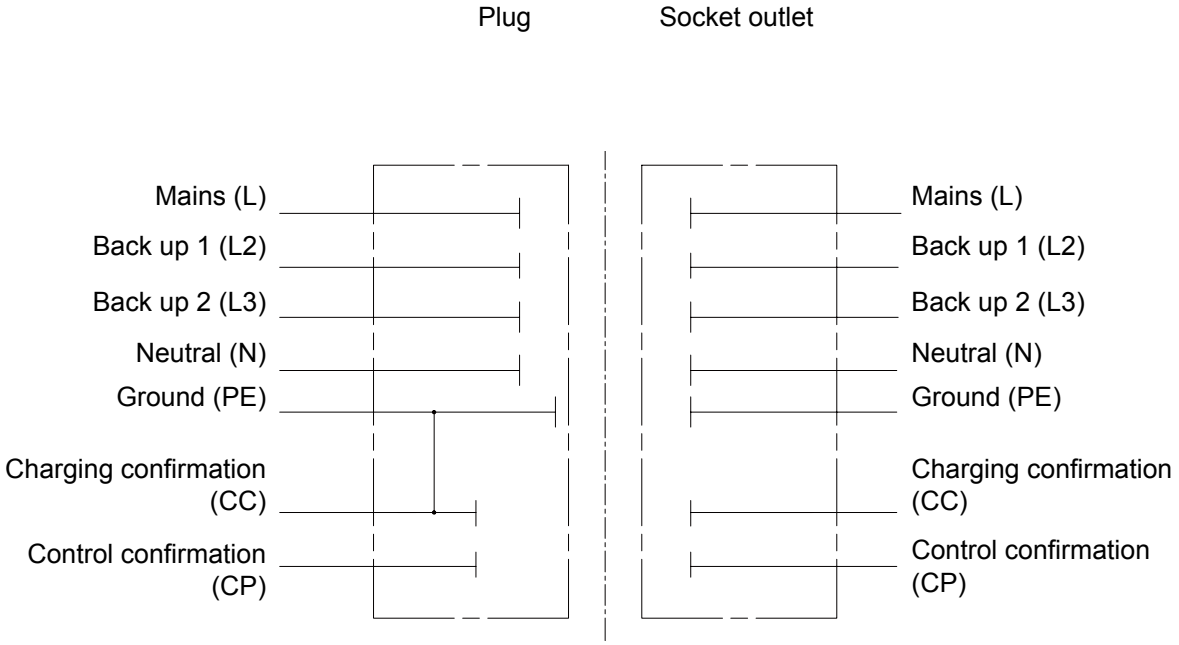
Contacts Number & Function	Rated Voltage & Current	Function
L1	250V 16/32A	AC power
N	250V 16/32A	Neutral
⏚	-	PE, connect charging stake and vehicle chassis ground
CC	30V 2A	Charging confirmation
CP	30V 2A	Control confirmation
L2	-	Back up contact
L3	-	Back up contact

