



40KW DC Charging

User Guide



Model:
EVD-40D

Please read this manual carefully prior
to your use of your EV Charger.

Copyright Notice



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ATESS Power Technology has the final interpretation of this user manual. The product specification may be updated from time to time and is subject to change without prior notice!

Thank you for choosing Project EV Charging Equipment

ATESS EVD series intelligent DC charging equipment is a device that provides high-efficiency, safe and stable DC power supply for electric vehicles, which has a friendly man-machine interface and integrates corresponding functions of control, billing, communication and security protection. The mode charging equipment uses OCPP 1.6JSON open protocol for communication with back-office server, thus to realize functions such as reservation and network payment via mobile APP.

Diversified communication options, including wired Ethernet, WIFI, 4G wireless, are provided for customers to conveniently connect the device to a charging network.

We sincerely hope that this product can meet your needs, and we welcome and value your feedback and suggestions on the performance and function of the product. We will continuously improve the quality of our products and services.

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Product Description



- | | |
|-------------------|--------------------------|
| 1. Screen | 5. WIFI/4G Antenna |
| 2. Lead Holder | 6. Air Outlet |
| 3. RFID Reader | 7. Mounting Bracket |
| 4. LED Indicators | 8. Emergency Stop Button |
| | 9. Lead Holder |

LED Sequence

Blue - Standby

(The charging equipment can only be used when the blue light is lit)

Red - Steady on/flashing

(Fault)

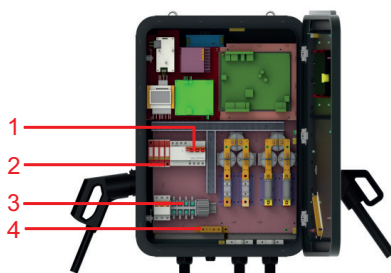
Green - Steady on

(Charging in process)

Green Flashing - Establishing Communication

Yellow Flashing - System Initialising

Internal view and terminal definition



1. AC input RCBO
2. SPD
3. AC input terminal block. Terminal Definition is (① L2; ② L2; ③ L3; ④ N; ⑤ E) from right to left.
4. Earth Terminal



**AC Surge
Protection Device**

Note: The charging equipment will detect the current status of the surge protection module in real time. When the surge protection module is damaged, the display will have an alarm indicating that the surge protection device is faulty. When repairing and replacing the surge protection module, the left side cover must be removed first. Then the maintenance person can operate the breaker in the surge protection circuit and replace the surge protection module.

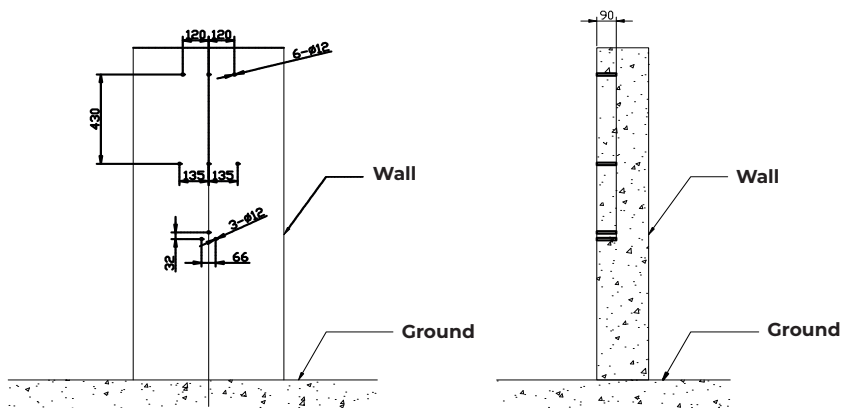
(The red circle in the figure is the surge protection. When the indication window indicates green, the surge protection module is normal; when the indication window indicates red, the surge protection module has been broken and damaged, and the surge protection module needs to be replaced.)

