



EVSE DC Controller Technical manual

Smart EVSE DC Controller

Charge controller for DC electric vehicle charging stations

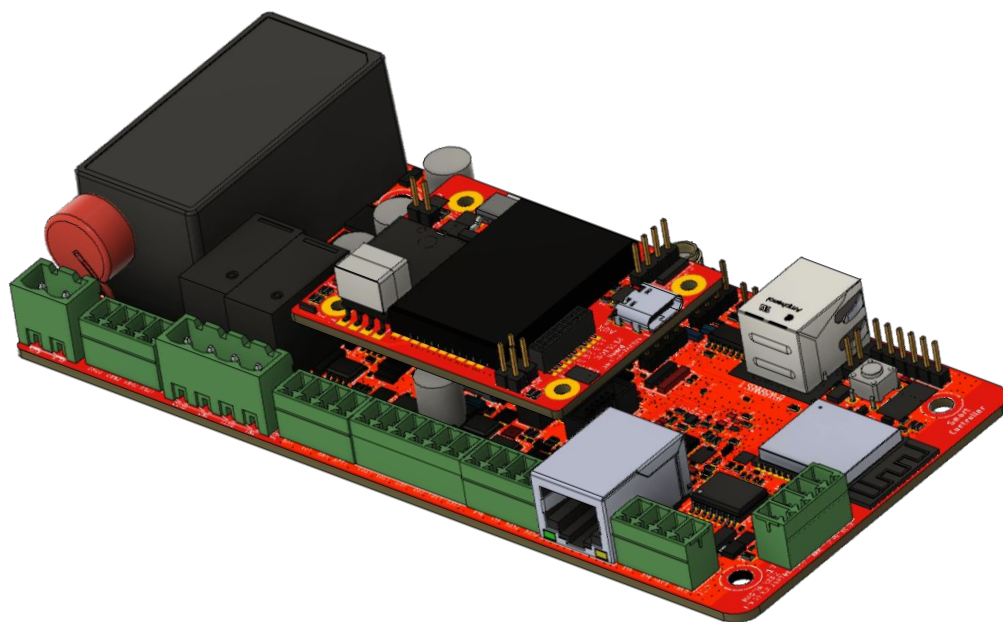


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1. General Instructions

1.1 Safety Precautions

Before operating the Master Plus, read this manual thoroughly. Follow all safety instructions to prevent accidents and hazards.

1.2 Intended Use

The Master Plus is a smart, sophisticated electronic device designed for specific applications within the realm of Electric Vehicle (EV) charging. Its intended use is defined as follows:

1.2.1 Purpose

The Master Plus is intended to control and regulate electrical power flow in electrical car (EV) charging and renewable energy systems. It is engineered to facilitate efficient power management, ensuring seamless operation and optimized performance within designated systems.

1.2.2 Suitable Environments

The Master Plus is intended for use in Electric Vehicle DC charger assembly and installations. It is built to withstand varying environmental conditions, including temperature fluctuations, humidity, and dust exposure, making it reliable even in challenging settings. Master Plus is designed for overvoltage category III and pollution degree 2.

1.2.3 User Qualifications

This device is designed for use by qualified technicians or professionals with a sound understanding of electrical systems and safety protocols. Users must possess knowledge of low voltage (<1000V) electrical wiring, system integration, and troubleshooting techniques to ensure proper installation and operation of the Master Plus.

1.2.4 Limitations

The Master Plus has specific limitations and should not be used outside of its intended scope. It is not designed for applications involving human safety, life support systems, or critical infrastructure where a failure could result in significant harm or loss of life. It should not be used in environments with extreme conditions beyond its specified operational range.

1.2.5 Customization and Modifications

Modifying or customizing the Master Plus without explicit authorization from the manufacturer is strictly prohibited. Any unauthorized modifications may compromise the device's safety, functionality, and warranty.

1.2.6 Compliance with Regulations

When implementing the Master Plus, it is the responsibility of the user to ensure compliance with local, regional, and national regulations and standards applicable to the intended application. The user should adhere to relevant electrical codes and safety regulations governing the installation and operation of such electronic devices.

1.2.7 Warranty

The intended use as outlined in this manual is fundamental to the warranty provided by the manufacturer. Any usage outside the specified applications or contrary to the guidelines described herein may void the warranty.

Important Note: It is imperative to read this section carefully and adhere to the intended use guidelines. Proper usage ensures the Master Plus's longevity, reliability, and safe operation within the intended applications. For further clarification on the intended use or any inquiries regarding specific applications, please contact our customer support team.



1.3 Delivery Conditions

1.3.1 Inspection Upon Receipt

Upon receiving the delivery of Master Plus Smart EVSE Controller PCB Board units, it is the responsibility of the recipient to inspect the packaging for any signs of damage or mishandling during transit within 5 business days after receipt. If any damage is observed, it must be documented on the delivery receipt or bill of lading provided by the carrier. This information is crucial for filing a claim with the shipping company.

1.3.2 Storage Conditions

Until installation, the Master Plus units should be stored in a dry, cool, and secure environment, protected from direct sunlight, moisture, extreme temperatures, and dust. Storing the units in these conditions ensures their integrity and functionality upon installation and Operating conditions as follows:

Operating Temperature : -25°C to +50°C

1.3.3 Installation Guidelines

It is the responsibility of the recipient or the designated technician to follow the installation guidelines provided in the user manual. Proper installation is crucial for the optimal performance and longevity of the Master Plus units.

1.3.4 Reporting Damaged Shipments

In case of any concealed damage discovered upon unpacking the units, the recipient must notify both the shipping carrier and the supplier immediately. Timely reporting of concealed damages is essential for filing claims and ensuring that replacement units or repairs are promptly arranged.

