MASSIMO ELECTRIC

EV CHARGING STATION

MCS-50

OPERATING MANUAL

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CONTENTS

Important Safety Instructions

Save These Instructions

1.1 Safety Information

Before installing, operating or repairing charging equipment, please read this safety information carefully, and please check and become familiar with the equipment.

● Electrical Hazard/Fire Hazard

The charging station must be installed, commissioned and repaired by a properly trained, qualified and authorized electrician. Such electricians have full responsibility for compliance with the current standards and installation regulations. Check the installation manual for additional details.

● Charging cable plugs with defects or excessive wear and tear should not be used.

● If the LED status indicator remains red, the charging station must be powered off until the equipment is replaced.

● The owner (end user) must ensure that the charging station is in good operating condition.

● Periodically check the charging station socket or charging cable plug (including the charging cable) for defects and the housing for signs of damage (visual inspection).

● Repair or replacement of the charging station is only to be completed by trained professionals.

● A damaged charging station should be powered off and replaced as soon as possible.

● No unauthorized alteration or adjustment shall be made to the charging station.

● Do not remove any identifiers such as safety marks, warning instructions, nameplates, labels, or cable marks.

● The MCS-50 charging station does not have a power switch. The output circuit breaker in the equipment connector or distributor can be used as power isolation equipment.

● No extension cords shall be used to connect charging stations to electric or plug-in hybrid vehicles.

● Only connect an electric car or a plug-in hybrid to the corresponding charger. Do not use the charger to connect to any other loads (power tools, etc.).
● Plug & Unplug the charging cable from the vehicle using the plug handle, not the cable.
● Ensure that the charging cable is not subject to any mechanical damage (kinked, stuck or crushed). Avoid any heat source, dirt or water in contact areas.
● Always visually inspect the plug and cables before charging. Please ensure the interior of the charging plug is dry and clear of dirt. Inspect Charging cable for damage, fraying insulation, etc.

Important:
● Ensure that charging station is not damaged by improper handling (housing cover, internal parts, etc.).
● Plug & Unplug the charging cable from the charger stand using the plug handle, not the cable

Important tips
● For charging stations installed outdoors, the terminal plate cover should only be opened in dry weather conditions.
● Do not open the cover until the current charging is completed and the vehicle is disconnected.

1.2 Intended Use

The charging station is only used to charge electric vehicles or plug-in hybrids for both indoor and outdoor use. Do not use the charging station to connect to any other equipment, such as power tools.

The use of this equipment for set purposes shall meet the environmental conditions set at the time of development.

The development, production, testing, and documentation of the charging station shall be based on the current relevant safety standards. If being operated in accordance with these instructions and specified purpose, this product will not cause any danger to personal health and property under normal circumstances.

The equipment must be grounded. Grounding helps reduce the risk of electric shock.

Please carefully follow the instructions outlined in this manual. Otherwise, a potential hazard may occur or the safety equipment may become inoperable. In addition to the safety information described in this manual, please review specific equipment specified in the Safety and Accident Prevention Code.

1.3 About this Manual

The manual and the functions described herein apply to the following types of equipment:

MCS-50 Charging Station

The charging station and charging station App illustrations and instructions in this manual refer to the typical version of this device. It may differ from your device and APP version. This manual applies to the following target groups:

● MCS-50 Charging Station User
● Commissioning Technician, Maintenance Technician.

1.4 Warranty

1.4.1 The following conditions are not covered by warranty:

● Any defects or damage caused by failure to install in accordance with the charging station installation manual.

● Any defects or damage caused by for not using the product in accordance with the charging station installation manual

● Damage caused by an unauthorized electrician install.

● Improper site preparation or maintenance, improper installation, and external damage, such as scratches and dents.

● Damage caused by extreme power surges, extreme electromagnetic fields, or natural phenomenon.

1.4.2 Product Limited Warranty herein applies to purchase made from normal channels for residential uses only.This warranty is not transferable and is only valid for buyers located in the United States and Canada.

Limited one-year product warranty: your charging station warranty is valid in 1 year from the original purchase date ("warranty period"). If you experience any issues during normal operation you can contact customer support for repair or replacement of the charging station. The warranty includes the parts and factory labor required to repair the charging station. Exclusions include any field labor required associated with unloading or installation of the repaired or replaced charging station. Please allow 30 days to repair and replace product.