Item	Quantity	Remark
Mode Charging Equipment	1	
User Manual	1	
Certificate of Quality	1	
Mounting Bracket	1	Already installed on the rear side of the charging equipment
Cable Hooker	2	
Hex Head expansion bolt, M8*80/304 stainless steel	12	

Installation and Wiring

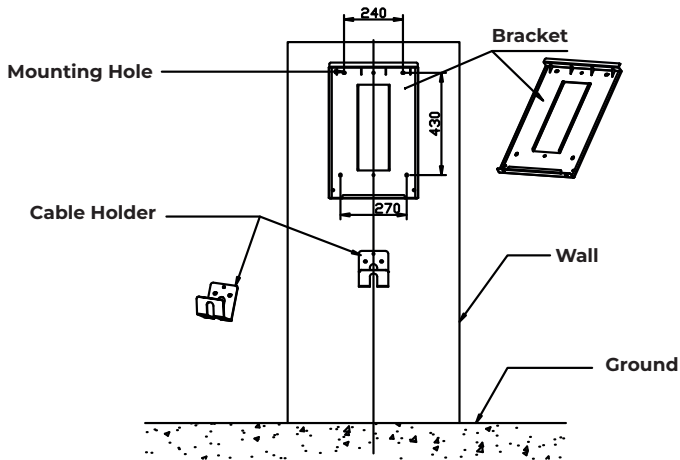
1. Firstly, according to regulation BS7671 18th Edition, the screen should be 1.2m-1.4m from the ground. Ensure you isolate the supply in the distribution panel before repairing or maintaining the charger.

According to the dimensions in the following drawings, drill 4 holes for bracket mounting and 3 holes for holder mounting on the wall. Take out the expansion bolts in the packing accessory bag, screw the expansion bolts into the holes. Remove the nuts and washers for later use.



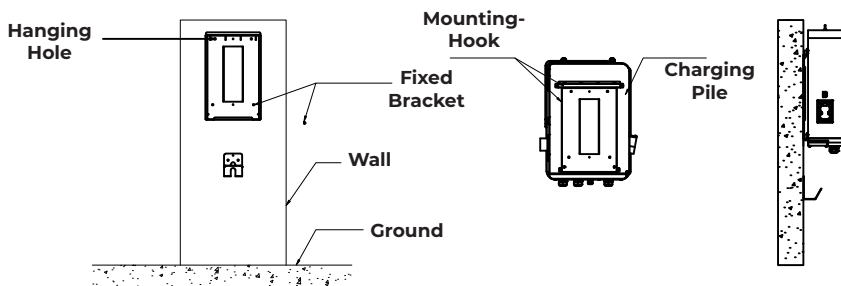
Drill holes into the wall

2. Loosen the 2 screws at the bottom of the charging equipment that fixes the mounting bracket. Keep them safe for later use. Place the mounting bracket onto the bolts and screw the nuts and washers on. Take out the cable hook and fix it using the same procedure.








Mount the bracket and cable holder

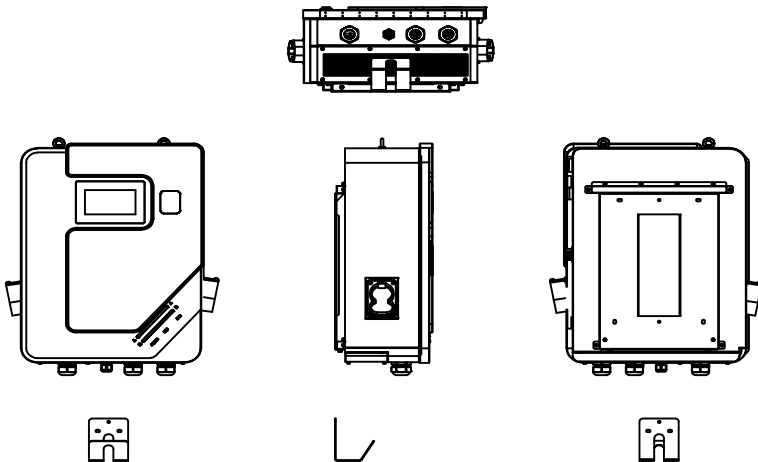
3. After the mounting bracket and cable hook holder are fixed, place the charging equipment onto the mounting bracket, with the outward curved part inserted to the slot on the rear side of the charging equipment. Lock the charging equipment onto the bracket at the bottom using the two screws. The installation process is then complete.



Insert the hanging hooks of the charging unit into the hanging holes and install in place

4. Using a suitable cable, we suggest you use a 5-core cable(with CPC included). For your convenience, a cable gland is provided. Unlock the unit, and open the door. Connect the cables into the terminal block, through the cable gland on the bottom right-hand side and secure them. (If hard wiring your internet connection, connect the network cable through the second cable gland to the RJ45 socket and tighten glads accordingly). Ensure all internal wiring is secure and correct, and all breaker positions are on, then close and lock the unit. The wiring is now complete.