1.3.5 Return Policy

If there are discrepancies between the delivered products and the order or if any units are found to be defective upon installation, the recipient must contact the supplier within the specified timeframe outlined in the return policy. The return policy provides instructions for returning products, including obtaining return authorization and arranging for product pickup or return shipment.

1.4.6 Warranty Information

The Master Plus units are covered under the manufacturer's 2 years warranty plus extra of 3 months, starting from the date of the shipment of the product where extra 3 months are given to a user to receive, inspect, assemble and sell EV charger as complete product. The warranty specifies the terms and conditions under which defective units will be repaired or replaced. It is essential to familiarize yourself with the warranty terms to understand your rights and responsibilities regarding potential defects or malfunctions.

1.4.7 Warranty Terms

The warranty covers defects in materials and workmanship but not cover damage caused by misuse, accidents, or unauthorized modifications, including aesthetic tampering. Warranty does not cover any sequential, reputational, lost opportunity and other indirect damages if any. Ensure compliance with the intended use and guidelines provided in the manual.



1.4 Safety

The safety of individuals and the proper functioning of the Master Plus are paramount. To ensure safe installation, operation, and maintenance, please adhere to the following safety guidelines:

1.4.1 Qualified Personnel

Installation, configuration, and maintenance of the Master Plus should only be carried out by qualified technicians familiar with electrical systems and safety protocols. Untrained personnel should not attempt to install or service the unit.

1.4.2 Electrical Safety

Power Off: Always turn off the power supply and disconnect all sources of electrical energy before installing, configuring, or servicing the Master Plus.

Proper Wiring: Use appropriate, high-quality cables and connectors as specified in the user manual. Ensure correct wiring to prevent short circuits or electric shocks.

Overload Protection: Avoid overloading the Master Plus with devices drawing more current than the unit's specifications. Overloading can lead to overheating and potentially hazardous situations.

1.4.3 Environmental Considerations

Temperature and Humidity: Operate the Master Plus within the specified temperature and humidity ranges mentioned in the technical specifications. Extreme conditions can affect performance and longevity.

1.4.4 Mechanical Safety

Mounting: Securely mount the Master Plus following the provided mounting instructions. Use appropriate hardware to prevent the unit from falling or vibrating loose. Only plastic screws (or other non conductive fixers) can be used to mount Master Plus

Physical Inspection: Regularly inspect the unit for signs of damage, wear, or corrosion. If any issues are found, disconnect the power supply and contact technical support for assistance.

1.4.5 Emergency Procedures

Emergency Shutdown: In case of malfunction, immediately shut down the Master Plus to prevent further damage.

First Aid: In case of electric shock, seek medical attention immediately. If someone is in contact with a live electrical source, do not touch them directly. Disconnect the power supply first.

1.4.6 Labels and Instructions

Read Labels: Pay close attention to warning labels, cautions, and instructions marked on the Master Plus unit. Follow these instructions diligently. Connectors and labels on the Master Plus can change without specific notification, it is a user responsibility to adjust internal documentation for proper reflecting the changes in wiring requirements.

User Manual: Familiarize yourself and other operators with the user manual. Keep it in a readily accessible location for reference.



1.5 Technical Support

If you have any questions or concerns regarding the safe operation of the Master Plus, please contact our technical support team at help@evtrip.net

By adhering to these safety guidelines, you ensure the protection of individuals, equipment, and property while maximizing the Master Plus's efficiency and longevity.



2. Function

Local access to the charge controller is possible either as the operator, as the manufacture or as user.

2.1 Intended use

The EVSE DC Master Plus charge controller, hereinafter referred to as "charge controller", is the main component of a charging system. Its purpose is to communicate with Electric Vehicle and control other devices inside charging system.

2.2 Device features

- Charge controller in accordance with IEC 61851-1, IEC 61851-23, DIN 70121, ISO 15118-2, ISO 15118-3
- Configurable master and slave operation
- Dynamic load management to optimally distribute the available power among all charging points and signal the maximum power available in each case to the vehicle
- Three-phases
- OCPP 1.6j compliant
- Embeds EVT (EVtrip proprietary communication protocol)
- Supported mobile networks: 4G (LTE) with an integrated GSM modem
- Supported connectivity: Wifi 2.4 GHz, Ethernet, Bluetooth
- External RS485 interface (Energy for Dynamic load management & Renewable Energy Management)
- User interfaces: RFID, LED, Display
- Internal temperature sensor to reduce the charging current depending on the ambient temperature

2.3 Product description

The DC EVSE controller is specifically designed for fast charging applications, typically involving high power outputs necessary for rapid DC charging. The charge controller primarily controls the charging process of an electric vehicle and monitors the internal hardware of charging systems such as power modules, the energy meter, the user interface module or the socket-outlet. It can be operated as "always-connected" that is always connected to Internet through a mobile network, WiFi or Ethernet, or as "offline mode" using RFID or Plug&Charge authorisation methods. Free charging mode is also available.

Advanced monitoring and control features are integrated to manage the high-power DC charging process, including thermal management, voltage and current regulation, and safety interlocks to protect both the vehicle and the charging infrastructure.

The controller adheres to stringent industry standards for safety and interoperability, ensuring compatibility with various electric vehicle models and charging networks.

Communication with a backend system is possible via the EVT or OCPP application protocol. The controller supports all core messages in OCPP (Open Charge Point Protocol) as well as a range of optional messages, allowing for comprehensive communication and control functionalities. This includes real-time monitoring, remote diagnostics, and firmware updates.

Integration tests with backend implementations of various charge point management system providers are required to ensure seamless operation within different charging networks. This guarantees that the controller can be effectively integrated into diverse EV charging ecosystems, providing reliable and efficient service.

