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	Product model	The YGC1372-EV-AS32TD200HC-H receptacle	Edition	A 0.0


YG 1372 AC-DC Integrated Vehicle Inlet Technical Specification

Edit: Kang Jinguo November 19,2021

Review: Yu tong November 19,2021

Approve: Xiang xiaodong November 19,2021

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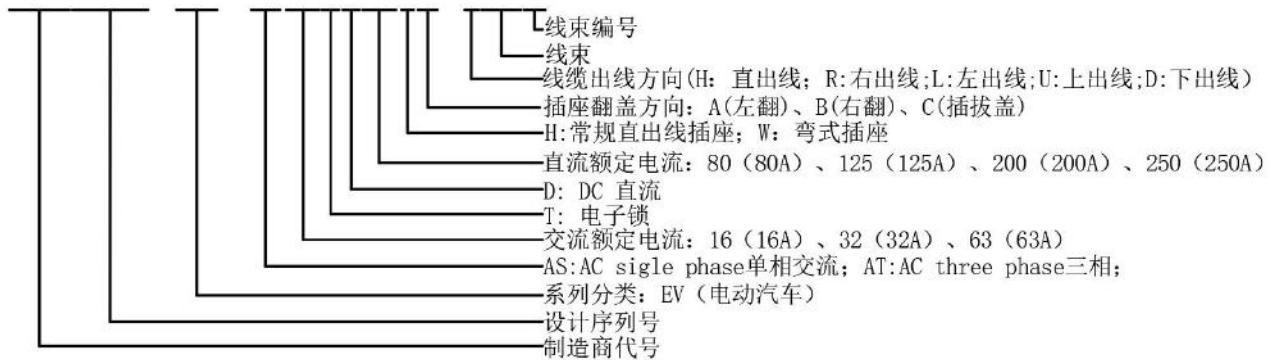
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1. YG1372 AC and DC integrated vehicle inlet naming rules

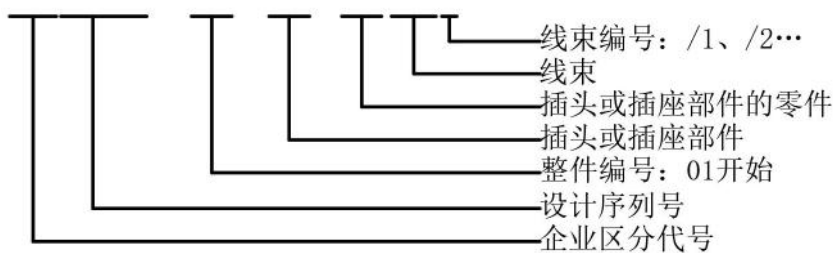
1.1.1. Naming convention

YGC 1372 - EV - AS16TD80HA - HXL 1



1.1.2. Name specification for wire harness product number:

YG1372 - 01 - 00 - 00 XL1




2. YG 762 DC vehicle inlet model details:

No.	Name	Identification of product	Port wiring specification (mm ²)								Ingredients package code	
			DC					AC			DC end	AC end
			DC+ DC-	PE	A+ A-	CC1 CC2	S+ S-	L1 L2 L3	PE	CC CP		
1	The YGC1372-EV-AS32TD200HC-H receptacle	YG 1372-02-00-00	50	25	0.75	0.75	0.75	6	6	0.75	113990000716	113990000734

Adapted cable (DC DC)

No.	Adapt cable specifications	Number of cable core	OD (in: mm)	Standard
1	0.75mm ² Non-shielding	1	Φ1.8±0.1	DIN72551-6/ISO6722
2	25mm ² Non-shielding	1	Φ10.2±0.2	Q/CT1037-2016
3	50mm ² Non-shielding	1	Φ13.5±0.3	Q/CT1037-2016

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Suitable cable (AC AC)

No.	Adapt cable specifications	Number of cable core	OD (in: mm)	Cable according to the standard
1	0.75mm ² Non-shielding	1	Φ1.8±0.1	DIN72551-6/ISO6722
2	6mm ² Non-shielding	1	Φ4.9±0.15	Q/CT1037-2016

Attention

- ★ receptacle body and ingredients package matching order, matching ratio: 1:1;
- ★ The above is the general product model, wiring, please choose according to the line diameter requirements, if there is any customized requirements, please consult our company;
- ★ A + / A- / CC1 / CC2 / S + / S- / CC / CP: 0.75mm²Line when you can use 1mm²replace;
- ★ Cable harness for customized products need to be applied according to the actual specific model, consult our company for details;