	L1	L2	L3	N	Earth
Terminal					



Notice

1. Final connections should only be undertaken by skilled persons. Connect the AC input wires in correct phase order according to the markings on the terminal block.
2. The CPC terminal must be connected securely.
3. No live work. Ensure the supply to the charger is isolated in the distribution

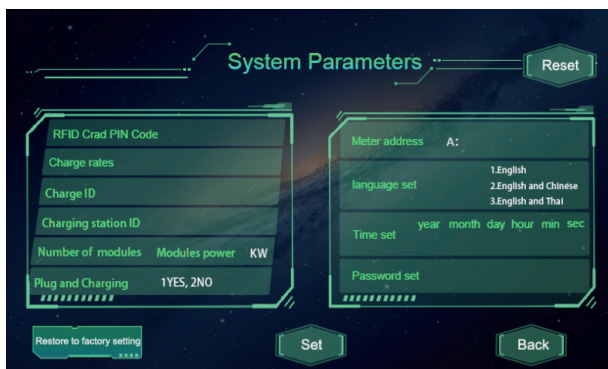
Parameter Configuration



After the charger is installed and connected, the charging equipment must be configured according to the actual needs of the user. Home page configured through the LCD touch screen. Save the changes, exit the menu before using the charging equipment as normal.



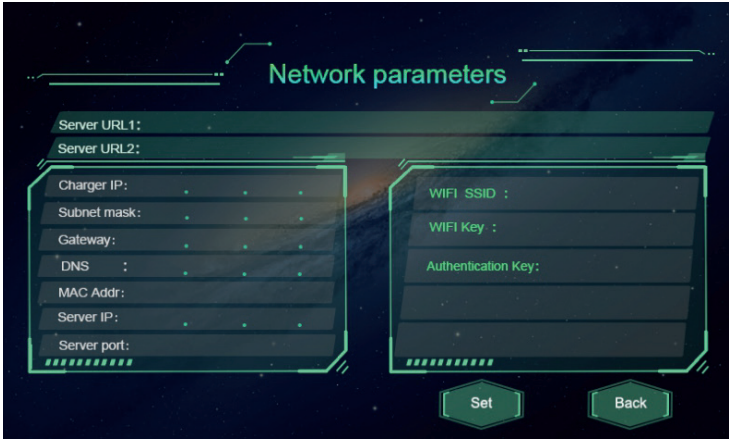
System Management Page



No	Parameters	Function Description
1	RFID Card PIN Code	PIN code setting of RFID reader, a 6-digit code, the default setting is 242007. It must be the same with the PIN code of user card. Users can also use other PIN code if they have card writer to change PIN code of user card.
2	Tariff Rate	Charging tariff setting, used to set the price per kWh.
3	Charge ID	Charger ID - It is suggested to use serial number as charger ID.
4	Charging Station ID	Identification number of charging station. (one charging station may consist of multiple charging equipment).
5	Number of power modules	Number of power modules inside the mode 4 charging equipment.
6	Modules Power	Rated power setting of power module
7	Plug and Charging	Charging mode setting. 1 is Plug&charge mode, payment is not needed; 2 is APP or RFID mode.
8	Meter Address	DC meter's modbus address(already preset in factory. Settings should not be changed)
9	Language Set	Language setting. Currently support English and French dual language display.
10	Time Set	System time setting. Format is Y, M, D, H, M, S. The Year setting can only set the last 2 digits, e.g. use 19 for 2019.
11	Password Set	Password of management page. It's a 4-digit fixed length password, default is "1234".

Network Parameters

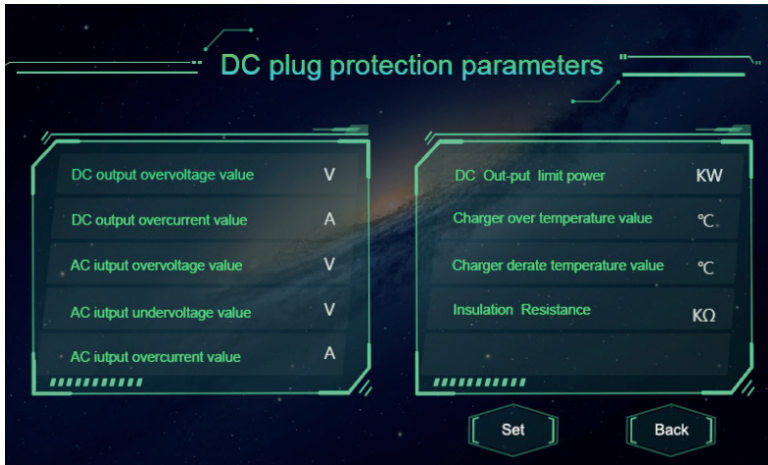
Network parameters need to be configured when the charging station needs to be connected to back office server, for operation and management. Network parameters include server parameters, and change parameters. The charging equipment can support LAN connection, WIFI and 4G.