AC VEHICLE COUPLER INTERFACE



Vehicle coupler interface

PLUG AND SOCKET OUTLET



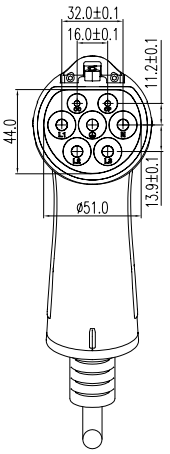
Charging station coupler interface

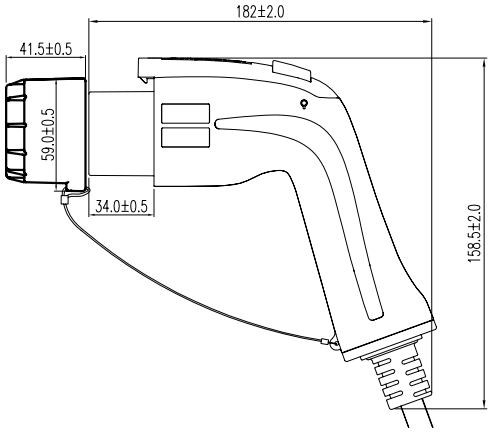
AC COUPLER DIMENSIONS

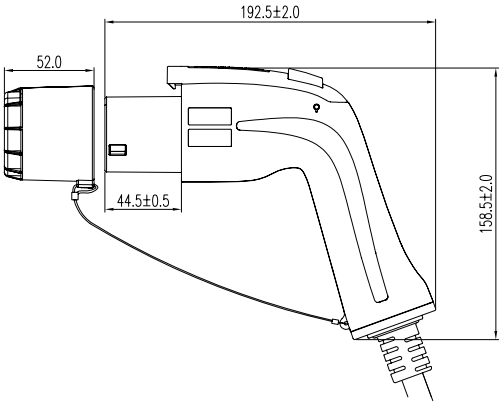
Plug outline

Vehicle connector

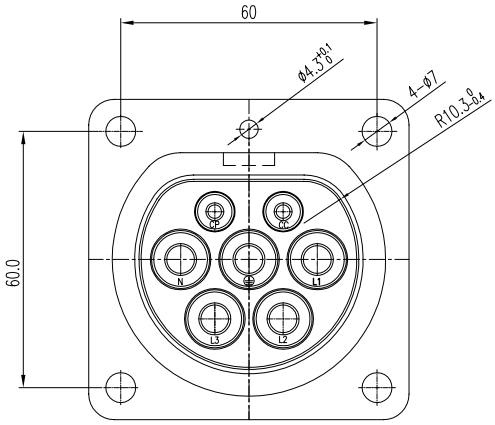
Charging stake plug

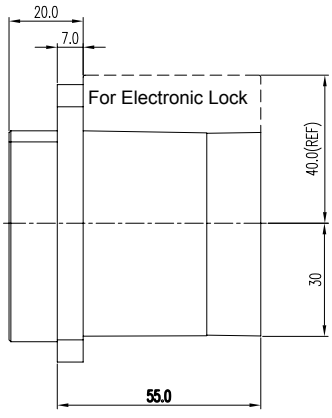




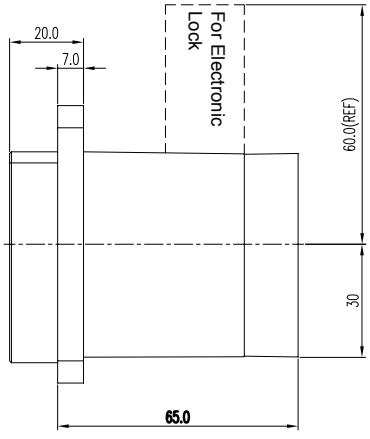


Receptacle outline





Vehicle inlet

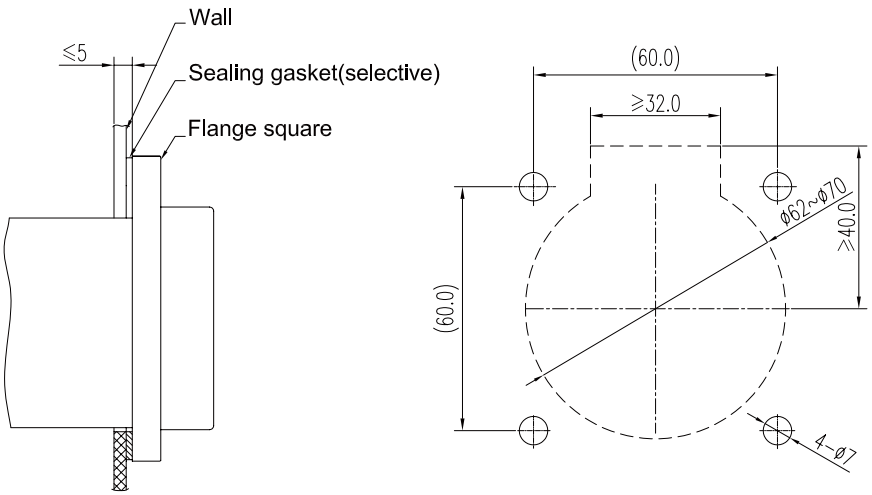


Socket outlet

MOUNTING INSTRUCTIONS