3. Technical parameters


3.1 Electrical parameters

DC DC end										
Port definition	DC±				PE	A±	CC1	CC2	S±	
Wiring specification (unit: mm ²)	25	35	50	70	25	0.75~4	0.75	0.75	0.75	
Contact Terminal Diameter (mm)	Φ12				Φ6	Φ3	Φ3	Φ3	Φ3	
Rated Operating Voltage (DC)	750V/1000V				/	0~30V	0~30V	0~30V	0~30V	
Rated Operating Current (DC)	80A	125A	200A	250A	/	2~20A	2A	2A	2A	
contact resistance	≤0.3mΩ				≤0.4mΩ	≤3mΩ				
Insulation resistance	The insulation resistance between any adjacent contact pair and between any contact pair and the enclosure shall be 2000 MΩ, test voltage DC 1000V± 50V; (no required between CC1 and PE)									
Pressure withstand (50Hz, AC normal)	Test after the receptacle is wired: ① Resistance voltage between DC + and DC-3000V AC 1min; ② DC +, DC-and PE, S +, S-, CC1, CC2, A +, A-resistance voltage 1500V AC 1min; ③ PE and S +, S-, CC2, A +, A-resistance voltage 1500V AC 1min; ④ S +, S-, CC2, CC1, A +, A-two mutual voltage resistance of 1500V AC 1min									
AC AC end										
Port definition	L1/L2/L3/N				PE				CC	CP
Wiring specification (unit: mm ²)	2.5	4	6	16	2.5	4	6	16	0.75	0.75
Contact Terminal Diameter (mm)	Φ6				Φ6				Φ3	Φ3
Rated Operating voltage (AC)	250V/440V				/				0~30V	0~30V
Rated Operating current (AC)	16A	16A	32A	63A	/				2A	2A
Contact resistance	≤0.4mΩ				≤0.4mΩ				≤3mΩ	
Insulation resistance	≥500MΩ(1000V AC)									
Pressure withstand (50Hz, AC normal)	Test after the receptacle is wired: ① L1 / L2 / L3 / N / PE resistance voltage 2000V AC 1min; ② L1 / L2 / L3 / N / PE and CC / CP respectively 1500V AC 1min.									

3.2 Mechanical performance parameters

Service life: 10000 times

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Plug and pull force: DC end: 140N; AC end: 100N

Lock-in force: 200N

3.3 Environmental performance parameters

Before insertion: IP54

After insertion: IP55 (head, seat connection position) IP67 (tail of receptacle, please pay attention to avoid tail wiring bending radius <6x cable OD)

Ambient temperature: -30°C ~ + 50°C

Temperature rise: 50K

3.4 Materials

Housing: Engineering plastics (temperature resistant PA66 or temperature resistant PC)

Terminal: copper

Seals: silicone rubber or elastic

Flame retardant grade of insulation materials: UL94 V-0

Environmental protection: meet the ROHS 2.0

3.5. Main implementation standards

GB / T 18487.1-2015 EVs-Part 1: General Requirements


GB / T 20234.1-2015 Connece devices for conductive charging of electric vehicles-Part 1: General Requirements

GB / T 20234.3-2015 Connections for EV Transmission Charging; Part 3: DC Charging Interface

3.6 Function definition of each terminal:

DC		
No.	Terminal identification	Function definition
1	DC+	The DC power supply is positive, and the DC power supply is connected to the battery cathode
2	DC-	The DC power is negative, connect the DC power is negative and the battery is negative
3	PE⊕	Protective ground (PE), connect to the ground wire of the power supply equipment and the vehicle body ground wire
4	S+	Charging communication CAN _ H, connecting the communication line between non-on-board charger and electric vehicle
5	S-	Charging communication CAN _ L, connecting the communication line between the non-on-board charger and the electric vehicle
6	CC1	Charging connection confirmation 1
7	CC2	Charging connection confirmation 2
8	A+	The low-voltage auxiliary power supply is connected to the low-voltage auxiliary power supply provided by the non-on-board charger for electric vehicles
9	A-	Low voltage auxiliary power supply is negative, connected to the low voltage auxiliary power supply provided by non-on-board charger for electric vehicles
10	T1+	The temperature sensor is positive on the right side of the DC power supply
11	T1-	The temperature sensor of the DC side is negative
12	T2+	The negative-side temperature sensor of the DC power supply is positive
13	T2-	The temperature sensor is negative on the negative side
★: The description of the temperature sensor is described below		
AC		

