

Charging Piles for Electric Vehicles

DC Contactor	Group A DC+ contactor adhesion	Contactor contacts do not open properly	1.Manual reset after power failure 2.Replacement of DC contactor
	Group A DC - contactor adhesion		
	Group B DC+ contactor adhesion		
	Group B DC - contactor adhesion		
	Group X DC+ contactor adhesion		
	Group X DC - contactor adhesion		
	Group Y DC+ contactor adhesion		
	Group Y DC - contactor adhesion		
	Group Z DC+ contactor adhesion		
	Group Z DC - contactor adhesion		
AC/DC Power Module	Module failure (red indicator)	Power module hardware damage or internal logic failure	1.Power Failure Restart Module 2.Check module indicator status 3.Replacement of faulty module
	Module protection (yellow indicator)	Overcurrent/overheat/short-circuit protection mechanism trigger	1.Check for load overload 2.Check the cooling system 3.Troubleshooting short-circuit points
	Internal SCI comm failure	Poor contact or abnormal protocol of internal communication interface	1.Check communication line connections 2.Replacing the module's internal communication board 3.Upgrade Firmware
	Input mode detection error	Wrong type of input power (e.g. wrong 3-phase/single-phase connection) or loose wiring	1.Check input power wiring 2.Verify the device input mode configuration
	Mode mismatch	Conflict between the command issued by the master unit and the module state	1.Re-issuance of control commands 2.Check module operating status 3.Contact the manufacturer for software upgrades
	DCDC overvoltage	Voltage at DCDC output exceeds safety thresholds	1.Check for load anomalies 2.Measuring Output Voltage 3.Replacement of DCDC control board
	PFC voltage anomaly	PFC circuit input voltage unbalance/ overvoltage/undervoltage	1.Detecting grid voltage quality 2.Check PFC circuit components 3.Replacement of PFC module
	AC overvoltage	Input AC voltage exceeds the permissible range	1.Use a multimeter to check the input voltage 2.Installation of voltage stabilizers
	AC undervoltage	Input AC voltage below minimum operating voltage	1.Checking the status of power supply to the grid 2.Detection of input line impedance 3.Check circuit breaker status
	CAN communication failure	CAN bus disconnection/defective termination resistor/electromagnetic interference	1.Check CAN cable connection 2.Measuring Bus Impedance 3.Increased shielding

Charging Piles for Electric Vehicles

AC/DC Power Module	Module current imbalance	Excessive difference in output current between parallel modules	1.Check module parameter consistency 2.Calibrated equalization function 3.Replacement of abnormal modules
	DCDC shutdown status	Status indication (non-fault)	1.Confirm that the current operating mode of the DCDC is normal
	Power limit	System actively limits output power	1.Check parameters such as temperature/voltage 2.Reduced load requirements
	Thermal derating	Module over-temperature trigger protection	1.Cleaning the cooling channels 2.Check fan operation status 3.Improvement of environmental ventilation
	AC power limit	Input AC power exceeds set threshold	1.Checking grid capacity 2.Adjusting the power allocation strategy
	Fan failure	Cooling fan stops or rotates abnormally	1.Clean the fan dust 2.Replace damaged fan 3.Check the drive circuit
	DCDC short circuit	DCDC output shorted	1.Immediate power failure. 2.Check output line insulation 3.Replacement of short-circuited components
	DCDC overtemperature	DCDC radiator temperature exceeds safe value	1.Use a multimeter to check the input voltage 2.Installation of voltage stabilizers
	AC undervoltage	Input AC voltage below minimum operating voltage	1.Check the status of thermal grease 2.Enhanced cooling system 3.Reduced output power
	DCDC output overvoltage	DCDC output voltage exceeds maximum allowable value	1.Checking the feedback loop 2.Replacement of voltage sampling resistor 3.Repairing control circuits

Notes:

- If the above fault information occurs simultaneously in a large number of devices, it is highly likely to be a firmware error, and technical personnel need to be contacted to upgrade the pile
- Please pay attention to high voltage when dealing with the above related troubleshooting, and try to complete it under the guidance of professionals.

