

EUNICE WIND

EEG-2S-22P-D

INSTALLATION AND OPERATION MANUAL



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1. ABOUT THIS MANUAL

This manual describes the EEG-2S-22P-D charger, providing all information for the proper reception, installation, and start-up configuration.

1.1 SCOPE

This manual applies to the following models:

- EEG-2S-22P-D

1.2 RECIPIENTS

This document is intended for qualified personnel only.

The status of qualified personnel referred to in this manual will be, at a minimum, that which meets all the standards, regulations, and laws regarding safety applicable to the tasks of installing and operating this charger.

The responsibility for designating qualified personnel will always fall to the company which operates the equipment. It is necessary for the company to decide which workers are suitable or not for carrying out specific tasks, while preserving their safety by complying with occupational safety legislation.

The company is responsible for providing appropriate training in safety legislation to their personnel and for familiarizing them with the contents of this manual according to EU and respective national legislation.

1.3 WARNINGS



This indicates a hazard to personnel.



Indicates importance



Additional information or references to other parts of the document or documents.

1.4 LANGUAGES

The original instructions of the document are in English. All other language versions are translations of the original document.

2. IMPORTANT SAFETY INSTRUCTIONS

This manual contains important instructions concerning the installation, handling, use and maintenance of EEG-2S-22P-D charger. The following sections describe the various safety measures that must be taken into consideration.

2.1 SAFETY CONDITIONS

2.1.1 General Warnings



The entire manual must be read and understood in full prior to handling, installing, maintaining, or operating the charger.



Opening the enclosure does not imply there is no voltage inside. Only qualified personnel may open it and follow the instructions in this manual. The risk of electric shock exists even after disconnecting from the grid.



It is strictly forbidden to gain access to the internal of the charger through any other point than the access cover provided for this purpose.



Keep this manual for later reference.

2.1.2 Potential Hazards for People

Electric shock:

The equipment may remain charged after disconnecting the grid power. Carefully follow the mandatory steps in the manual for removing the voltage.

Explosion:

There is an extremely low risk of explosion in specific cases of malfunction. The enclosure will protect people and property from the explosion only if it is correctly closed.

Crushing and joint injuries:

Always follow the instructions in the manual when moving, storing, and installing a charger. The weight of this charger can cause injury if not handled correctly.

2.1.3 Potential Hazards for Equipment

Do not touch printed circuit boards (PCB) or other electronic components. The more sensitive components can be damaged or destroyed by static electricity.

Do not disconnect or connect any terminal while the charger is operating. Disconnect and check for absence of voltage first.