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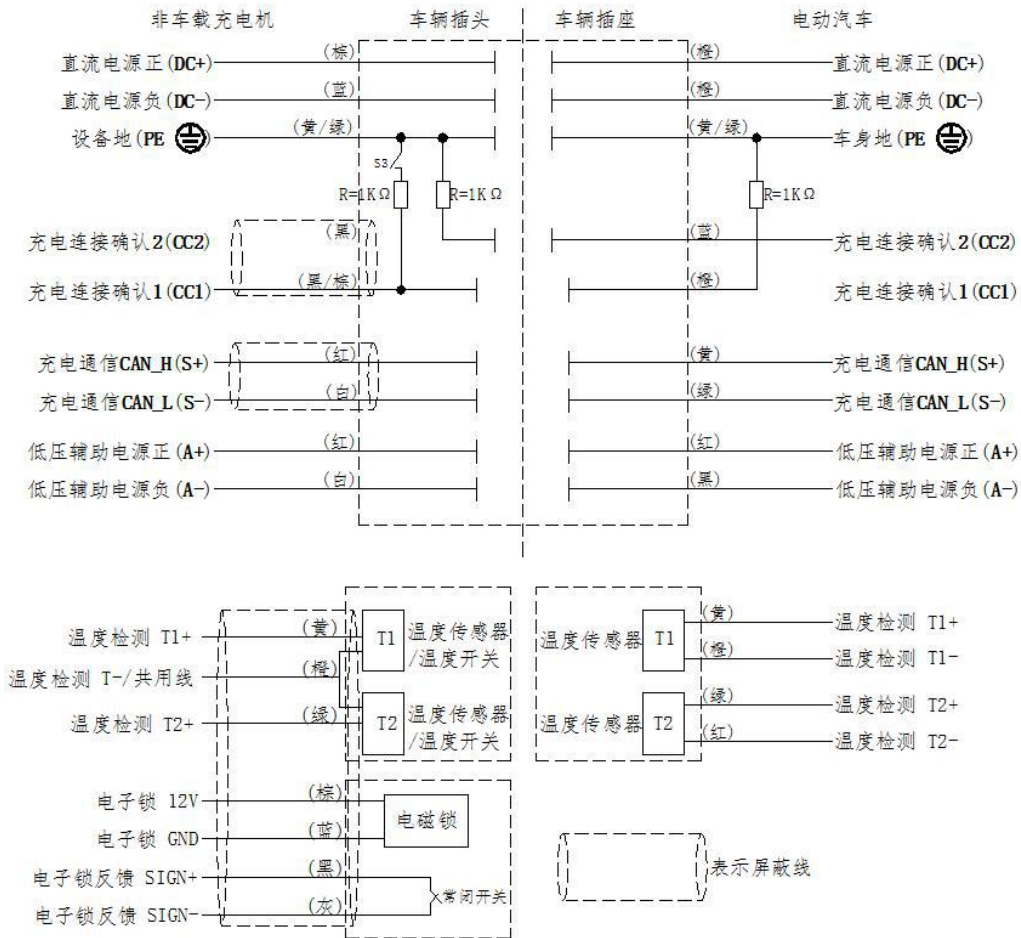
No.	Terminal identification	Function definition
1	L1	AC power supply, Fireline 1
2	L2	AC power supply, Firewire 2
3	L3	AC Power Supply, Firewire 3
4	N	AC power, midline
5	PE⊕	Protective ground (PE), connect to the ground wire of the power supply equipment and the vehicle body ground wire
6	CC	Charging connection confirmation
7	CP	Charging control guidance
8	T1+	L1 (L1 and L2, if L2) side temperature sensor is positive
9	T1-	L1 (L1 and L2, if L2) side temperature sensor is negative
10	T2+	N (N and L3, if L3) side temperature sensor is positive
11	T2-	N (N and L3, if L3) side temperature sensor is negative
★T1-and T2-are available		
14	Electronic lock at 12V	The electronic lock in the vehicle inlet is positive
15	electronic lock GND	Negative electronic lock in the vehicle inlet
16	Electronic lock feedback SIGN +	The electronic lock in the charging gun works (unlock / lock) and the feedback is positive
17	Electronic lock feedback SIGN-	The electronic lock in the charging gun works (unlock / lock) and the feedback is negative
★Electronic lock GND and electronic lock feedback SIGN-available		

