

# MAXICHARGER

## User Manual and Safety Instructions



Version 11/03/2021

## CONGRATULATIONS !

You have just acquired a MAXICHARGER and we thank you ! This product is designed and conceived in France, with the collaboration of the company ESD Electronique.

Please read this manual in order to use your MAXICHARGER in accordance with the manufacturer's recommendations and safely.

We hope that your MAXICHARGER will bring you complete satisfaction and we wish you a good use. Do not hesitate to contact us for any feedback or suggestion that you may have regarding this product.

## SAFETY INSTRUCTIONS

The following manual contains important security instructions. Make sure you read and understood them before using the equipment.

Please keep the manual with the equipment for future reference.



### WARNINGS :

Not following the instructions below exposes you to risks such as fires, electric shocks, serious and deadly injuries.

- Always use your MAXICHARGER respecting the process described in this manual.
- The MAXICHARGER is conceived to only charge an electric vehicle according to IEC-62196 standard with SAEJ1772 connector called "Type 1" or VDE-AR-E 2623-2-2 called "Type 2" on the 230V single-phase or 400V three-phase electrical network. Never use it for another purpose or with another vehicle or object.
- Use your MAXICHARGER only on an electrical installation in compliance with the standards of your country or region.
- Do a visual examination of your MAXICHARGER before each use. Stop using it if you detect any crack, bare wire, connexion oxidation, burning mark or if it does not work at all anymore.
- Do not attempt to open, disassemble, repair, alter or modify your MAXICHARGER. Any attempt to do so will automatically cancel the product warranty irreversibly. Please contact the distributor in case of failure.
- The use of extension cable, power strip, or conversion socket to plug the MAXICHARGER is strictly forbidden.
- Do not use a generator to power the MAXICHARGER.
- Do not plug the MAXICHARGER in a damaged or poorly attached outlet. Make sure that the connector pins fit perfectly into the wall outlet and that the plug is plugged all the way in.
- Do not use the MAXICHARGER in extreme climate conditions (heavy rain, snow, thunderstorms, bad weather, heat wave).
- While handling and carrying it, do not subject the product to an intense shock, a twist, or a crush.
- Protect your MAXICHARGER from humidity, especially during its storage. If it looks corroded or damaged, do not use it.
- If it rains during the charge, do not let water flow along the cable till the load port, the wall plug, or the charging station socket.
- Do not use the MAXICHARGER with an outlet that is or has been immersed. If the MAXICHARGER is plugged while the outlet is already immersed, cut the power off at the circuit breaker before touching the outlet.
- Do not insert any metallic object or any other item into the connectors. Do not touch the MAXICHARGER with sharp or metallic objects such as tools, wire or needles.
- Do not cover the MAXICHARGER while in charge.
- Make sure that the cable of the MAXICHARGER does not obstruct the passage of pedestrians, objects or any vehicle.
- Do not use solvents to clean the MAXICHARGER.
- The use of the MAXICHARGER can affect or impede the operation of implantable medical devices, such as pacemakers or defibrillators. Contact the manufacturer of these devices to know the possible effects that the proximity of these devices might have during a charge.



### CAUTION :

These instructions are intended to protect you from a premature wear, a malfunction or a damage on your MAXICHARGER.

- Do not use the MAXICHARGER out of its temperature range of -30°C and +50°C.
- Have your electrical installation equipped with a lightning arrester and / or surge protector to protect your MAXICHARGER and your vehicle.
- Roll the cable up in circle. Do not wring, twist, or bend it.
- Do not keep your MAXICHARGER outside, exposed to the sun, to severe heat or weather during several days.

## COMPATIBILITY

### ELECTRIC NETWORKS

The MAXICHARGER is compatible with all single-phase 230V and three-phase 380/400V networks, of 50 or 60Hz.



Please have a professional verify the presence of a neutral pole, of an electrical ground with a leakage resistance of less than 100 Ohms and a zero potential difference between the neutral pole and the electrical ground. Some vehicles can refuse the charge if those criterias are not respected.