No	Parameters	Function Description
1	Server URL 1	Server address setting, used to set domain or IP address of back-office server.
2	Server URL 2	Address of backup server. This parameter is not available now, reserved for future use.
3	Charger IP	IP setting of the charging equipment
4	Subnet mask	Subnet mask setting
5	Gateway	Gateway setting
6	DNS	DNS server address
7	MAC Address	MAC address
8	Server IP	Server IP address
9	Server Port	Server port number
10	WIFI SSID	WIFI SSID setting, to set the name of the wireless network to which the charging equipment is to be connected. A reserved function for future use
11	WIFI Key	WIFI password setting. A reserved function for future use
12	Authentication Key	OCPP login authentication setting

Protection Parameters

The protection-related parameters - Including voltage, current and temperature.



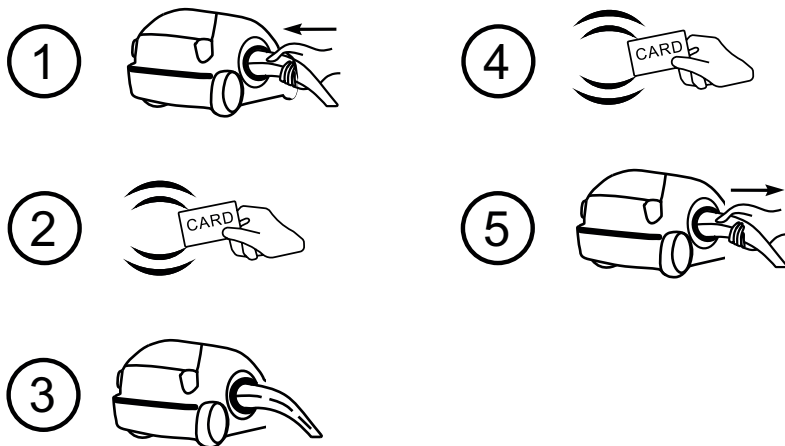
No	Parameters	Function Description
1	DC Output overvoltage value	Over voltage limit setting of DC output
2	DC output overcurrent value	Over current limit setting of DC output
3	AC input overvoltage value	Over voltage limit setting of AC input
4	AC input undervoltage value	Under voltage limit setting of AC input
5	AC input overcurrent value	Over current limit setting of AC input
6	DC output limit power	Power limitation setting of DC output
7	Charger over temperature value	Over temperature limit setting of charging connector
8	Charger derate temperature value	Charging connector's temperature at which the charging equipment starts decreasing output power
9	Insulation Resistance	The minimum value of insulation resistance

Operation Instruction and LCD Introduction

Charging mode and operation

APP/RFID Mode:

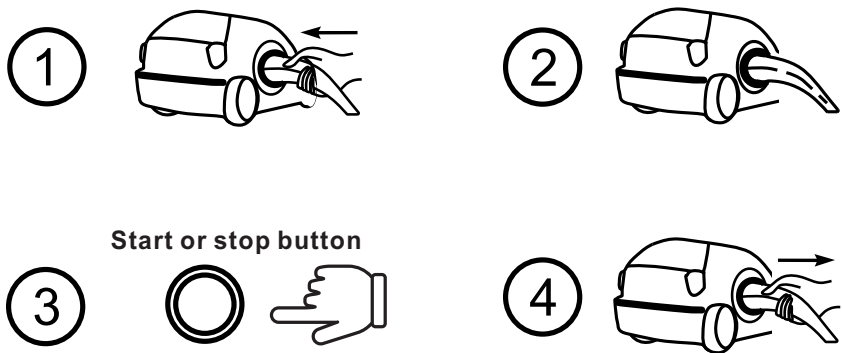
Initiate or cease charging by scanning QR code using APP or by swiping RFID card. You can also use APP for reservation and payment provided that the back-office server supports such function.