Contents Overview
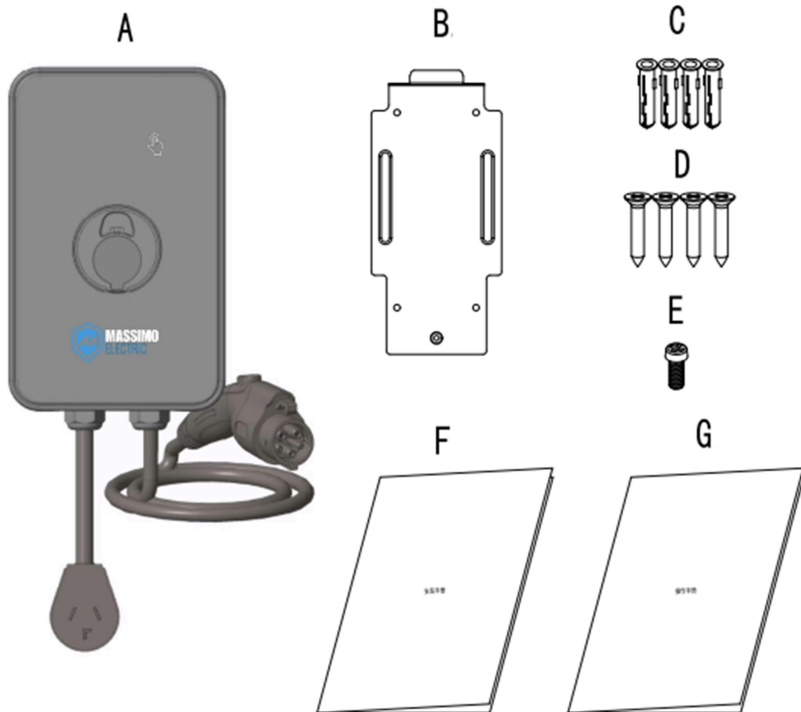
A. Charging station
B. Back plate
C. Wall anchor(4)
D. Self tapping screw(4)

E. Screw(1)
F. Installation manual
G. Operation manual

Operation

3.1. Power On

When the device is powered on, the system enters a self-test, and the status indicator will display yellow. The device is ready when the Status indicator turns blue, and the LCD will display charging information.

3.2 Start Charging

There are two charging modes: Plug-and-Play Charge and APP mode. In the Plug-and-Play mode (default setting), connect the vehicle and the charging connector to begin the charging process. The screen displays "charging", and the LED status indicator is blue.

3.3 End Charging

The vehicle ends charging automatically, and the LED status indicator remains green. The user unplugs the vehicle connection, and the LED status indicator remains blue.
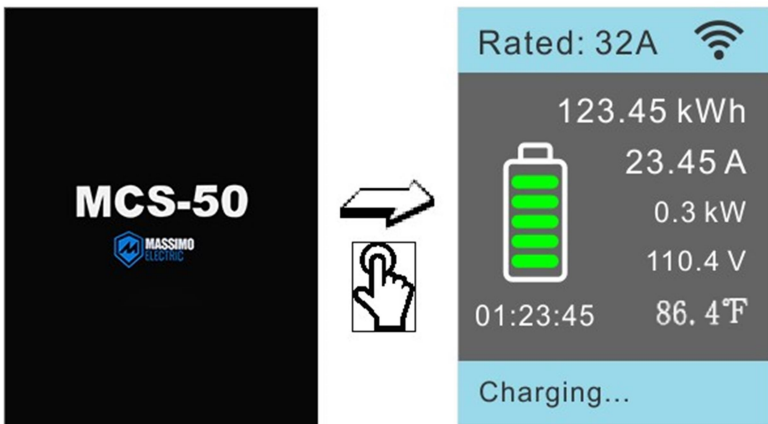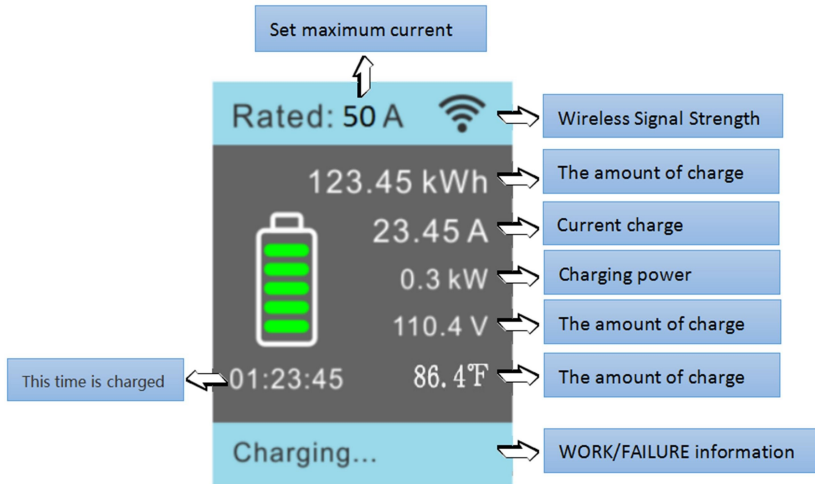
LED Status Indicator Status