2.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

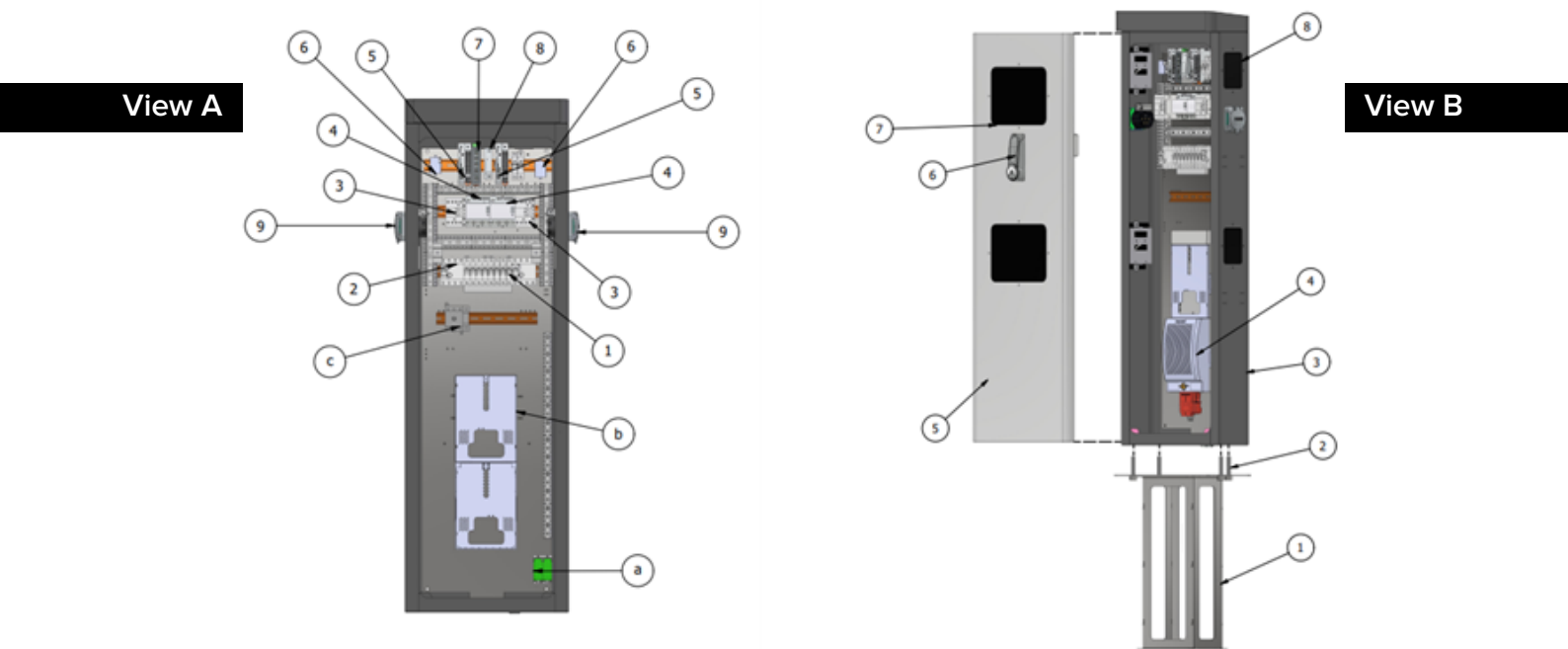
At a minimum, the following must be worn when working on the charger, otherwise stated by local authorities:

Description
Working Clothes
Safety Footwear
Hard Hat/Safety Helmet
Working Gloves
Dielectric Gloves

Table 1. Suggested Work Equipment

3. PRODUCT DESCRIPTION

3.1 PRODUCT OVERVIEW



Picture 1. Product Overview (View A, Internal), (View B, External)

Notation	Description
1	Miniature Circuit Breaker (MCB)
2	Residual Current Detector Type A 30mA
3	MID Energy Meter
4	Contactor
5	Charging Controller
6	DC Leakage Sensor 6mA
7	Ethernet Switch
8	Power Supply
9	Charging Socket with LED
a	Ground Connection Terminal
b	Mounting Plate for CAM
c	Main Switch