By supporting robust communication protocols and offering flexible operational modes, the DC EVSE controller is a critical component in the infrastructure for electric vehicle charging, facilitating both rapid charging and extensive network management capabilities.



2.4 Operational Overview

Power Flow: The AC power from the AC 3P Power Source is fed into the DC Power Module, where it is converted to DC power. This DC power is then controlled by the DC Power Relays and supplied to the vehicle through the CCS Connector.

Monitoring and Control: The Power Meter monitors the energy usage, while the RCM and RCCBO provide safety monitoring. The PLC Module coordinates overall system control, with the IMD ensuring insulation integrity.

User Interface and Safety: The system includes a user interface with a Display and RFID Reader for user interaction. Safety mechanisms such as the Emergency Stop and alarms are in place to handle emergencies.

Communication: The system supports communication with backend systems via internet using GSM/WiFi/Ethernet as an underlying physical layer, enabling remote monitoring, diagnostics, and control.

2.5 Temperature monitoring - Load current and cooling monitoring

The charge controller is equipped with a temperature sensor, which allows the temperature in the environment of the charge controller to be estimated. Based on this estimation, it is possible to dynamically reduce the charging current or even suspend charging. This feature can serve to maintain the temperature inside the enclosure within the permissible range for the components used in a charging system.



2.6 LED indications



Status LED

Green	Power On, Charger Online
Red	Alarm
Yellow	Charger Offline, charging is possible with Plug&Charge/RFID
Blue	Charging Session ON, Charger Online
Purple	Charging Session ON, Charger Offline
Blink Blue/Purple	Charging is allowed, but no EV present
Blink White	RFID reading or Firmware update in progress



CPU

Blinking Blue	Power On, CPU is running
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Ethernet

Steady Orange and Blue	Connected without communicating
Steady Orange & Blue & Blinking Yellow	Connected and communicating



LTE Modem

No LED	Not Working
Fixed ON	Searching for Network/Allowance by SIM provider
Slow Blinking 800ms ON, 800ms OFF	Network hookup
Fast Blinking 200ms ON, 200ms OFF	Data Exchange



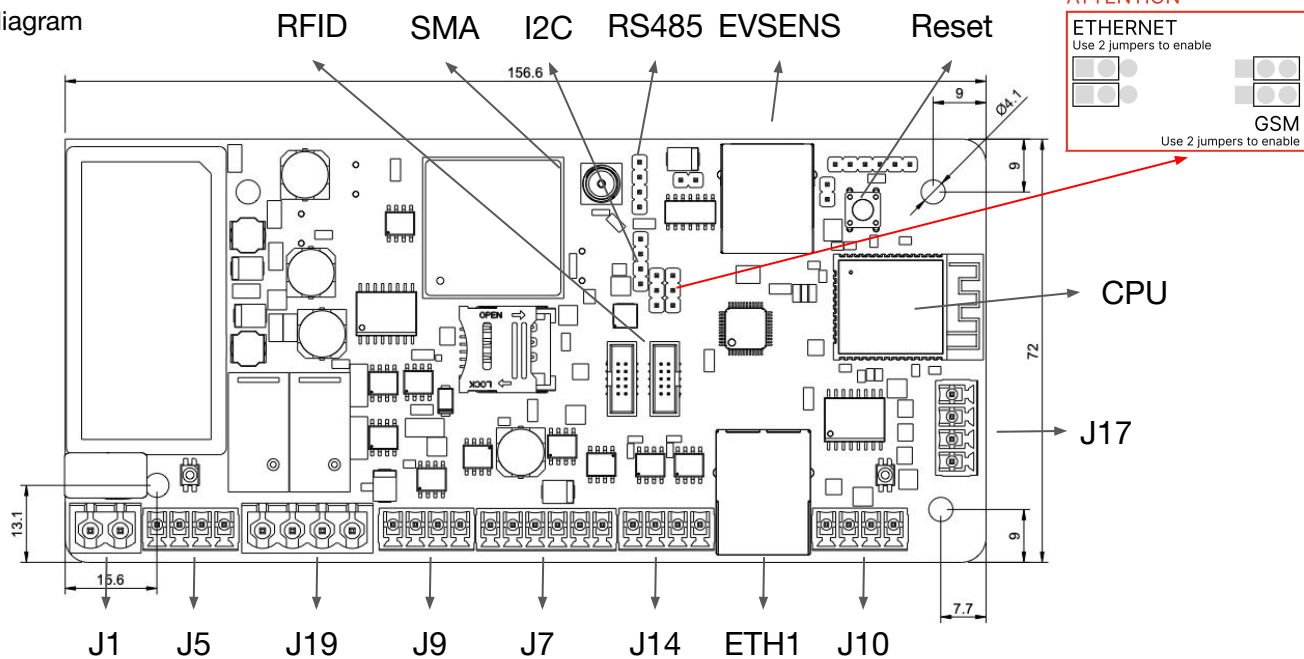
PLC Module

No LED	Not Working
Red	Power on
Yellow blinking/fixed	PLC is working



3. Dimensions

Dimension diagram



4. Connection

4.1 Connectors description



CONNECTOR

J1	AC 220V Power Supply
J5	External RGB LED2 (LEDV +12V)
J19	Control Relay 1,2 IN/OUT
J9	PP1, CP1, GND, +12VDC
J7	WILL BE CHANGED HERE
J14	External Connector 3,4; RCD1,2
J10	External Connector 1,2; S0+ Energy Meter 1,2
ETH1	RJ45 Ethernet
J17	External RGB LED1 (LEDV +12V)
EVSENS	RJ45 for RS485 (A,B,+12VDC, GND)
RS485	GND, B, A, +12V
RFID	EVtrip RFID connectors
SMA	GSM/LTE Antenna connector
I2C	I2C port
Reset	Reset Button



4.2 Connection conditions

**DANGER System parts may be live (up to 1000V)**

Electric shock: Before touching system parts, ensure that it has been de-energised.