APP/RFID Mode operation process flow

Plug and Charge Mode:

Charging will start automatically after EV vehicle plugged into charger. If you want to stop the charging, just press the stop icon on the screen.



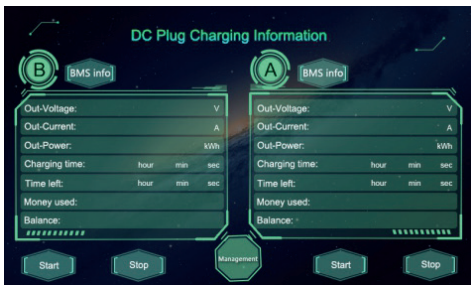
Plug & Charge mode operation process flow

LCD Interface Introduction

The charging equipment is equipped with a 4.3 inch screen. The content is displayed as below:



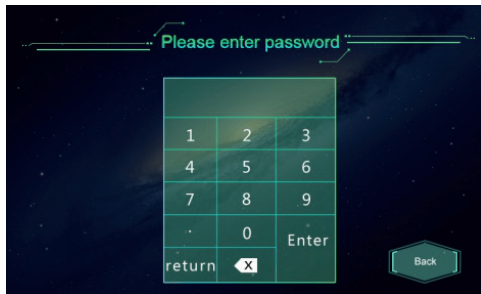
When powered up, the charging equipment will show this display.



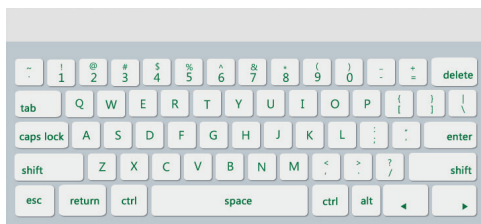
Charging information, which will show the status of the charging equipment, such as standby, charging and fault.



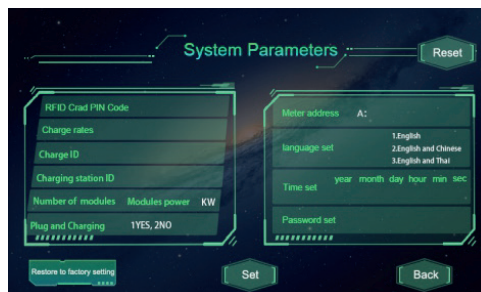
Management page, user can set different kinds of parameters here. Password authentication is required when entering each parameter setting page.



Password window. Before entering numerics, please first press the blank bar above the keypad, before following the instruction below.



Using the keyboard that appears, you can type in the 4- digit password. A wrong password will cause no response and action.



System parameters page

Network parameters

Server URL 1:
Server URL 2:

Charger IP:	x x x x
Subnet mask:	x x x x
Gateway:	x x x x
DNS :	x x x x
MAC Addr:	x x x x
Server IP:	x x x x
Server port:	#####

WiFi SSID :	
WiFi Key :	
Authentication Key:	
	#####

Set Back

Network parameters page, used to set network related parameters of back-office server and the charging equipment.

DC plug protection parameters

DC output overvoltage value	V
DC output overcurrent value	A
AC input overvoltage value	V
AC input undervoltage value	V
AC input overcurrent value	A
	#####

DC Output limit power	KW
Charger over temperature value	°C
Charger derate temperature value	°C
Insulation Resistance	KΩ
	#####

Set Back

Protection parameters page of DC output, used to set limit value of voltage, current, power and temperature.

Fault Details

Page 1 / 1 Clear All Fault Record

ID	Time	Detailed description

Previous Next Back

Fault record page - User can check history of faults here.

Charge Record

Page 1 / 1 Clear All Charge Record

ID	Start Time	End Time	Electricity (kwh)	Prices (kwh/kwh)	Money (kwh)	Stop Reason

Previous Next Back

Charging record page

Fault Codes

The table below outlines the type of faults which may appear on your EV charger.