LED Lamp	Status
Black	Station not connected to power supply
Yellow 1-Sec Pulse	System Initialization
Blue Steady On	No vehicle connected
Yellow Steady On	Vehicle connected, waiting to charge
Blue Flashing	Vehicle charging
Green Steady On	Charging complete
Yellow Quick Flashing	Automatic capacity reduction or charging at high-temperature
Red	Fault

Display Screen Information

The LCD screen shows the relevant electrical parameters and charging time. The status / fault bar indicates the working process and fault type (if present).
The LCD screen will enter Screensaver mode automatically.
Wake the Status Screen by tapping the information button.

Fault

6.1 Troubleshooting

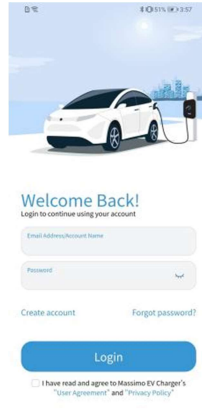| Fault Situation	Method of Operation
Status indicator light is not on (white)	1. Power supply disconnected - Check circuit breaker and ensure breaker is set to ON.
	2. Equipment failure. Contact Support
Charging cannot start (yellow or green light)	Charging plug is not correctly inserted into vehicle - Unplug and Reconnect Securely
	2. The vehicle has been set to reserve charging - check the vehicle
	3. The vehicle does not need to charge or vehicle fault- -Check the vehicle
Charging Time Extended	1. Vehicle in reserve charging mode
	2. Reduced charging due to high temperature. Check current values on LCD Display.
	3. Charging current at max. Check current values on LCD display.
Steady Red Light	If charging station faults, refer to the fault information displayed on the LCD screen.
	Disconnect charging plug, shut off the power supply (disconnect the circuit breaker). Wait 30 seconds and turn on power supply to restart system. If the issue persists, contact customer support.

6.2 Possible Causes of Fault

LCD Display Fault Shown	Status
Overcurrent	Overcurrent protection. Charge again after 10-min interval. If overcurrent fault occurs three times, end charging and contact customer support.
Overvoltage	Overvoltage protection. Resume charging after the voltage is normalized.
Undervoltage	Undervoltage protection. Resume charging after the voltage is normalized.
Contactor Err	Contactor status failure. Contact customer support.
Overtemperature	Over-temperature protection. Resume charging after temperature has cooled.
CCID leakage	CCID leakage protection. Remove vehicle plug and reconnect after 30 seconds.
Ground fault	Ground-fault protection. Check for proper grounding.
Short circuit Err	Short circuit protection. Contact customer support.
Control pilot Err	Control pilot failure. Abnormal draw during charging.

APP Summary

In APP controlled mode, **Massimo EV Charging APP** manages the tasks of the charging station through WIFI, and Plug-and-Play mode will be disabled. The APP can be used to start and stop charging, view charging data, and additional information. Administrators can also authorize other users by sharing access.

7.1 User Register and Log in

Download the "**Massimo EV Charging**" APP through the Apple App Store or Google Play Store. New users must register and log in.

User Register	User Login	Forgot Password
New users must register after downloading the "**Massimo EV Charging**" APP. Tap "Register" to enter the registration process.	After successful registration, enter the [account and password login] page, enter the email and password to login.	If the user is unable to remember password, tap "Forgot Password?" and proceed to reset password.
Create Account Login to continue using your account Email Address Already have an account? Sign in Get verification code I have read and agree to Massimo EV Charger's "User Agreement" and "Privacy Policy"	Welcome Back! Login to continue using your account Email Address/Account Name Password Create account Forgot password? Login I have read and agree to Massimo EV Charger's "User Agreement" and "Privacy Policy"	Forgot Password Please enter email address associated with your account Email Address Get verification code
Check E-Mail > Get Captcha > Enter Verification Code > Set Password > Finish.	Enter User Name and Password to log in.	Check E-Mail > Get Captcha > Enter Verification Code > Reset Password > Finish.