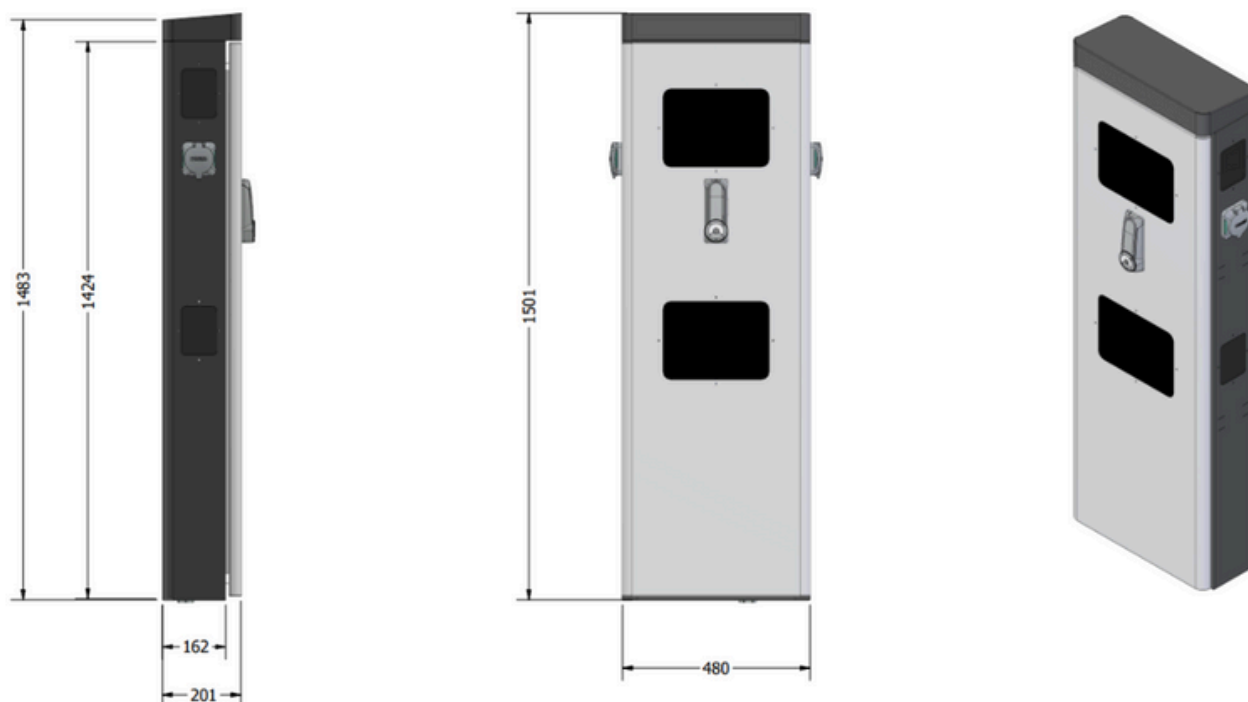
Table 2. Component List (View A)

Notation	Description
1	Metallic Base
2	Bolts
3	Casing (Enclosure)
4	CAM
5	Door
6	Door Handle
7	TFT Screen (Optional)
8	RFID

Table 3. Component List (View B)

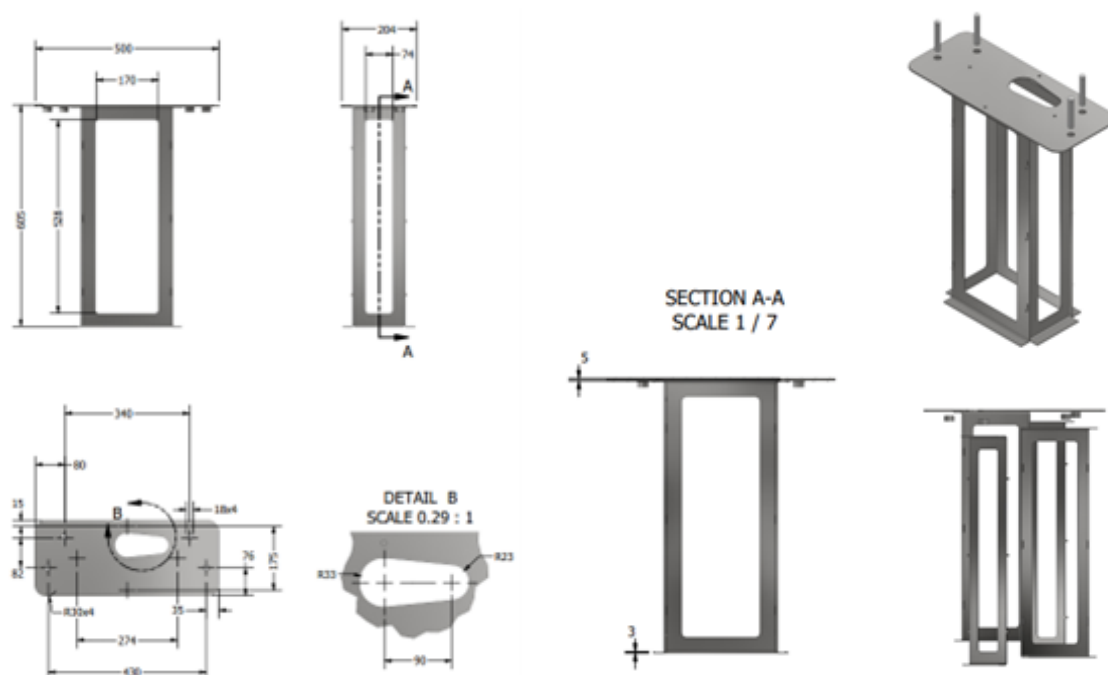
3.2 TECHNICAL DRAWING

Charging station external dimensions in mm are shown in the figure below:



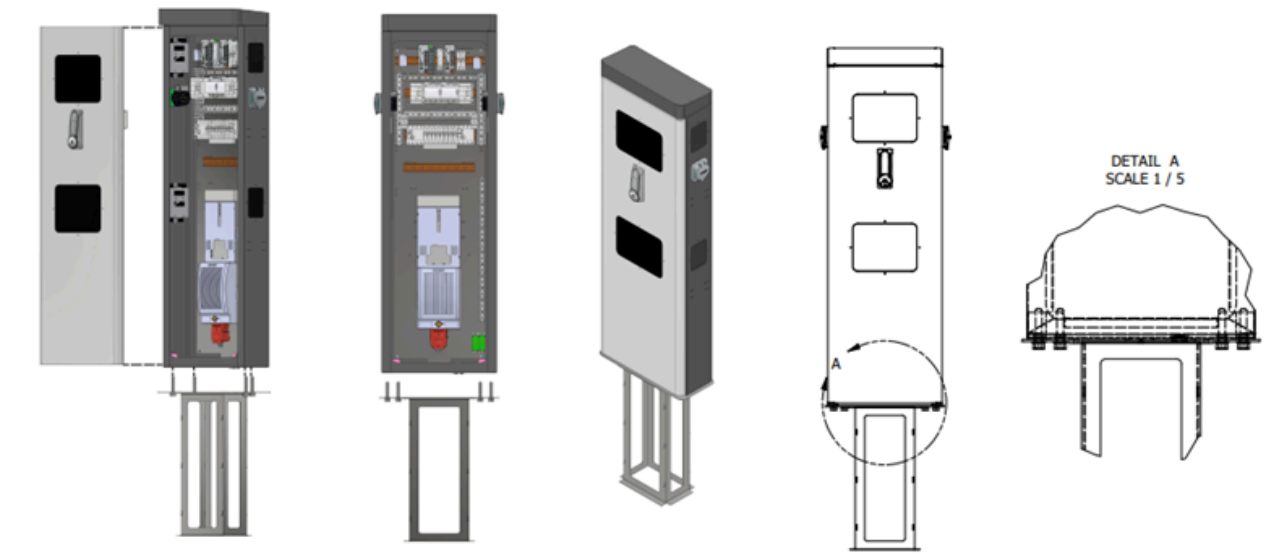
Picture 2. External View of Charging Station

The foundation anchoring assembly consists of a metallic base structure shown in the figure below with its respective dimensions.



Picture 3. External View of Charging Station Metallic Base

The charger is fastened to this metallic base using the metal foundation shown in figure below:



Picture 4. View of Charging Station with its Metallic Base

For a detailed installation procedure see section 5.

3.3 PRODUCT CHARACTERISTICS

The EEG-2S-22P is a three phase AC, dual socket, Type 2 mode 3 EV charger that allows simultaneous charging of two vehicles.