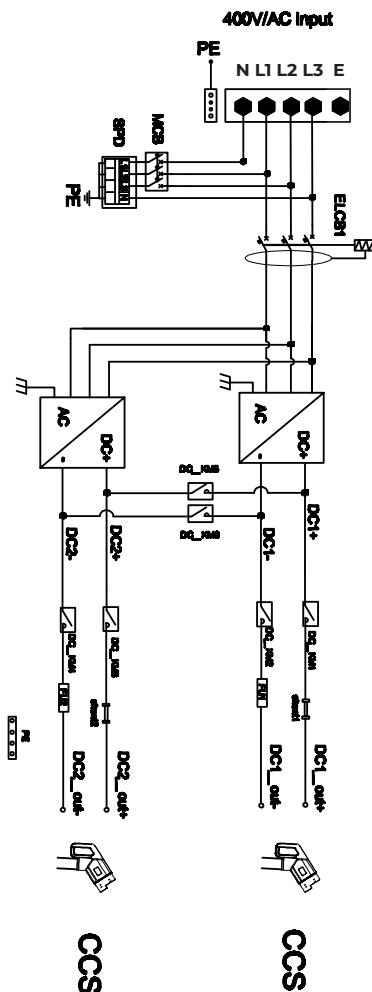
No.	Fault Description
1	Emergency stop is activated
2	RFID Communication fault
3	Over temperature fault
4	Surge protection fault
5	Power module communication fault
6	Meter communication fault
7	DC output overvoltage fault
8	DC output overcurrent fault
9	BMS communication timeout
10	Insulation detection timeout
11	Insulation detection fault
12	Polarity
13	DC+ Contactor fault
14	DC- Contactor fault
15	Charge Lead disconnection fault
16	Plug head connection over temperature fault
17	AC contactor fault
18	AC input overvoltage
19	AC input undervoltage
20	BMS communication fault

Model	EVD-40D-P
Dimension (mm)	775*556*270 (WD*H)
Weight (KG)	80KG
Display	LCD
Casing Material	Stainless steel & acrylic sheet
AC Input	
Grid Connection	400V, 3 phase 5 wires
Voltage	AC 320~475V
Current	63A
Frequency	45~65Hz
DC Output	
Plug Type	CCS
Voltage	DC150~750V
Current	0-100A
Voltage-stabalizing Accuracy	$\leq \pm 0.5\%$
Current-stabilizing Accuracy	$\leq \pm 1\%$ (at 20%~100% of rated power)
Power Factor	≥ 0.95 @20%~50% of full load output power $\leq \pm 1\%$ (at 20%~100% of rated power) ≥ 0.98 @50%~100% of full load output power ≥ 0.99 @100% full load output power, rated input voltage and frequency
Efficiency	$\geq 95.2\%$, @ 750V, 50%~100% of rated current and rated input voltage
IP Degree	IP54
Working Environment	-25 ° c~+50 ° c, derate since 50
Relative Humidity	5%-95%
Altitude	$\leq 2000\text{m}$, derate for higher than 2000m
Cooling Method	Forced air cooling
Remote Monitoring	Ethernet/WIFI/4G/485/232
Payment	RFID/APP
Standby Power	35W
Standards	IEC-62196-1;IEC-62196-3;
Mounting	Wall or Pole
Certificate	CE/UKCA
Metering Accuracy	0.5

Protection Features	
Low and high trip limit of AC input voltage	Adjustable within 260~457V AC
Over voltage trip limit of DC output	Adjustable within 260V~778V DC
Over temperature protection	Derate since 50 °c; Stop at 75 °c
Short circuit protection	Yes
Emergency stop protection	Yes
Leakage Protection	Type A
Lightning Protection	Type 2

Electric Diagram

Fig7-1, Main circuit diagram



5 Year Warranty Statement for ATESS EV AC/DC Chargers Authorized Warranty Installer (valid from 01.December.2020)

(These warranty terms are only applicable to UK consumers only for the ATESS EV chargers, bought through the authorized repair and installation partner)

Welcome to Project EV and ATESS, and thanks for choosing our Electric Vehicle charge point.

All our products are backed by a 5-year warranty (3-years parts and labour plus 2 years parts) giving you years of trouble-free charging.

However, in the unfortunate circumstances where something does go wrong, we are here to help and get you up and running as soon as possible.

Electric vehicles are changing all the time and even what appears to be the same manufacturer, model and year can have different battery and software configurations, we understand this can be frustration but sometimes the problem can lie with the vehicle and manufacturer.

With this in mind, we have developed a product that allows our company to make changes remotely and update chargers to keep them running at their optimum and in step with the latest electric vehicles on the road.