7.2 Profile Info

Click the Profile icon in the upper left corner to enter the Profile Info page.

From top to bottom :

    Profile and Nickname
    Current Version
    Frequently Asked Questions
    Privacy Policy
    User Agreement
    Modify Password
    Logout.
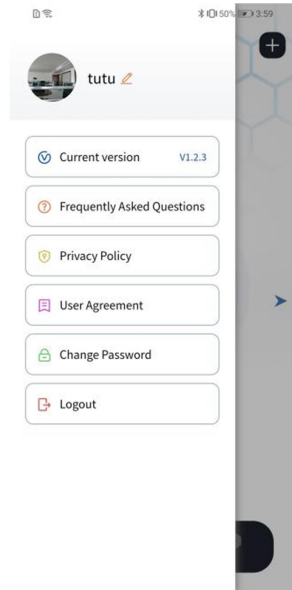
- Profile and Nickname: Tap to modify the user nickname (nickname limited to 50 characters)
- Current Version: If there is an app update available, the red "new" logo will display. Tap this notification go to the App Store to update the app
- FAQ: Tap to view common problems and solutions
- Privacy Policy: Software privacy policy.
- User Agreement: Tap to view User instructions and agreements.
- Modify Password: Tap on this function to reset the account password.
- Logout: Tap to log out of the account and return to the login page.

APP Features Overview

The APP functions are divided into: charging, setting and management

Class	Function	Description	User	Administrator
Charge	Search for MCS-50	The App automatically searches for the nearby available MCS-50.	√	√
	MCS-50 pairing	Select your MCS-50 that you want to pair with through your login data.	√	√
	Start and end the charging	Start charging and end charging with this function.	√	√
	Charging state	The App displays the current state of the MCS-50 in a visual form, which is synchronized with the state indicator and the display data of the MCS-50.	√	√
Setting	Charging environment	Manage the working voltage and the maximum available charging current.		√
	Charging method	Select the APP launched mode or plug and play mode.		√
	wireless connections	Modify the wireless connection		√
	Share the account	Create a user account		√
		Delete a user account		√
		Reset your own password	√	
		Reset the user password		√
	Firmware	Download the latest firmware		√
Manage	Charging data	Check the charging records for the past three months.	√	√
	Power data	Check the charge volume in the past three months or one year.	√	√
	failure logging	Check the recent failure record in the past three months.	√	√

8.1 Charging Operation
8.1.1 Add the Pile

Users can scan the bar code to add the charger by tapping "+" in the upper right corner of the interface. Scan the bar code→ Hold the information key ⟨⟩ for 5secs to enter the network connection mode (WIFI icon flashing)→ Tap to start searching, keeping the phone close to the charger→ Tap connection→ Set up WIFI→Complete.
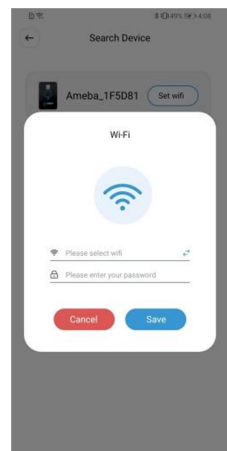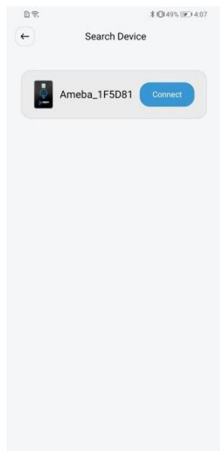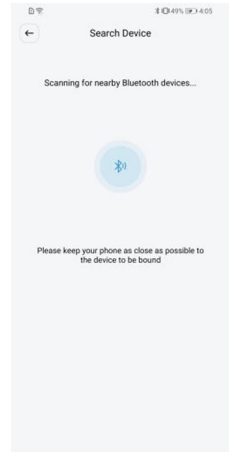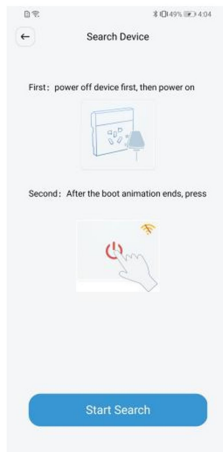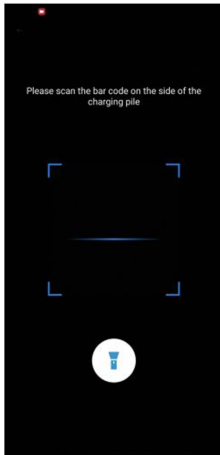
8.1.2 Charger Status