9 Maintenance

9.1 General Maintenance

- Please keep charger in a ventilated location and do not block the air vents of the Charging Station.
- Please clean the air filters once every six months, and replace the air filter when the dust is too thick to clean (about once every 5 years) to ensure the Charging Station works properly.
- Check the cooling system once every year, and replenish it in time when the coolant is too low (press 9.3), check the liquid cooling lines and interfaces, if coolant leaks, contact the manufacturer.
- The housing was made of welding process and surface painting. It is necessary to keep the exterior clean all the time. It's easy to get rusty if not keeping the exterior clean especially in corrosion sensitive environment.
- Slightly rusty will not affect charger performance, but if charger is serious rusty during or exceed the warranty period, please contact manufacturer for instruction.
- Clean the Charging Station at least three times a year, keep the exterior clean at all times.
- Clean the outside of the cabinet with damp cloth or wet cotton towel, only use low-pressure tap water and cleaning agents with PH level between 6 to 8.
- Do not use cleaning agents with abrasive components and do not use abrasive tools. Improper cleaning agents might spoil coating, painting, surface, brightness and durability of all exterior parts.
- If there is water intruding into the Charging Station then please cut off the power source immediately and contact the manufacturer for repair.
- Please make sure the charging connector is returned to the holder of the charging connector after charging to prevent damage.
- If there is damage to the charging connector, charging cable or holder of the charging connector then please contact the manufacturer.
- When using the Charging Station, please handle properly.
- Do not strike or scrape the cabinet or screen.
- If the enclosure or screen is broken, cracked, or shows any other indication of damage, please contact the manufacturer.



WARNING: In the process of installation, maintenance, and disassembly, clean up the outflow coolant and cleaning liquid containing detergent. Do not allow it to contaminate the soil and dispose of it properly.

NOTE:

- Maintenance of the Charging Station shall be conducted only by a qualified technician.
- Before switching off main breaker to begin maintenance, please record the status code number on the LCD monitor.
- After the cooling system stops working, the residual high temperature and high pressure in the pipes may cause damage to maintenance personnel.
- After maintenance, door opened or NFB of charger turned off the charger is still hazardous. Only visual inspection can be operated.

Charging Piles for Electric Vehicles

- After opening the front door of the Charging Station, turn off the main breaker and auxiliary breaker before any maintenance work.
- Please confirm the main power junctions are tightened every month, and rotate cables testing when the power off, If any main power screw is loose will be resulted in damage on charger or smoke on the connections.
- Please confirm screw torque requirement table.
- Charging cable maintenance: Do not twist, bend the charging cable. The metal contact should not fade or be rusty.
- Please provide the EVSE information including serial number, model name, status code, failure behavior and timing, and also connect the EVSE to the Internet before remote diagnostics and upgrading

Screw Torque requirement table

Screw in Metric						
Screw size	Screw type	Steel Inch-Lbs.	Steel Kgf-Cm	Steel N-m	Aluminum Kgf-Cm	Aluminum N-m
M2*0.4	Machine	3~4.77	3.5~5.5	0.34~0.54	3~4.5	0.34~0.44
M2.5*0.45	Machine	3~4.77	3.5~5.5	0.34~0.54	3~4.5	0.34~0.44
M3*0.5	Machine	5.5~9	6.5~10.5	0.64~1.04	5.2~8.4	0.51~0.82
M3.5*0.6	Machine	8.5~13	10~15	0.98~1.47	8~12	0.78~1.18
M4*0.7	Machine	13~18	15~21	1.47~2.06	12~17	1.18~1.66
M5*0.8	Machine	25~34	29~39	2.84~3.82	23~32	2.26~3.14
M6*1.0	Machine	45~55	52~63.5	5.1~6.22	42~51	4.11~5
M6*1.0	Hex cap	85~112	98~129	9.6~12.65	78~103	7.65~10.1
M8*1.25	Machine	106~141	122~163	11.96~15.98	98~130	9.61~12.75
M8*1.25	Hex cap	205~274	237~316	23.24~30.98	190~253	18.63~24.8
M10*1.5	Hex cap	212~382	245~440	24.02~43.15	196~351	19.22~34.42
M12*1.75	Hex cap	372~668	430~770	42.17~75.49	343~615	33.63~60.3
Screw in Imperial						
2-56	Machine	1.5~2	1.7~2.3	0.17~0.22	1.4~1.8	0.14~0.18
4-40	Machine	3~4	3.5~4.5	0.34~0.44	2.8~3.6	0.27~0.35
6-32	Machine	6~10	7~11.5	0.68~1.13	5.6~9.2	0.55~0.9
8-32	Machine	10~15	11.5~17	1.13~1.66	9.2~14	0.9~1.37
10-32	Machine	16~24	18.5~28	1.81~2.74	15~22	1.47~2.16
1/4-20	Machine	35~46	40~53	3.92~5.2	32~42	3.14~4.11
1/4-20	Hex cap	57~77	66~89	6.47~8.73	53~71	5.2~6.96
5/16-18	Hex cap	119~158	137~182	13.43~17.85	110~145	10.77~14.21
3/8-16	Hex cap	205~274	237~316	23.24~30.99	190~253	18.63~24.82
7/16-14	Hex cap	338~451	390~521	38.24~51.09	312~416	30.59~40.79
1/2-13	Hex cap	515~686	595~792	58.35~77.66	476~634	46.68~62.17