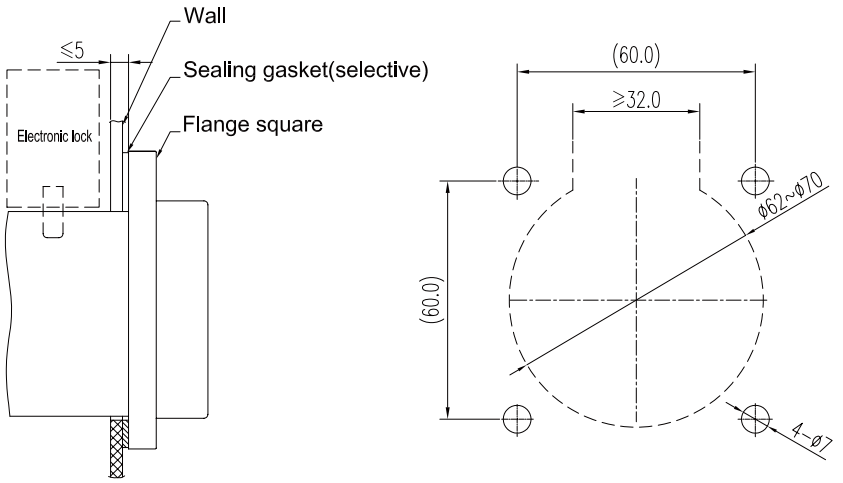
Vehicle inlet

Front



Socket outlet

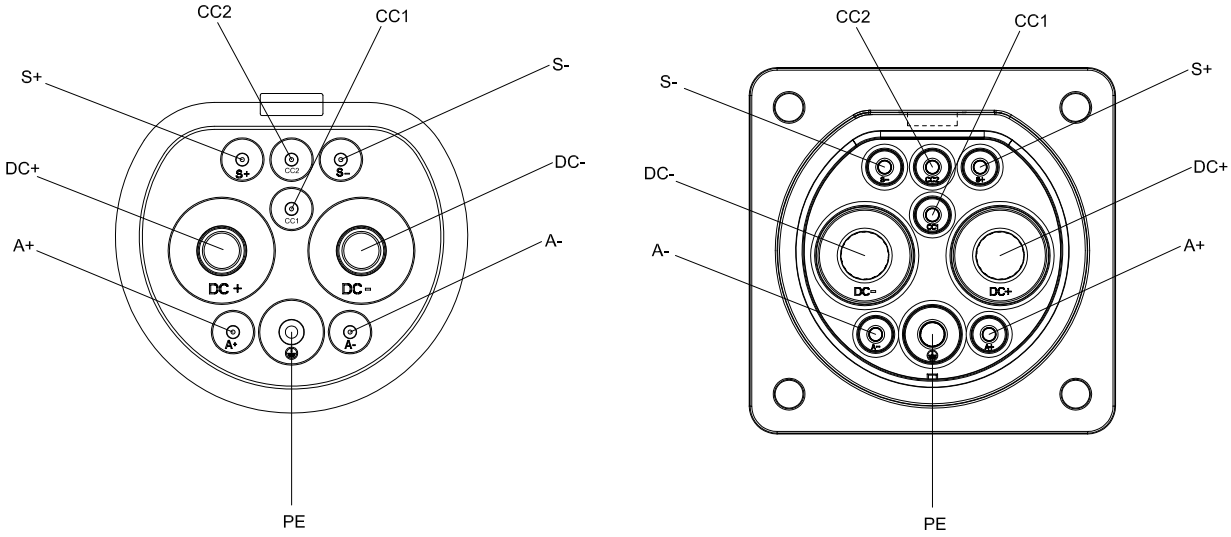
Front



INSERT ARRANGEMENT

DC Coupler inserts arrangement

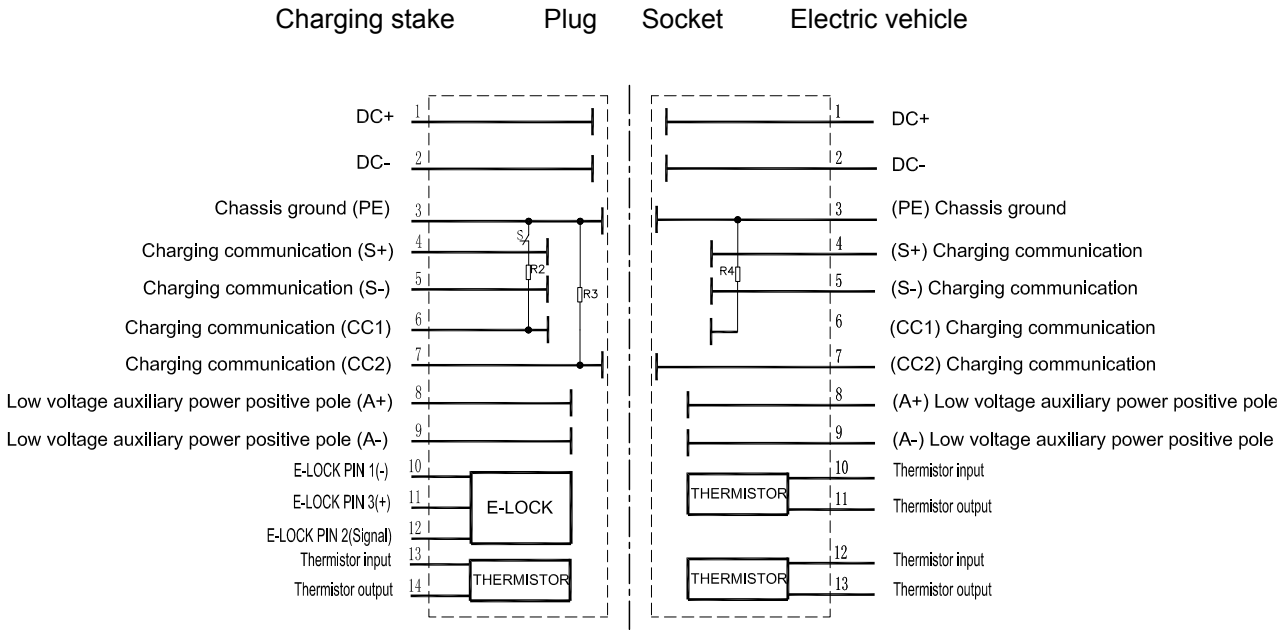
National standard



DC Coupler contacts function

Contacts Number & Function	Rated Voltage & Current	Function
DC+	750V 125/250A	DC+, connect DC+ and battery+
DC	750V 125/250A	DC -, connect DC- and battery -
⏚	-	PE, connect power supply equipment and vehicle chassis ground
S+	30V 2A	Charging communicattion CAN_H, connect charging stake and vehicle's communication
S-	30V 2A	Charging communication CAN_L, connect charging stake and vehicle's communication
CC1	-	Charging confirmation 1
CC2	-	Charging confirmation 2
A+	30V 20A	Low voltage auxiliary power+, charging stake supply low voltage auxiliary power+ to electric vehicle
A -	30V 20A	Low voltage auxiliary power-, charging stake supply low voltage auxiliary power- to electric vehicle
Remarks: Charging stake and vehicle control device should mount CAN fieldbus termination resistor, 120Ω recommended. Communication wire should use shielded twist wire, charging stake end with shielded ground.		