All we ask is that you follow the process below and make a number of small checks prior to calling or email the team.

- It sounds obvious but check the emergency stop button has not been activated.
- Check the RCD on the unit.
- Check the consumer unit in the property.
- Check all cables are installed correctly and are not loose or have been damaged.
- Check power cable to the vehicle.
- Check the manufacturers charging guidelines (doors may need to be locked and the vehicle alarmed etc.)
- Make sure the vehicle software is the latest version, please refer to the manufacturer guidelines.
- Please make sure the charger is online – we will not be able to remotely access or diagnose faults if it is not.
- Call 0800 599 9582
- Email enquiries@projectev.co.uk please take pictures or videos
- If we cannot diagnose the fault we will aim to get an engineer to your charge point location to rectify your problem with a replacement or fix the issue (we will not call out to solve or fix Wi-Fi or connectivity problems, please refer to your original installer.

1. Warranted Products

This 5 Year limited warranty shall only apply to EV Chargers AC/DC only installation up to 300kW installed and provided by an Authorized 5 Year Warranty Installer.

2. 5 Year Limited Warranty

A. 5 years Limited Product Warranty

ATESS warrants its EV chargers, known as 'ATESS Products' here after including factory-assembled charger sockets, charger plug and cables, if any, to be free from defect in materials and workmanship which would impact the functionality of the product under normal application, installation, use and service conditions.

The duration of this limited warranty is for life from the date of delivery in the original packing to the first customer (CUSTOMER) of the ATESS products, or latest 6 months after manufacturing date, the earlier time between the two.

Claims under the warranty can only be accepted if the buyer can provide the proof that the malfunctioning or non-conformity of ATESS Products results exclusively from defects in materials and/or workmanship under normal application, installation, and use and service conditions. If an ATESS Product fails to conform to this warranty, ATESS will, at its option, either repair or replace the product. In the event that a like for like replacement is not available and upgrade may be offered at an additional customer cost.

A.1 Product warranty within / up to 3 years

If, within a period of three (3) years, the costs belonging as below:

Items	Spare Parts	International Transportation	On-site service (If needed)	Other Service
Cost belonging	ATESS	ATESS	ATESS	Installer/User

A.2 Product warranty from year 3 to 5

If, after a period of three (3) year, the costs belonging as below:

Items	Spare Parts (Except DC Charger)	International Transportation	On-site service (If needed)	Other Service
Cost belonging	ATESS	ATESS	ATESS	Installer/User

*ATESS provide a 5 years or 30,000 hours spare parts warranty for all DC chargers.

3. Exclusions and Limitations

The aforementioned “Limited Warranty” does not apply to any ATESS Products which have been subjected to:

- A. If the direct customers who has obtained the ATESS Products from ATESS or its distributor failed to pay the ATESS Products according to the purchase price, ATESS is entitled to reject the claim under this warranty based on this provision.
- B. Cosmetic change in appearance stemming from the normal wear and tear over time of product materials, for example the out casing, charger sockets, charger plug, cables and so on.
- C. Installation on mobile or in a marine environment, or extreme thermal environment, damage caused by ammonia, high air pollution, acid rain or any other abnormal environment that beyond ATESS's control;
- D. Misuse, abuse, neglect or accident, alteration, improper installation or application, Improper or unauthorized repair or modifications, power failure surges, lightning, flood, fire, accidental breakage or other events outside ATESS's control.
- E. Service or installation by unapproved technicians who are not qualified under the relevant law or made illegible regulations at the place of installation.
- F. Installation by none approved company or person
- G. ATESS Products for which the nameplates or serial number have been altered, removed or made illegible.
- H. ATESS Products which have been moved from their original installation location without the express written approval of ATESS.
- I. Defective components in the construction on which the ATESS Products are mounted.
- J. Wi-Fi connectivity, internet connectivity or APP connectivity is not covered or any associated connectivity issues
- K. The Warranty is nontransferable.
- L. Any subsequent costs or losses associated with the ATESS EV charge point.
- M. Future proofing new Electric Vehicle software compatibility.

4. General Conditions for Warranty Claims

A. The direct customers who have obtained the ATESS Products shall register the ATESS Products and upload the information within 30 days from the date of receiving the ATESS Products. If the customers fail to register the product before the deadline, the Limited Product Warranty will remain at 3 years. The warranty registration can be done either through the APP or via the website.