9.2 Air Filter Cleaning Method

Clean the filter behind the front door

			
1.After confirming that the power is disconnected, open the front doorway.	2.Remove the top, left and right side screws with a socket screwdriver. Remove the metal protective cover.	3.Remove dust from the fan with a hair dryer or vacuum cleaner. (It is not necessary to disassemble the fan for routine maintenance; it is necessary to disassemble the fan to clean it after a long period of use when the dust is too thick to be removed by a hair dryer machine.)	4.Put the metal protective cover back in place and tighten the screws.

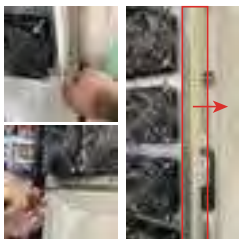
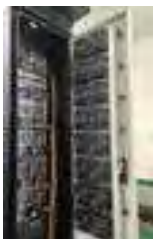
Clean the filters on the front of the unit on the lower left and lower right sides.

		
1.Use a screwdriver to loosen the screws on the pressure bar (no need to remove the bar) and remove the filter.	2.Remove dust from the filter with a hair dryer or vacuum cleaner. You can also gently pat the filter.	3.Put the cleaned filter back in place, install the pressure bar and tighten the screws.

Clean the left side air filter

				
1.Open the left door.	2.Remove the screws with a socket screwdriver, remove the pressure strip and take out the filter.	3.Remove dust from the filter with a hair dryer or vacuum cleaner. You can also gently pat the filter.	4.Put the cleaned filter back on and secure the filter with the press and screws.	5.Remove dust from the module fan with a hair dryer or vacuum cleaner.

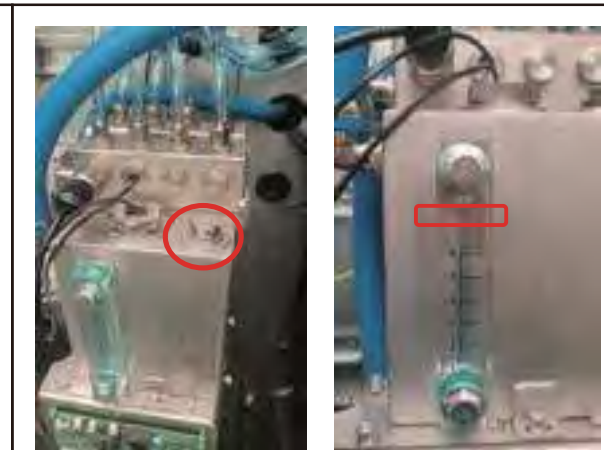
Clean the Right side air filter

				
1.Open the right door.	2.Loosen the top and bottom screws halfway with a socket screwdriver (you don't need to take them out) Remove the right side screw with a Phillips screwdriver. Remove the right side cover plate.	3.Remove dust from the filter with a hair dryer or vacuum cleaner. You can also gently pat the filter.	4.Put the cleaned filter back on, paying attention to the front and back sides (the side with the cushioning foam faces the outside of the body through the mesh holes).	5.Put the cover plate back in place and tighten the top, bottom and right side screws.