4. Electrical schematic diagram:

(DC end)


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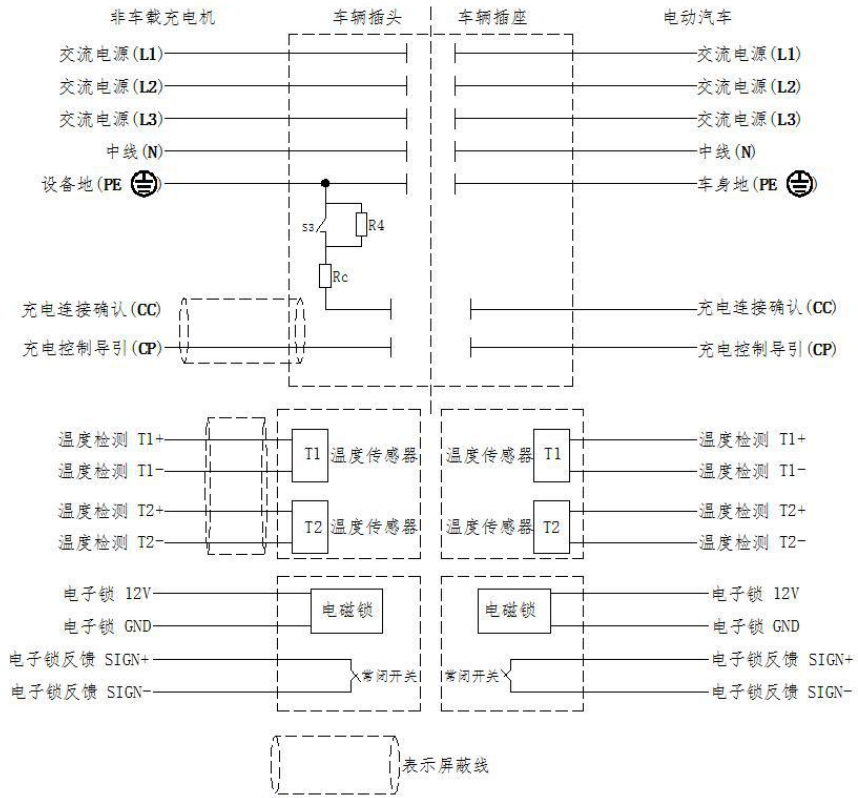
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(AC end)

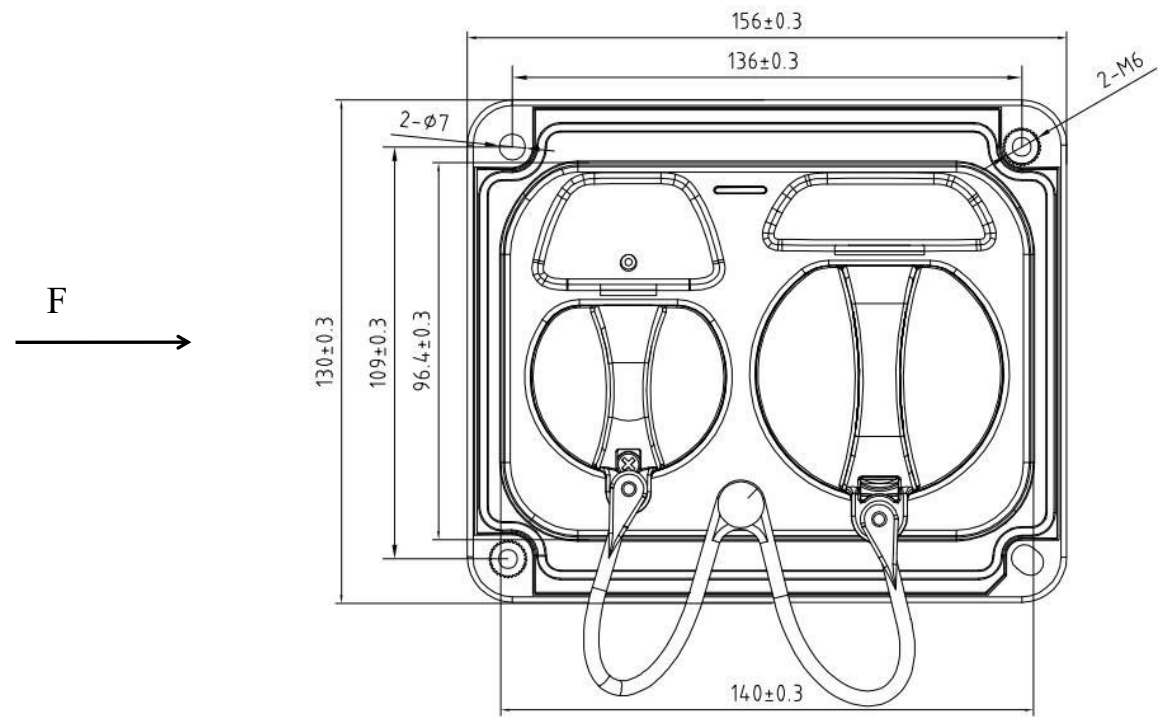
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注意：
1. 供电一侧，仅63A枪及供电插座配温度传感器，根据国标选配；
2. 供电一侧，仅供电插座配电子锁，根据国标选配。