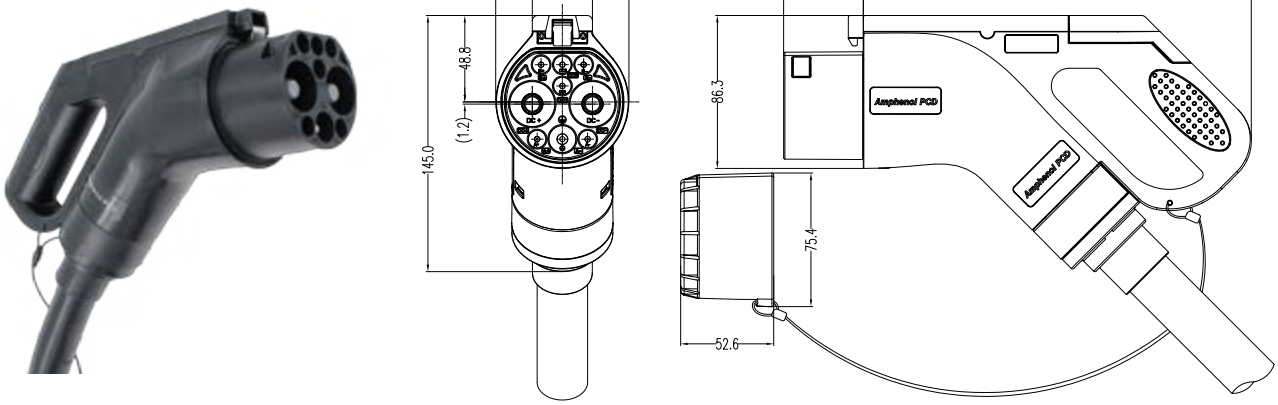
DC CHARGING COUPLER INTERFACE



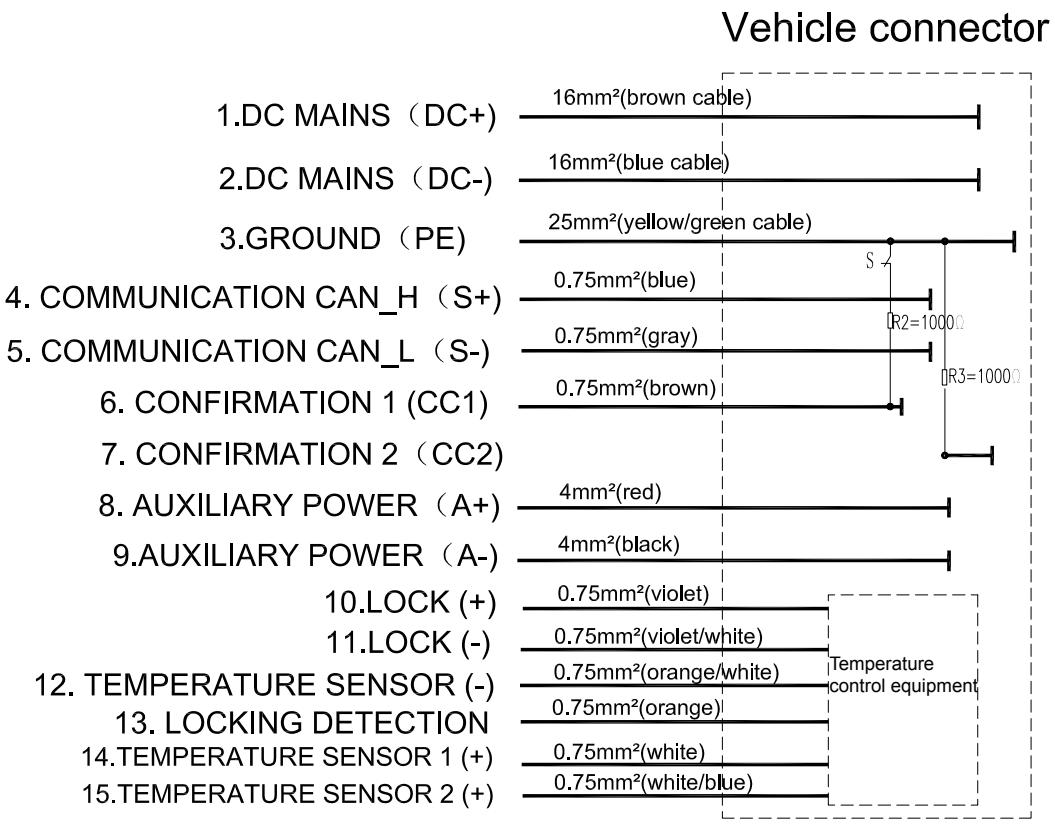
DC charging coupler interface

80A DC COUPLER DIMENSION

PLUG

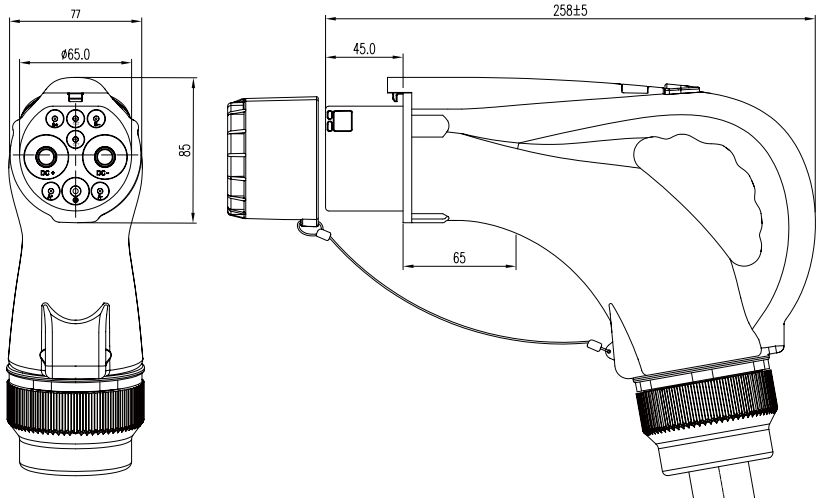


DC VEHICLE COUPLER INTERFACE

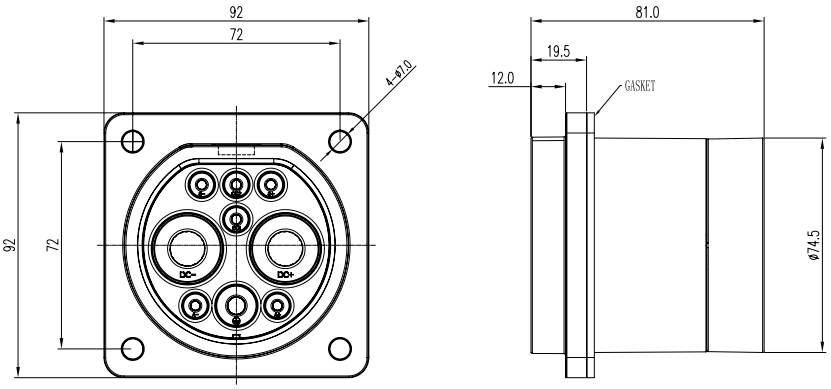


125 TO 250 A DC COUPLER DIMENSION

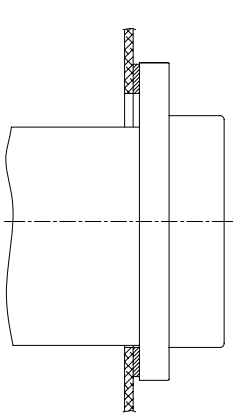
Plug outline

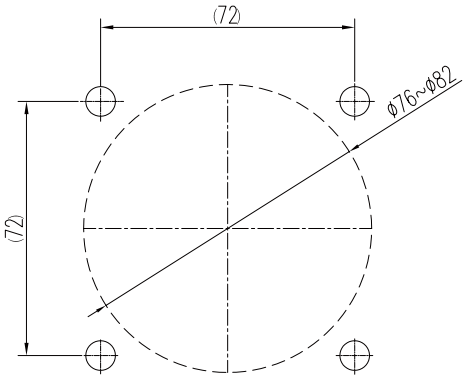


Receptacle outline



Vehicle inlet front mount instruction





Charging Mode 2	Charging Mode 3
Plug	Plug
	
Charging Mode 4 (80A)	Receptacle
	
Charging Mode 4 (125A to 250A)	
Plug	Receptacle
	

HOW TO ORDER

HVCO	M	E	L	B	T	S	R6	PSXXX	R	W	LXXXX	XXXX

Connector type:
M: Plug
F: Receptacle

E: Switch (Only for male contact)
Omit: No need switch

L: Electronic lock (Only for R12 male contact)