9.3 Refill Coolant

The alarm level scale of the cooling system is 4~5. When the coolant level is in this area, the system will give an alarm. When the liquid level is lower than 4, the system will reduce the charging current to the maximum current value allowed by the non-liquid cooling cable. Refill the coolant to the highest scale before the liquid level enters the alarm (scale 5).

Recommended to replenish the same coolant: FUCHS BluEV TF 8025

	
1.Keep the charging pile powered on, disconnect the power switch of the cooling system, and confirm that the temperature of the liquid cooling system pipeline has dropped and the residual pressure has been eliminated.	2.Remove the air filter, Add the coolant with a funnel until it is full, and then tighten the air filter. Closing the cooling system power switch , charging pile can charge normally.

9.4 Replacement Kits and Accessories

The DC EVSE offers the following replacement kits and accessories.

Replacement Kit List	
10-inch LCD	Relay board
CCS1/NACS DC charging connector & Charging cable	Fan board
Charging Cable Holder	LED board
Emergency Stop Button	4G/Wi-Fi board
40kW DC PSU UXR100040G	DC Relay
MW Aux Power WDR-120-12V	AC Contactor
MW Aux Power TDR-960-24V	NFB &RCD
Control & Supervisory Unit (CSU3、 0)	Cable Management
Surge Protection Device (SPD)	Liquid Cooling System
DC Fan	Credit Card Terminal
Air Filters	RFID Scanner
Door Key	Speaker
Antenna	Service Socket

10. Instruction of Packing, Handing, Transportation and Storage

Package:

Weight	1100Kg
Dimensions	1300*1140*2530mm

- The transportation can be by car, vessel and aircraft.
- During transportation, please pay attention to sunscreen and civilized loading and unloading, avoiding violent vibration and impact, etc.
- Products should be stored in Class I environment and stored for more than 6 months are recommended to be re-tested and can only be used if they are qualified.

11. Limited Product Warranty

The warranty period of this charger is according to purchasing contract, two years typically.

Any spare parts provided by Supplier and used as replacements for repair are covered by a two-year guarantee. Replacement and repair parts manufactured by alternative manufacturers to those on the maintenance parts are only allowed if authorized by Supplier.

The housing was made of welding process and surface painting. It is necessary to keep the exterior clean all the time. It's easy to get rusty if not keeping the exterior clean especially in corrosion sensitive environment. Slightly rusty will not affect charger performance, but if charger is serious rusty during or exceed the warranty period, please contact local vendor for instruction.

Warranty Exclusions:

- Damage or rendered non-functional as a result of power surges, lighting, earthquake, fire, flood, pest damage, abuse, accident, misuse, negligence or failure to maintain the product or other event beyond Supplier's reasonable control or not arising from normal operating condition.
- Cosmetic or superficial defect, dents, marks or scratches after use.
- Components which are separate from the product, ancillary equipment and consumables, such as door key, RFID card, air filter, fuse, cable, wires, and connectors.
- Damage as a result of modifications, alterations, or disassembling that were not pre-authorized in writing by the Supplier
- Damage due to the failure to observe the applicable safety regulations governing the proper use of the product.
- Installed or operated not in strict conformance with the documentation, including without limitation, not ensuring sufficient ventilation for the product as described in the Supplier installation instruction.

If a defect in the product arises and a valid claim is received within the warranty period, your sole and exclusive remedy will be for Supplier, at its sole discretion and to extent permitted by law, to

- Repair the defect in the product at no charge, using new or refurbished parts.
- Exchange the product with a new or refurbished product that is functionally equivalent to the original product.

Any remedy hardware product will be warranted for the remainder of the original warranty period or 90 days from delivery to the customer, whichever is longer.

To receive the remedy, set for above, you must contact the Supplier during the warranty period and provide the model number, series number, proof of purchase, and date of purchase.

This warranty does not cover the damages caused by adapter usage accidents or by other unauthorized operations/services.

认证完成后打认证logo



Name of Manufacturer: SHENZHEN HB ELECTRONIC CO., LTD

Address : Floor 301, Bldg 21, Zhengdaan Industrial Park, 172 Xiangshan Rd,
Luotian Village Yanluo Town, Baoan District Shenzhen City 518105, China