**CAUTION Sharp-edged terminals**

Cut injuries

Handle enclosure and terminals with care.

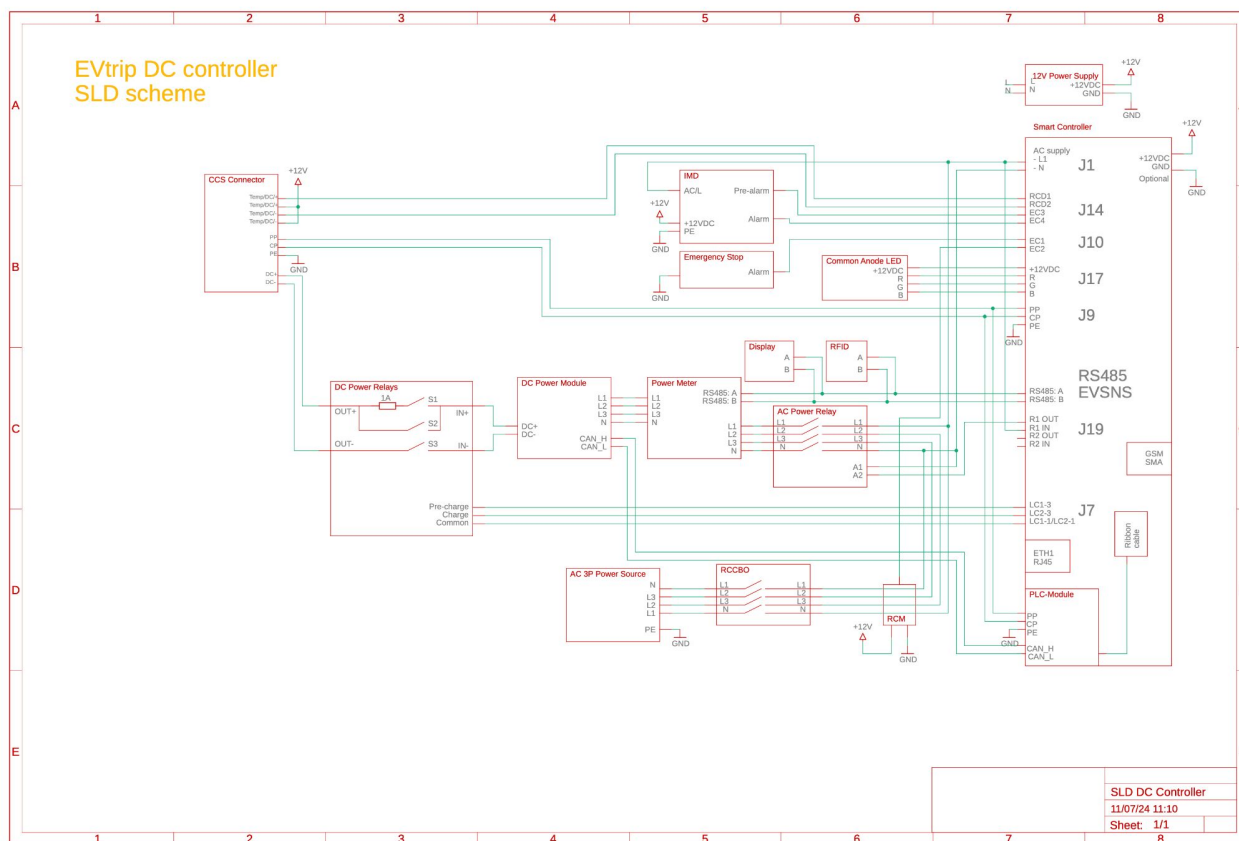
When establishing connections with the Master Plus, it is imperative to operate within specific conditions to ensure optimal performance and safety. All electrical connections must be made in compliance with the local electrical codes and regulations applicable to your area. Use high-quality, appropriately rated cables and connectors as specified in the user manual to prevent issues such as voltage drop, short circuits, or overheating. Prior to making any connections, ensure that the power supply is turned off, and verify that the voltage and current ratings of the connected devices align with the Master Plus's specifications. Correct polarity and proper grounding are fundamental; double-check all connections before applying power. Additionally, maintain a clean, dry, and well-ventilated environment around the connections, protecting them from moisture, dust, and physical damage. Adhering to these connection conditions guarantees the Master Plus's seamless integration into your system, promoting reliability and longevity.

All external components which generate electromagnetic emission such as Power Relay, Energy Meter, Socket Locker, etc must be placed as far away as possible with the EMC suppression devices. All proper behaviors must be tested during the production.



4.3 Wiring Diagram

The DC EVSE (Electric Vehicle Supply Equipment) Controller is designed to manage the charging process of electric vehicles, ensuring safe and efficient power delivery. The system configuration includes several key components and subsystems, each fulfilling a specific role in the charging process. The following description outlines the primary elements and their interactions based on the SLD.



4.3.1 Components and Connections

1. **CCS Connector:**
 - Connects to the vehicle for charging.
 - Monitors temperature (Temp DO1-4), enables pilot communication (CP, PP, PE), and manages power delivery (DC+ and DC-).
2. **DC Power Relays:**
 - Controls the flow of DC power to the vehicle.
 - Includes relays S1/S2 and S3 for switching the DC output on and off.
3. **DC Power Module:**
 - Converts AC power to the necessary DC power required for charging.
 - Receives AC input (L1, L2, L3, N) and provides DC output (DC+, DC-).
 - Communicates via CAN bus (CAN_H, CAN_L).
4. **Power Meter:**
 - Measures the energy consumed during the charging process.
 - Connects to the AC input (L1, L2, L3, N) and communicates via RS485 (A, B).