### ELECTRIC VEHICLES

The MAXICHARGER realizes a charging supervision by complying to the IEC 62196 standard through a Type 1 or a Type 2 plug according to the version ordered. Please refer to your vehicle's manual to know the connexion procedure on the vehicle side.

## OPERATION

The MAXICHARGER is an “intelligent” cable that ensures the supervision and safety of an electric vehicle’s charge. It can be powered by several types of domestic, industrial or charging stations outlets.

Charging can be done with one-phase 230V or three-phase 380V / 400V, according to the type of connection available, and with a power between 2,2 and 22 kW.

### START THE CHARGE (ON DOMESTIC OUTLET)

1. Make sure that the outlet of the electrical fixed installation complies with established requirements, and is compatible with one of the adaptors you own.
2. Make sure that the cable is long enough to go from the wall socket to the electric vehicle’s socket. If not, bring the car closer, or find a closer wall socket.
3. Plug the adaptor in the unit’s inlet.  
Secure the adaptor by tilting the handle.  
Plug the unit in the wall socket.  
A few seconds later, the lastest selected amperage indicator lights up.

4. Select the desired charging current by pushing the following buttons



The unit will let you select only the current range allowed by your adaptor.

5. Plug the charging plug on your EV.  
The “POWER” indicator lights up briefly.
6. Your EV starts exchanging parameters with the unit. If all the parameters match, the charging process starts. This may take a while. The “POWER” indicator stays on during the charging process.

**During the charging process, you can select another charging current anytime with the**  **and**  **buttons**

**The new parameters will be set immediatly**

## START THE CHARGE (ON A CHARGING STATION)

1. Make sure that the charging station complies with established requirements and is compatible with one of the Type 2 or Type 3 adaptor that you own.
2. Make sure that the cable is long enough to go from the charging station to the electric vehicle's socket. If not, bring the car closer, or find a closer charging station.
3. Plug the Type 2 or Type 3 adaptor in the unit's inlet.  
Secure the adaptor by tilting the handle.  
Plug the unit in the charging station.
4. Plug the charging outlet on your EV.
5. Start the charging process on the charging station (please refer to the instructions on the user interface of the station).
6. Your EV starts exchanging parameters with the charging station through the MAXICHARGER. When all the parameters match, the charging process starts and the "POWER" indicator starts to blink.



You cannot change the charging current while the MAXICHARGER is used with the Type 2 or Type 3 adaptor. In this charging mode, the charging current is automatically managed by the charging station you are plugged in.

## STOP THE CHARGE

1. Stop the charge on your EV. Please refer to the user manual of your EV to do so.
2. Unplug the charging outlet from the EV.
3. Unplug the unit from the wall socket or charging station.
4. Disassemble the adaptor and the unit by tilting back the handle.

## SECURITY


### ONBOARD SECURITY FEATURE


The MAXICHARGER is equipped with a coding system that is able to identify the adaptor you plugged into the unit and to limit the charging current according the plug's specifications, in order to avoid any overheating or fire risks.

The current limitation is done by the following table :


Adaptor	Limitation	Network	Power
Schuko	10A	Single-phase	2,3kW max
Swiss T13	8A	Single-phase	1,8kW max
GB/UK	13A	Single-phase	3kW max
Single-Phase CEE 16	16A	Single-phase	3,7kW max
Single-Phase CEE 32	32A	Single-phase	7,4kW max
Three-Phase CEE 16	16A	Three-phase	11kW max
Three-Phase CEE 32	32A	Three-phase	22kW max
Type 2*	Auto (charging station)	Three-phase	22kW max
Type 3C*	Auto (charging station)	Three-phase	22kW max


\* Compatible with MAXICHARGERS produced starting 2016 only.

 With any adaptor plugged into the unit (except for the Type 2 and the Type 3 plugs) the MAXICHARGER will always start with a 10A current setting to prevent any circuit breaker disconnection if your electrical installation is undersized.