B. The direct customer shall notify the warranty claims to Authorized 5 Year Warranty Installer or its Distributor within 1 week via email only after becoming aware of the circumstances which constitute a warranty case. The report shall include the following information:

1. Name and address of the END CUSTOMER
 2. Name and address of the INSTALLER or SELLER
 3. A copy of the purchase agreement or installation agreement
 4. Module type and serial number of the respective ATESS Products
 5. Address of the place of installation of the respective ATESS Products
 6. A short description of the problem at hand as well as a short description of the tests which may have already been performed as well as their results.
 7. Regarding any defect or fault, where possible, pictures and videos of the effected ATESS products clearly showing the problem or fault.
- C. Any repaired or replaced ATESS Products provided by ATESS under a warranty claim, shall be covered by the same Limited Warranty and terms as the first ATESS Products purchased.
- D. No warranty periods or terms shall be extended because of a warranty claim or remedy.
- E. The Limited Warranty does not cover any transportation costs for return of the defective ATESS Products or for reshipment of any repaired or replaced ATESS Products or costs associated with installation, removal or re-installation of repaired, replacement or additional ATESS Products.
- F. The Limited Warranty does not cover any other costs, loss of use, loss of profits, and loss of production, loss of revenues associated with performance or non-performance of defective ATESS Products.

G. If the authorized partner should cease to trade the warranty reverts to ATESS standard UK warranty which can be viewed online at www.atesspower.com. The warranty is only valid through a valid Authorized 5 Year Warranty Installer directly. ATESS will not cover any product unless it goes through an Authorized 5 Year Warranty Installer. ATESS Warranty is with and for the Authorized 5 Year warranty installer. This product is covered by authorized partner.

H. 5 Year Warranty only applies to products installed by an Authorized 5 Year Warranty Installer.

I. An upgrade may be offered at an additional cost should the product or the components be unavailable at an additional cost.

J. Refurbished or factory reconditioned products may be used in part exchange.

K. No responsibility will be taken by ATESS for fluctuations in voltage supplied from the National Grid that may affect performance and may cause the EV charger to fail or fault.

- L. An approved installation or technical partner must be used, none approved third party invalidate this warranty in full.
- M. A call out costs and labor charges will be applicable in all cases.
- N. The EV charger must be accessible by ATESS and the consumer to read any faults.
- O. The EV charger must be online and have latest firmware, and make sure the authorized installer can diagnosis potential faults and settings remotely or further labor costs will be required.
- P. The units must be connected so remote analysis can be confirmed or further charges may be required
- Q. Replacement product for warranty claims can only be honored through an Authorized 5 Year Warranty Installer; in this case ATESS has the right to terminate claims over and above its standard terms and conditions if claims do not come through Authorized 5 Year Warranty Installer Ltd.

5. Dispute regarding a material defect or a reduced power

In case of a dispute regarding the existence of a material defect or reduced power in a warranty claim, ATESS will accept the judgment of an accredited testing institute (which is to be selected by ATESS in advance.) The cost and expenses for the testing shall remain with the Buyer if it is found to be good performance.

6. Force Majeure

ATESS shall not be responsible or liable in any way to the Buyer for any non-performance or delay in performance under this Limited Warranty due to occurrences of force majeure such as, war, riots, strikes, epidemic, unavailability of suitable and sufficient labor, material, or capacity or technical or yield failures and any unforeseen event beyond its control, including, without limitation, any technological or physical event or condition which is not reasonably known or understood at the time of the sale of the defective Product(s) or the notification of the relevant warranty claim under this Limited Warranty.

7. Validity

This Limited Warranty shall apply to ATESS Products (s) manufactured after 1st of Jan 2020. This Limited Warranty shall be valid until a new revision is issued by ATESS and is subject to change without prior notice.

8. Others

EV charger spare parts and service costs are assessed each year, subject to the latest prices. ATESS reserves the right to interpret other unmentioned matters.

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9. Contact

In the first instance please contact your installer or failing this please contact Project EV

<https://www.projectev.co.uk/>



Company Address:

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Lancaster Business Park,
Newborough Road, Needwood,
Burton Upon Trent,
Staffordshire,
DE13 9PD

Website: **www.projectev.co.uk**

Contact Number: **0800 599 9582**

General Enquiries Email: **enquiries@projectev.co.uk**

Pro App Email: **proapp@projectev.co.uk**