1. AC Power Source:
 - Supplies the AC power needed for the charging system.
 - Includes connections for three-phase power (L1, L2, L3, N, PE).
2. RCCBO (Residual Current Circuit Breaker with Overcurrent Protection):
 - Provides protection against overcurrent and residual current faults.
 - Ensures safety by disconnecting the circuit in the event of a fault.
3. RCM (Residual Current Monitor):
 - Monitors residual currents to enhance safety.
 - Works in conjunction with the RCCBO to detect any leakage currents.
4. PLC Module:
 - Acts as the Supply Equipment Communication Controller (SECC).
 - It has 2 communication interfaces:
 - i. Power Line Communication over CP/PE lines. SECC <-> EVCC
 - ii. CANBUS to communicate with the DC power module and EVTrip Master Board
5. IMD (Insulation Monitoring Device):
 - Monitors the insulation resistance of the system.
 - Provides pre-alarm and alarm signals to ensure safe operation.
6. Emergency Stop:
 - Allows immediate disconnection of the system in case of emergency.
 - Provides alarm signals when activated.
7. Display and RFID Reader:
 - Provides user interface for operation and status monitoring.
 - RFID reader for user authentication and authorization.
8. AC Power Relay:
 - Controls the flow of AC power within the system.
 - Contains relays K1, K2, and K3 for switching purposes.
9. Common Anode LED:
 - Indicates system status using LED signals.
 - Operates on a 12VDC power supply.
10. 12V Power Supply:
 - Supplies 12VDC power for various components within the system.

Ensures proper operation of control and monitoring devices.

4.3.2 Residual Current Monitoring

For residual current detection in an DC charging system, an integrated residual direct current monitoring connector is available (EC4). This connector is using external RCM devices that supports Analog/Digital or Open Drain outputs. This allows the use of a residual current protective device (RCD) type A instead of an RCD type B.

The relay in the charge controller is de-energised if, during the charging process, a residual current $I_{\Delta n} \geq DC 6mA$ flows.

Model	Connection PIN	Note
Western Automation RCM14	EC3, EC4	Internally pulled up to +3V3
Ivy Metering MD0630T41A	RCD1, RCD2	-/+12VDC tolerant



4.3.3 Connectivity with Modbus RTU energy meters

Energy Meter is necessary if measured values are required during normal operation. The meter is connected to the Modbus meter interface of the charge controller. Various Modbus meters are currently supported:

Model	Connection PIN	Note
Acratel ADL400	RS485	
Etigroup 3MEM80	RS485	
Enteselektronik MPR1X	RS485	
Carlo Gavazzi EM340	RS485	
IYY Metering EM118090	RS485	

4.3.4 Connectivity with S0+ energy meters

Master Plus supports S0+ Energy Meters connected to J10 terminal. Number of Pulses can be setted in the CPMS (Charge Point Management System).



4.4 Connectivity

4.4.1 Interfaces

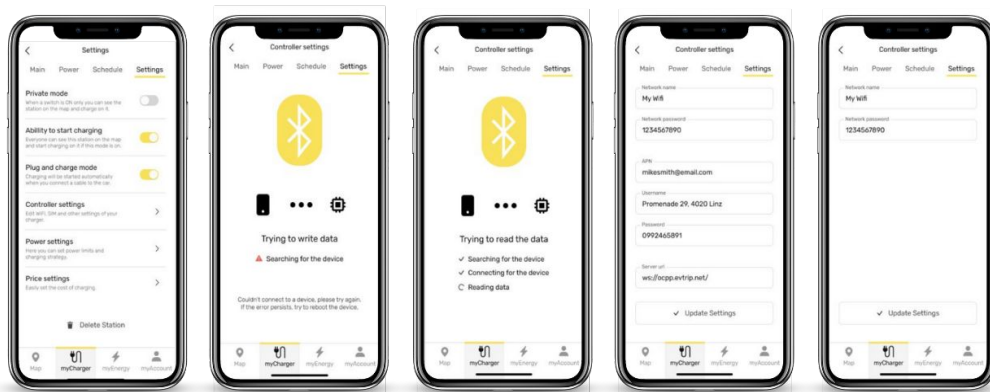
Ethernet interface

The charge controller can be connected to an existing Ethernet network via an Ethernet interface.

Wifi interface

1. Connect via Wi-Fi or Bluetooth:
 - Open the "Charger Settings" section of the app.
 - Find the "Controller Settings" option.
 - Click on "Controller Settings" you will directly connect to the charger via Bluetooth.
 - To connect the Charger with Wi-Fi, Click on "Controller Settings" enter Wi-Fi Credentials to connect the charger with the Wi-Fi, and click save.
 - Follow the on-screen instructions to establish the connection and save the settings.

By following these steps, you can customize your charger's visibility, naming, pricing plans, connectivity..



GSM-LTE Interface

The charge controller supports 4G mobile networks. A 4G modem is integrated into the device. It uses a wireless module which supports the following European frequency bands:

LTE FDD: 800 MHz Band 20, 900 MHz Band 8, 1800 MHz Band 3, 2100 MHz Band 1, 2600 MHz Band 7

GSM: 900 MHz Band 8 and 1800 MHz Band 3

WCDMA: 850 MHz Band 5, 900 MHz Band 8, and 2100 MHz Band 1

The charge controller can be operated as an "always-on system" when connected to a mobile network.

Connection is only possible when a micro SIM card is inserted in the SIM card slot located on the charge controller front panel.