After the user adds the charger, the main interface will display the added charger. If there are multiple chargers, you can slide left and right or tap the left or right arrows to switch between them. There are six states of the charger, "offline", "alarm", "idle", "in operation", "charging" and "complete".

● When the charger is not connected to network, the offline state is displayed.
● When the charger is undervoltage or overvoltage, the alarm state is displayed.
● When the charger is connected to the network without any other operation, the idle state is displayed.
● When the charger is connected to a vehicle, the charging state is displayed.
● When the charger has completed charging the vehicle, the complete state is displayed .

8.1.3 Charging

When the charger is set to "APP Launched", tap "Start charging" button and plug the plug into the car to start charging. To end charging, tap "End charging" button or pull the plug directly to stop charging.
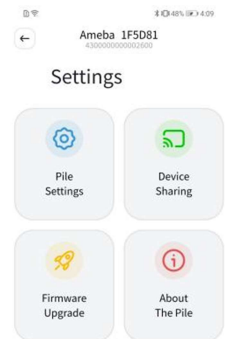When the charger is set to "plug and charge", plug in vehicle to start charging, and end the charging by unplugging.
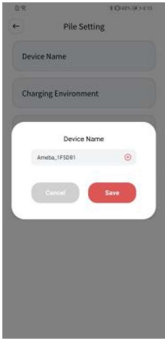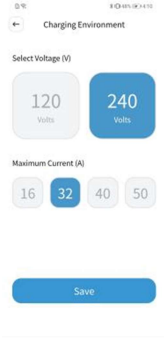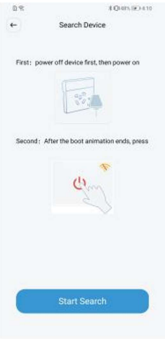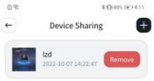
8.2 Settings

Tap the menu icon at the right bottom of the page to enter the menu page of the pile. There are"Pile Settings"、 "Firmware Upgrade"、"About the Pile" three functions.

8.2.1 Setting of Pile Parameters

In the pile setting, from top to bottom are "Device Name", "Charging Environment", "Charging Mode", "Modify WIFI", " Device

Sharing", and "Remove".

Device Name	Charging Environment	Charging Mode	Modify WIFI	Device Sharing
User can modify the pile name after clicking it	The pile voltage and current can be set on this page, and click to save the setting	You can choose the APP launched mode or plug-and-play charger mode.	Connect Bluetooth first, then modify WIFI	After clicking the small plus number in the upper right corner, enter the account to be shared, and you can share the pile with other users.
	The voltage shall be consistent with the actual situation.①		See Add Pile Content	Click the "Remove" on the right of the user button to cancel the sharing.

①The maximum current is set and refer to the installation manual. Overvoltage and overcurrent failure may occur due to **improper** setting.

8.2.2 Firmware Upgrade

This page displays the current version number and whether there is a new version to upgrade. If the latest version of the firmware is detected, tap the Update Now button to upgrade. If the upgrade fails, return to the previous page and enter the [firmware upgrade] page again for a
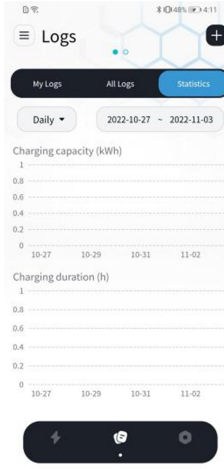re-upgrade.

8.2.3 About the Pile

On this page, users can view the firmware version currently used by piles.

8.3 Management

Tap the log icon on the left bottom of the page and enter the pile log page. Users can choose to check "My Logs", "All Logs " of the pile and "Power Statistics", and can also switch piles by sliding left and right.