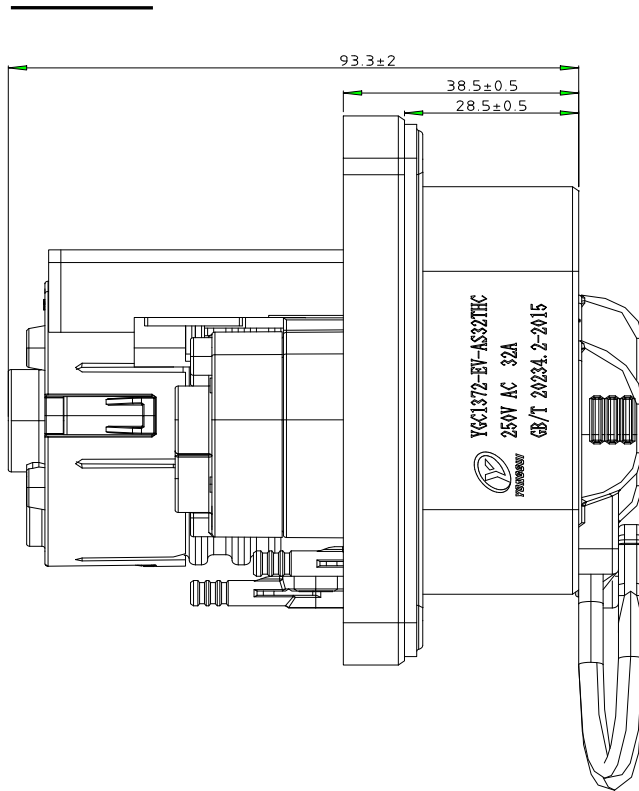
5. Size of YG1372 integrated vehicle inlet:



F

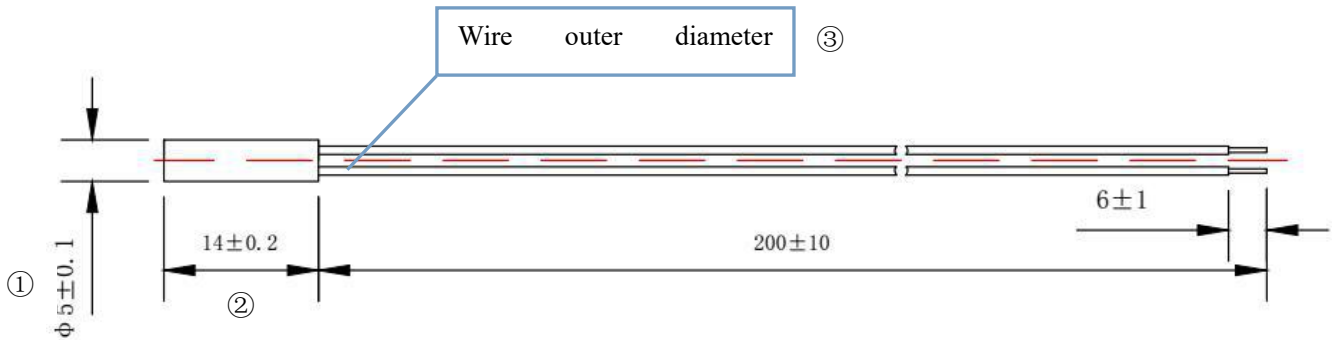
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6 Accessories of vehicle inlet:

6.1 NTC / PT temperature Sensor dimensions:




★Note: ①②③ The dimensions must be required, and the remaining dimensions can be customized

★Recommended MT20.NTC01.L382 200 thermal temperature sensor (501021702657), 4 temperature point resistance values are as follows:

温度	对应阻值	精度
0℃	32.75K Ω	±1.0%
25℃	10.00K Ω	
75℃	1.47K Ω	
100℃	0.67K Ω	

★Recommended MT20 PT1000A LA380 200 PT1000 temperature sensor (501021702658), 4 temperature point resistance values are as follows:

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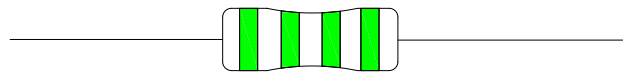
温度	对应阻值	精度
0℃	1000.00 Ω	±0.1%
25℃	1097.34 Ω	
75℃	1289.85 Ω	
100℃	1385.03 Ω	

★ See the specifications for details of the above sensor performance;

★ According to the standard, two sensors are placed in DC + / DC-, and order with the receptacle. The order ratio is 1:2 (receptacle: temperature sensor).

★ In summary, the sensor performance parameters and wiring length can be customized according to the user requirements.

6.21000Ω/1.0W Metal film resistance (pin CMF) (501021701023)



1000Ω / 1.0W 金属膜电阻(引脚CMF)

★ The resistance is placed on the inside of the receptacle, and the ratio of the receptacle is 1:1.

7. Use method and maintenance method of integrated vehicle inlet

7.1 Use method

7.1.1 The receptacle installation mode is installed in front of the panel, and installed on the charging interface of the car body,

Tightening force shall be 6~8N. M, in the process of locking bolts, use cross diagonal lock, to ensure the receptacle black silicone sealant gasket uniform compression;

7.1.2 When the charging interface is not charged, plug the receptacle cover and keep the charging interface clean;

7.1.3 During the car washing process, prohibit the high-pressure water gun to directly charge at the charging interface;


7.1.4 It is forbidden to use sharp tools to pick the internal reed of the metal terminal;

7.1.5 To avoid arc pulling, live plugging is prohibited;

7.1.6 Charging current is controlled within the rated current, and it is recommended to control within 85%~90% of the rated current;

7.1.7 Before charging, make sure the car stops and stops (according to the requirements of the manufacturer) and check the inside of the vehicle inlet (black plastic cavity)

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Whether the body and metal terminal holes) are transferred from foreign bodies, if there are foreign bodies to be cleaned, and then use the charging gun for pre-insertion, if the charging gun can be normally inserted (feel no more than 14 kg force), in addition, the charging interface needs to detect whether the water phenomenon, to ensure the normal plugging and no water before charging;

7.1.8 During the charging process, turn on the temperature sensing and detection function of the BMS DC vehicle inlet;

7.1.9 After charging, close the receptacle cover.

7.2 Maintenance method

7.2.1 When the charging gun is inserted and stuck, check whether there is any foreign body drilling in the receptacle hole, and if there is no foreign body after inspection

Normal plug and pull, contact the manufacturer for processing;

7.2.2 When reporting the insulation fault, first ensure that the battery service switch is disconnected, and close the main gate of the car body circuit system when necessary;

Check and check whether the receptacle is leaking. If there is water leakage, use the multimeter to detect the insulation resistance between the terminals (except between PE and CC1), the resistance value of 2000M Ω is normal, otherwise contact the manufacturer for treatment;

7.2.3 In case of abnormal charging connection, first make sure that the battery service switch is disconnected, and close the car body circuit system if necessary

For the total gate, detect the resistance value between PE and CC1, if the resistance value is 1000 + / -30 Ω is normal, otherwise contact


Manufacturer processing;

7.2.4 Wipe and clean the charging interface with alcohol, especially the metal jack inside the receptacle;

8.YG1372 AC-DC integrated vehicle inlet

DC end				
Announcement logo	temperature control device	Electromagnetic lock device	Strong inspection report number	CQC report number
YGC1372-EV-D250HC	have	not have	QA21EE1X57611 QA21EG1X57611	/
YGC1372-EV-D200HC	have	not have	QA21EE1X57611 QA21EG1X57611	/
YGC1372-EV-D 125HC	have	not have	QA21EE1X57611 QA21EG1X57611	/

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AC end				
Announcement logo	temperature control device	Electromagnetic lock device	Strong inspection report number	CQC report number
YGC1372-EV-AS32THC	have	have	QA21EE1X56671 QA21EF1X56671	/
YGC1372-EV-AS16THC	have	have	QA21EE1X56671 QA21EF1X56671	/

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