Antenna socket:

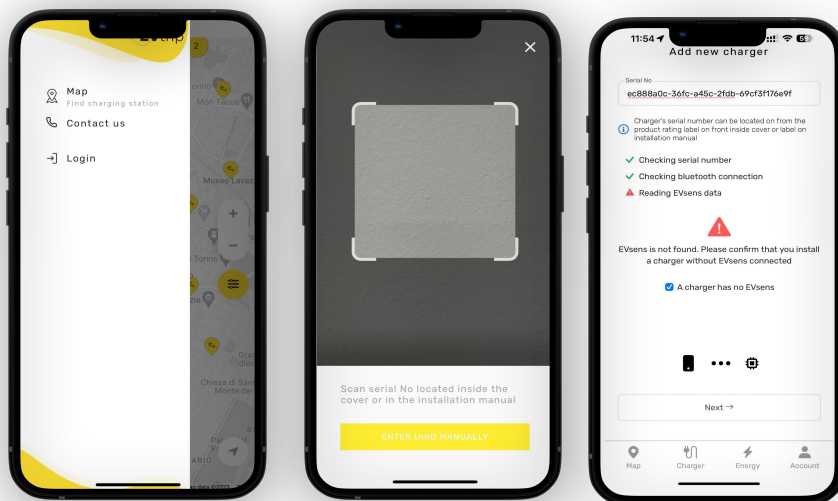
The antenna socket (SMA) enables connection to a 4G antenna (not included in the scope of delivery).



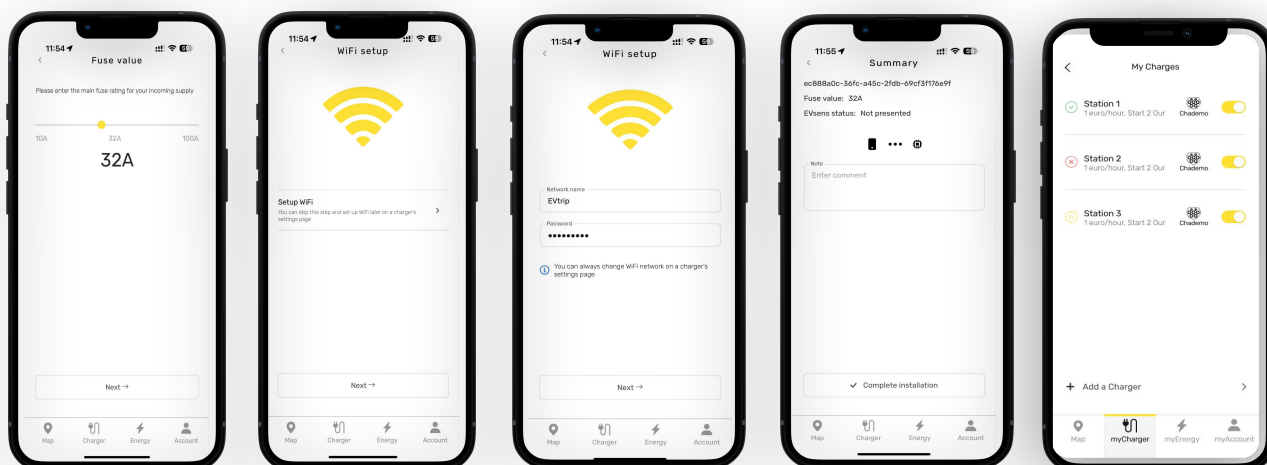
5. EVSE DC Controller Activation, Configuration and Testing

5.1 Activation

In the "Charger" section of the EVtrip app, you can add and set up charger. Here are the steps to perform these actions:



- 1.
2. Launch the App: Open the EVtrip app on your mobile device.
3. Navigate to Charger Section: Go to the "Charger" section within the app.
4. Input Charger Details: Scan the QR code or manually enter the UUID of the charger.



5. Confirm Charger Type: Indicate whether the charger has EVsens or does not have EVsens, then proceed by selecting "Next."
6. Set Fuse Level: Configure the fuse level according to the incoming supply, select "Next."
7. Configure WiFi: Provide the network name and password to set up WiFi, select "Next."
8. Review Summary: Review the summary of the charger, add any necessary notes, and select "Complete Installation."
9. Finish: The charger will now appear in the "Charger" section of the app.



5.2 Controller/Charger Setting

VIA ONLINE PLATFORM

- Login to the Demo Online Platform using your email <https://demo-adm.evtrip.net/auth/login>
- Select your controller/charger based on ID or owner's email registered
- Enter in setting page
- Modify all the information

VIA MOBILE APP

In the "My Charger Settings" section of the EVtrip app, you have full control over your charger's configurations and settings. Here are the steps to perform each action:

1. Choose Charger Visibility:
 - Select the desired charger from the My Charger's dashboard.
 - Go to the "Settings" section.
 - Toggle the visibility option to make the charger either public or private.
 - When the charger is enabled to be public it appears in the map.
 - when Public is not enabled the charger is private and will only be visible to the owner's map.
2. Rename the Charger:
 - Go to the "Settings" by choosing the Charger in Dashboard
 - Look for the "Rename Charger" option.
 - Enter the new name for your charger and save the changes.
3. Set Pricing Plans per kWh:
 - Access the "Settings" or "Charger Settings" section of the chosen charger.
 - Locate the "Pricing" or "Pricing Plans" option.
 - Define the desired pricing per kilowatt-hour (kWh) and save the settings.