Charging log	Charging details	Power statistics
Users will display "charging start time", "total charging power", and "total charging duration" in the pages of "My Logs" and "All Logs".	Users can tap any charging log to enter the charging details page. In the charging details page, users can view "charging start time", "charging end time", "total charging duration", "total charging power", "operator", "charging status", "remarks" (charging fault record)	Users can view the charging power consumption and charging time through the column statistics chart. Users tap the "Daily" button on the top left of the chart to switch two statistics methods: "daily statistics" and "monthly statistics". Users can tap the time button on the top right of the chart to select the required statistics time.
"All Logs" the pile is only available to the administrator		When using daily statistics, the maximum time is three months. When using monthly statistics, the maximum time is one year.

Size

201mm

78.5mm

319mm

400mm
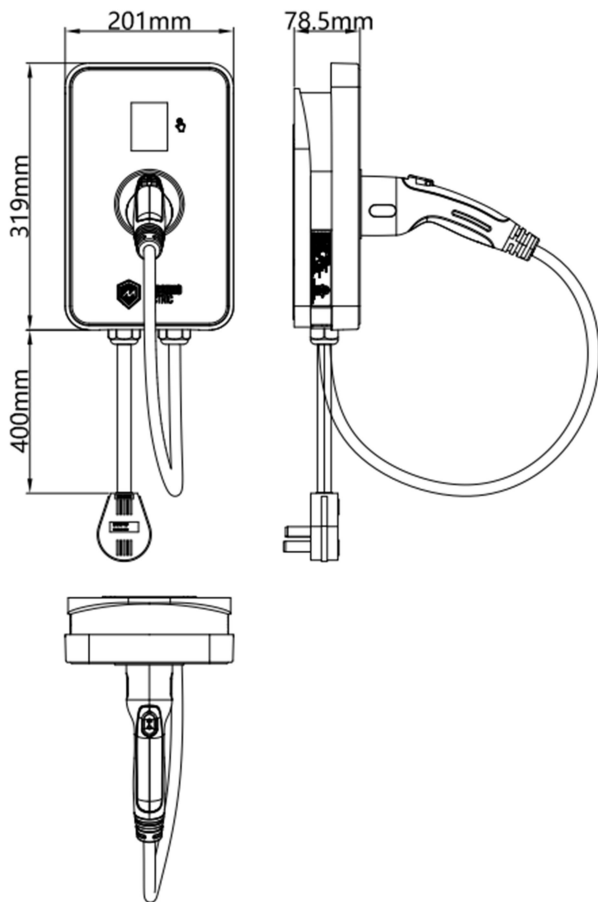
Technical parameter

Description	Project	Parameter
Electrical parameters	Input Rated Value	240VAC, Single-phase, 60Hz
	Input Wiring	Fire wire, zero wire and ground wire, together with the junction box Type O type terminal connection
	Output rating	240VAC, Single-phase, 60Hz
	Rated Current	16A，32A，40A，50A (available by APP setting, default 50A)
	Power Line-In	Above 90°C Copper Core Cable, 6AWG / 50A, 8AWG / 32A, 11AWG / 16A
	Standby Active Power Consumption	5W
	Internal Residual Current Detection	CCID20
	Electrical Protection	Overvoltage, undervoltage, overcurrent, short circuit, grounding fault, overheat protection, surge protection
	Overvoltage Category	II level
	Cold Load Recovery	After power failure, delay for 15 seconds before charging recovery
	Display Mode	2.8One-inch color dot matrix screen + LED ring lamp belt
	USB	SAE J1772 type 1
interface	Communication	WIFI
	Working Temperature	-30°C~+50°C over 50°C for capacity reduction
	Storage Temperature	-40°C～+80°C
	Humidity	95% (No condensation)
ambient condition	Height	3km
	Cooling Method	Natural Ambient Cooling
	Level of Protection	Type 4;IK08
	Charging Cable	23ft
configuration parameter	Dimensions (Width * Height * Depth)	201*319*79mm, excluding the charging cable
	Weight	2.4kg without charging cable and accessories

Maintenance

⚠️ Do not use Corrosive solvents or cleaning products.

Do not clean with high-pressure water or power washer

As required, use wet cloth to clean the equipment, stubborn dirt can be removed with mild, solvent-free cleaning products.

Disposal

When equipment has reached end of life, please dispose in accordance with the current waste regulations.

Product Certification

http://www.massimoelectric.com