 The power setting selected on the MAXICHARGER and the support of the three-phase current is limited by the capacities of the embedded AC charger of your EV and can be lower than what you would expect. Please refer to the user manual of your EV to check the specificities of your embedded AC charger.

### The higher the power, the faster the charge!

However, it is possible to select a lower charging current, even if the adaptor allows a higher current. To do so, press the  button to lower the current during the charging process if necessary.

 The MAXICHARGER does not allow you to select a charging current below 10A. However, the Swiss T13 adapter will limit the current to 8A, according to the specificities of this plug that do not allow a safe charging process above this current.

### STATED, INDUSTRIAL OR DOMESTIC ELECTRICAL INSTALLATION

The wall socket on which the unit is plugged needs a **type A** or **High Immunity 30mA** differential circuit breaker. It also needs a **curve C** thermal circuit breaker, suitable with your socket and power line specificities.

Contact your electrician to check or modify your installation if necessary, or contact your local Mister EV reseller who will advise you about the compatibility of the product with your installation.

## TROUBLESHOOTING

Symptoms	Indicators	Origin	Solution
Impossible to charge	All OFF	No power	Check the circuit breaker
Impossible to charge	All indicators light up successively	Adaptor wrongly inserted or faulty	Plug the adaptor properly. Call your local reseller if that did not solve the issue
Charge interrupted	POWER indicator is OFF. Current indicator is ON.	The vehicle is 100 % charged. Vehicle in deferred charging. Vehicle is currently pre-conditionning. Temperature of the battery is too low or too high.	Deactivate the deferred charging or pre-conditionning.  Move your car to a temperate area.
Charge interrupted or impossible	32Amps indicators blinks quickly	Fault detected by the vehicle or electric network fault.	Have your vehicle and/or electrical network checked by a technician.

## LIMITED WARRANTY

The two years limited warranty covers manufacturing defects from the date of purchase. It does not cover shipping costs for the possibility of sending back the product to the factory or local repair service.

The warranty voids if the product is not used properly, plugged on an improper electrical installation or if the safety instructions described in this manual are not respected.

In some cases the warranty can be extended with the agreement of the manufacturer. For more information, contact your local reseller.



## LIMIT OF LIABILITY

The compatibility of your MAXICHARGER is guaranteed with the vehicles available on the market at the date of purchase of your equipment.

The manufacturer's or reseller's liability is limited to the repairs or exchanges that does not exceed the total price you paid for the product.

The manufacturer or reseller shall not be liable under this limited warranty for any defects that exceed the fair market value of the equipment at the time of the discovery of the defect.

The manufacturer or reseller does not authorize any person or entity to create for it any other obligation or liability in connection with this limited warranty.

The decision to repair or replace a part of the MAXICHARGER by a new, conditioned or non genuine one that fulfills the same quality criterias as the original part will be done by the manufacturer, in its sole discretion.

The manufacturer and the reseller hereby disclaim any and all indirect, incidental, special and consequential damages arising out of, or relating to the MAXICHARGER, including, but not limited to : transportation of your vehicle (repair, towing, vehicle rental), loss of vehicle or equipment value, loss of personal or commercial property, loss of time, loss of income, travelling expenses (bus fares, vehicle rental, gasoline or energy expenses), lodging expenses, service call charges, negligence, additional costs (phone, mail, fax or shipping expenses), moral prejudice or crime.

## PRODUCT TRACKING

All our products have a serial number. When purchasing one of our product, you must send your details to your local reseller. This allows us to arrange product update if necessary. Do not forget to update your details if you move or resell your MAXICHARGER to a third party.

## TECHNICAL SPECIFICATIONS

- Maximum power input : 32A @ 230 or 400V
- Power consumption (idle) : less than 1W
- Power consumption (charge) : depends on the vehicle, up to 22KW
- Waterproof IP grade of the controller box (adapter plugged and locked) : IP65
- Waterproof IP grade of the vehicle and wall socket : IP44

## MANUFACTURER

This product is manufactured by ESD Electronique and distributed by :

### **MISTER EV SAS**

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