5.3 EV Charging Session

VIA ONLINE PLATFORM

1. Connect the Controller to power components according with the SLD
2. Power up the system
3. Connect the charger to the EV

5.3.1 Smart mode via Mobile App

The charging session starts only through mobile app activation
My Charger >> Main >> Ready press to Start

Testing Procedure:

1. Disable Plug&Charge mode in Demo-Platform
2. Save setting
3. Set up Max Power with Mobile app or Demo-Platform
4. Insert EV charger plug into EV socket
5. Start charging session via Mobile App (My Charger>> Your Charger>>Main)
6. Charge session will start in less than 30 sec
7. Leave the car charging for at least 30 mins
8. Stop charging session via Mobile App (My Charger>> Your Charger>>Main)
9. Disconnect Plug
10. Check power down in the Order report (Mobile app or Demo Platform)

Test succeed if the the power drown is the same as the one showed in EV app or Energy Meter

5.3.2 Smart mode via RFID Tag

See RFID Reader manual for wiring information and RFID Tag registration

The charging session starts swiping the RFID token close to RFID reader, charging Session starts even if the Master Plus is offline.

To Stop the charging session, remove the plug from the EV.



5.4 OCPP Connection

To change OCPP configuration:

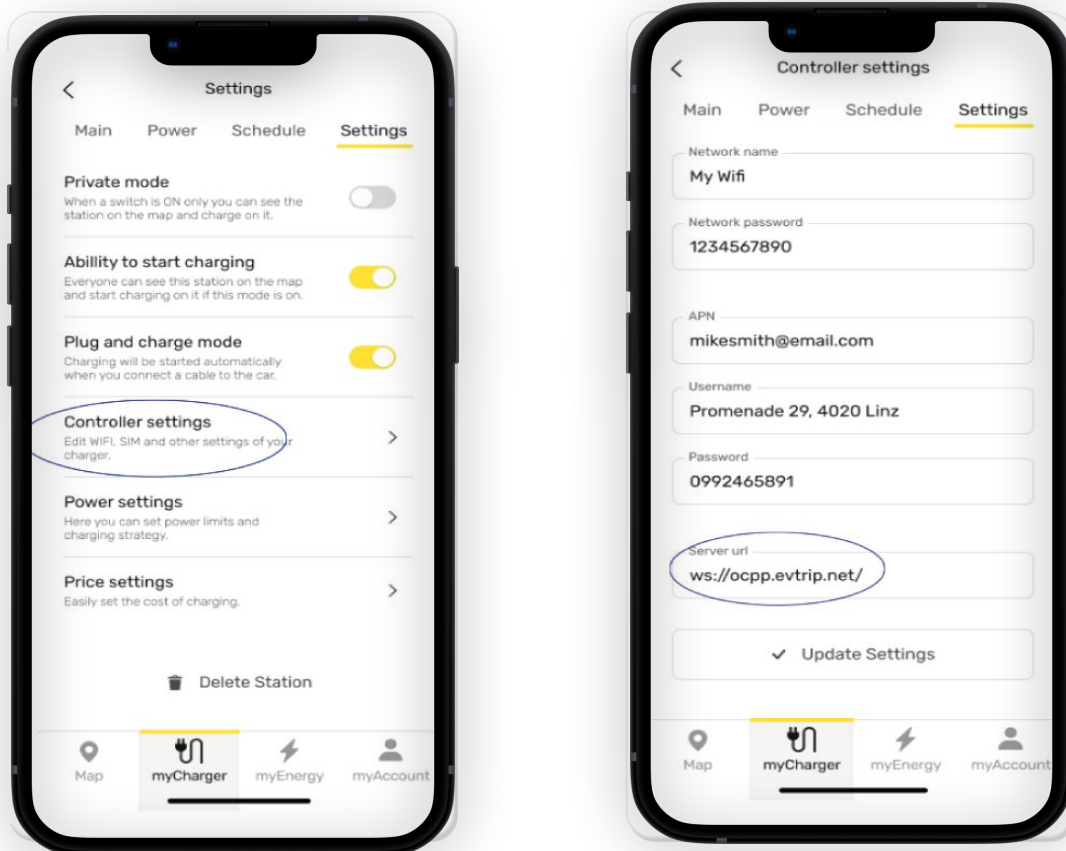
My Charger >> Setting page >> Controller Setting >> Associate with the BLE>> OCPP setting

Change ID setting according to the OCPP server provider

Change URL according to the ID

See OCPP Manual for the list of OCPP Messages supported and list of Charge Point Management Systems (CPMS) previously integrated.

Note: EVtrip has so be informed in advance if other OCPP messages or integrations with other CPMS are required. CMPS compatibility tests must be performed under EVtrip supervision.



6. Technical Data

6.1 Technical Specifications



Physical Value/unit

Weight	250 Grams
Dimensions	72x157x40mm
Material	FR4



Power Input Min. Max. Unit

Voltage	220	230	VAC
Power Cons	2	4	W
Frequency	50	60	Hz



Charger Status Indicator

Type	Quantity
RGBW LED	2



Sensors

Type Resolution/unit

Temperature sensor	-50°C to +125°C
Temperature unit	Degree Celsius



Interfaces

Type Application

RS485	EVSENS, Energy Meters
I2C	RFID, Display
SPI	RFID, Display
UART	Programming Interface



Server Communication

Type Version

OCPP	1.6j
EVtrip Proprietary Protocol	



Protection

Type Resolution

RDC-MD (Residual Direct Current-Monitoring Device)	6mA
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Connectivity

Type

Ethernet
WIFI
Bluetooth
GSM/LTE



Standard

Type

IEC 61851-1
IEC 62196
IEC 61851-23
DIN 70121
ISO 15118-2
ISO 15118-3



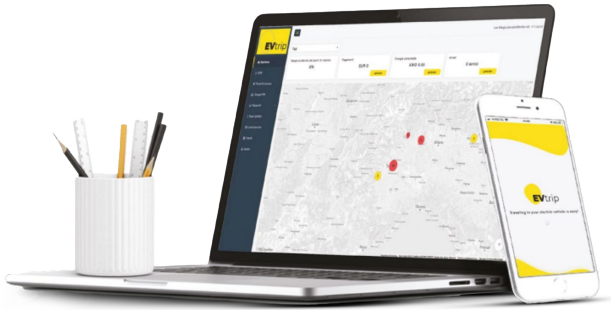
Operating Conditions

Type Range

Operating Temperature	- 25°C to +50°C
Storage Temperature	- 25°C to +80°C
Humidity	<95%