B: 2015 New version GB national standard

Temperature sensor:
T: Temperature sensor - (For rated current over 16A male & female contact)
Omit: No temperature sensor

S: Charging stake coupler
SC: Both charging stake and vehicle have 1 coupler (Only for both 2 end are charging outlet)
Omit: Means only 1 coupler in vehicle

Contact size:
R6: 6mm Radsok, pin contact
R12: 12mm Radsok, pin contact

Type of connector insert arrangement:
PSXXX: Plug slow charging coupler, refer to page15
PFXXX: Plug fast charging coupler, refer to page15
SSXXX: Socket slow charging coupler, refer to page15
SFXXX: Socket fast charging coupler, refer to page15

R: Need more resistor in the plug
Omit: No need resistor

W: Wave tube
Omit: No need wave tube

Cable length :
LXXXX: (Unit in mm). Omit: No need cable

Cable accessories:
XXXX: Cable accessories

HOW TO ORDER: INSERT ARRANGEMENT

AC Coupler Plug Types										
Part Number	Cable Quantity	Charging Mode	Cable Section (mm^2)	L	CN1	CN2	PE	N	CC	CP
PS502R	4	Charging mode 2, rated current 16A	2.5	2.5	N/A	N/A	2.5	2.5	R	0.75
PF506R	4	Charging mode 3, rated current 32A	6	6	N/A	N/A	6	6	R	0.75

AC Coupler Socket Types										
Part Number	Cable Quantity	Charging Mode	Cable Section (mm^2)	L	CN1	CN2	PE	N	CC	CP
SS502	5	Charging mode 2, rated current 16A	2.5	2.5	N/A	N/A	2.5	2.5	0.75	0.75
SF506	5	Charging mode 3, rated current 32A	6	6	N/A	N/A	6	6	0.75	0.75

DC Coupler Plug Types												
Part Number	Cable Quantity	Charging Mode	Cable Section (mm^2)	DC+	DC-	PE	S+	S-	CC1	CC2	A+	A-
PF916	9	Charging mode 4, rated current 80A	16	16	16	25	0.75	0.75	0.75	N/A	4	4
PF935	9	Charging mode 4, rated current 125A	35	35	35	25	0.75	0.75	0.75	N/A	4	4
PF970	9	Charging mode 4, rated current 250A	70	70	70	25	0.75	0.75	0.75	N/A	4	4

DC Coupler Socket Types												
Part Number	Cable Quantity	Charging Mode	Cable Section (mm^2)	DC+	DC-	PE	S+	S-	CC1	CC2	A+	A-
SF916	9	Charging mode 4, rated current 80A （Not Recommanded）	16	16	16	16	0.75	0.75	0.75	0.75	4	4
SF925	9	Charging mode 4, rated current 80A （Recommanded）	25	25	25	16	0.75	0.75	0.75	0.75	4	4
SF935	9	Charging mode 4, rated current 125A	35	35	35	16	0.75	0.75	0.75	0.75	4	4
SF970	9	Charging mode 4, rated current 250A	70	70	70	25	0.75	0.75	0.75	0.75	4	4

Remarks:
1. Cable section & pin installations are according to national standards. Please contact us if an alternative installation is desired.
2. Cable assembly is recommended to be done by Amphenol PCD Shenzhen, for professional and safety reason. Any special request, please contact us.
3. The part numbers shown in this form are only for reference. Please refer to the specific customer drawing for actual part numbers.

Amphenol PCD Shenzhen

Building 21
1st Liao Keng Industrial Zone
Shi Yan Street, Bao An District Shenzhen 518108
China

TTel.: +86 755-8173-8000
Fax: +86 755-8173-8180
Email: inquiry@amphenolpcd.com.cn

www.amphenolpcd.com.cn

Notes:

Amphenol PCD Shenzhen has made every effort to ensure that the information contained in this catalog is accurate at the time of publication. Specifications or information stated in this publication are subject to change without notice.

Amphenol PCD Shenzhen reserves the right to clarify this catalog.