6.2 OCPP Configuration



Charge Point Management Configuration

Function	Connector 1	Connector 2
When this connector in use, is another connector Available?	Yes	Yes
Charging type	AC	AC
Connector Code	1	2
Connector Type	Type 2	Type 2
Max Connector Power	22 kW	22 kW



Supported Messages

OCPP 1.6J Message

BootNotification
 Clear Cache
 Heartbeat
 StatusNotification
 Authorize
 Start/Stop Transaction
 MeterValues
 Remote Start/Stop Transaction
 Reset
 ChangeAvailability
 GetConfiguration
 ChangeConfiguration
 UnlockConnector
 GetDiagnostics
 Offline behaviour
 Local authorisation list
 UpdateFirmware
 SetChargingProfile
 Remote Trigger





GetDiagnostics

Get Diagnostics File Format	<i>.tar.gz</i>
Get Diagnostics File Upload Protocol	<i>FTP</i>
URL example:	<code>ftp://xxxxx:zzzzz@domain.com:port/</code>
Error reply:	-11 (Out of memory), -10 (Failed to read file), -7 (ftpClientAccess failed), -8 (ftpClientLogin failed), -9 or -12 (ftpClientConnect failed)



RFID management (Local Authorization list)

RFID Tag example	<i>25eccd59000000</i>
RFID Tag Length	<i>7 hex max</i>
Max Local List RFID Tags No	<i>20</i>
RFID behaviour	<i>RFID StartTransaction, detach EV (state A) to StopTransaction</i>



Firmware update

Update Firmware File Format	<i>.bin</i>
Max and Avg Firmware File Format	<i>Max 2Mb, Avg 1.5Mb</i>
Security protocol:	<i>https from EVtrip servers only</i>
Security options:	<i>Save Boot, Inscription. Certificates</i>



MeterValues

	Unit	Comment
Energy.Active.Import.Register	Wh	Cumulative data
Power.Active.Import	W	

Note: Sent only of transactionId>0 and State is Charging





Offline behaviour

Narrative

StatusNotification message
 Start/Stop transaction message
 Maximum No of Offline events
 Timestamp sync events

Behaviour

Not sent
 Sent in chronological order with a historic timestamp
 50
 BootNotification, Heartbeat



Charging Profile

Narrative

chargingRateUnit
 chargingProfilePurpose
 Profile max number
 Clear Charging Profile

Value

A
 ChargePointMaxProfile
 1
 Not Implemented, use SetChargingProfile instead



EVDisconnected behaviour

EVDisconnected event is triggered when EV is absent (State A) for more than 30 seconds, StopTransaction (if any) is either saved locally (offline) or sent to a CPMS



Compatibility



AMPECO

ETREL



beagleplug®

E-Flux
by road



6.3 Ordering Details

6.3.1 Direct Order:

Customers can place a direct order for the Master Plus units via an email writing us at info@evtrip.net , with your shipping address, payment details, and other necessary information. Once the order is confirmed, you will receive an order confirmation email with the details of your purchase. Direct orders ensure a streamlined process, and you can track your order status directly through our website with the tracking code we will be providing after the confirmation. For any inquiries or assistance with the direct ordering process, please contact our customer support team at help@evtrip.net

6.3.2 Third Party Order:

Alternatively, customers can also place orders for the Master Plus units through authorized third-party distributors and resellers such as Digikey.com. We have established partnerships with reputable distributors who stock our products and can provide tailored solutions for your specific requirements. To place a third-party order, please refer to this link: Digikey.com.

Third-party orders offer the convenience of localized service and support while ensuring the authenticity of the products. For a list of authorized distributors or assistance in locating a distributor in your region, please visit our official website or contact our sales team for recommendations.

6.4 Service Level Agreement

If the first line of user support performed by the Manufacturer is unable to resolve the technical issue with the mobile app, back-end system, or electronics provided and/or designed by EVtrip, EVtrip and its technicians will take the necessary actions to resolve the issue in accordance with the following:

Critical technical issues are severe malfunctions of the hardware or software provided by EVtrip that limit the normal use of all or most of the service provided (e.g., mobile apps not working, back-end system unresponsive, etc.) and must be resolved within 24 hours of the Manufacturer's request.

Normal technical issues are malfunctions affecting a small part of the hardware or software and involve individual or a limited number of Manufacturer users (e.g., charging point is inactive, some pages of the back-end system not functioning as expected, some mobile app features not working) and must be resolved within 7 working days from the submission of the Manufacturer's Support Request Notice.

Minor technical issues are all others and will be resolved in accordance with EVtrip's internal development.

Technical issues do not include missing features that were not designed by EVtrip before the event that revealed the need for such functionality (e.g., inability to use PayPal account as a payment method or a specific workflow), malfunctions due to components and processes not designed and/or provided by EVtrip (e.g., wiring, non-functioning power relays, non-compliant electrical system, etc.).



Notices and communications regarding technical issues must be sent via email with email receipt confirmation to help@evtrip.net attaching the Support Request Notice containing the following information:

Support Request Notice

- Controller UUID
- Description of the issue
- Detailed procedure to reproduce the error
- Logs and debug information received during the incident or reproduction
- Photos and videos of LED behavior during the incident
- Installation Certificates
- Any other relevant information



Important Contact Information:

For technical support and inquiries, contact our technical customer support team at help@evtrip.net or info@evtrip.net

Disclaimer: The information in this manual is subject to change without notice. Check our official website or contact customer support for the latest updates.

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