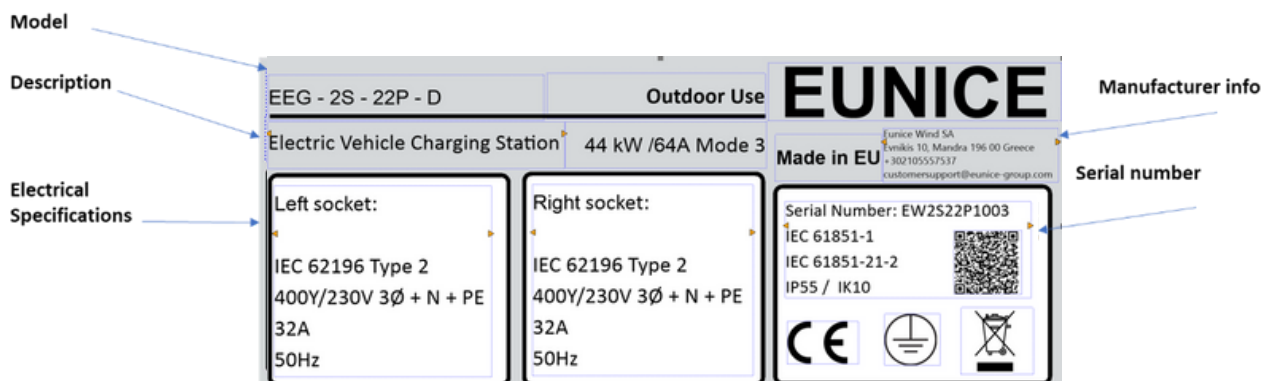
It is designed for both indoor and outdoor use and can be installed in locations with unrestricted access. Main product specifications can be found in the following Table.

Model	EEG-2S-22P-D
Charger Type	Type 2 Mode 3
Number of Sockets	2
Electrical Characteristics	
Rated Power per Socket	22kW (32A) AC
Type of Sockets	Type 2 (IEC 62196-2)
Nominal Voltage (Ue) - Mains	400 V AC (3-phase)
Grounding Systems	TT & TN
Nominal Insulation Voltage (Ui)	440V
Impulse Voltage (Uimp)	4kV
Frequency	50Hz
Rated Current (InA/Icn)	63A/22A
Nominal Peak Limit Current (Ipk)	15kA at 400V
Rated Short-Circuit Capacity (Icn)	10kA EN 60898 at 230V
Rated Short-Circuit Capacity (Icu)	15kA IEC 60947-2 at 230V & 400V
Conditional Short-Circuit Current (Icc)	10kA
Max. Short-Time Current (Icw) & Associated Duration	10kA/1sec
Metering	MID kWh meter per socket
Protection Against Electric Shock	Class I
Surge Protection Device	T1/T2/T3 (optional)
Environment	
Environmental Conditions	Indoor & Outdoor Use
Operating Temperature	-25°C / +50°C (-30 optional)
Storage Temperature	-40°C / +80°C
Humidity	5...95% (non-condensing)
Altitude	2000m (Consult Manufacturer for Higher Altitudes)
Ingress Protection (IP)	IP54
Ingress Protection (IK)	IK10
Corrosion Protection	ISO 12944-5, Corrosivity Category: C4
Pollution Degree	3
Connectivity	
Communication	Ethernet/2G/4G/WiFi(optional)
Communication Protocol	OCPP 1.6, OCPP 2.0.1 (future update)
User Interface	Screen 7" display (optional)
User Identification	Contactless RFID Card (MIFARE/NFC)
Status Indication	LED
General	
Dimensions (w/d/h)	480/200/1500 mm
Weight	<60kg
Compliance	
Standards	IEC 61851 Series, ISO 15118
Compliance	CE, LVD, MID, RoHS, WEEE
Mounting	Ground/Floor

Table 4. General Product Specifications

3.4 MARKING PLATE

Below you can find an example of the marking label of the charger with explanation.



Picture 5. Example icon of marking plate

The marking label is on the inside of the enclosure door. The QR code on it refers to this charger installation and operation manual. The manufacturer reserves the right to update the label according to the latest changes to the product.


4. RECEIPT, TRANSPORTATION & STORAGE

4.1 RECEPTION

Keep the charger in its packaging until immediately before installation. The charger, along with its installation kit, is packaged using a corrugated cardboard packaging solution.

4.2 EQUIPMENT IDENTIFICATION

All chargers are delivered with specification plates marked with a unique serial number.

 Refer to section 3.4 for more details.

You must quote this number in any communication with EUNICE WIND.

4.3 TRANSPORTATION DAMAGE

If the charger has been damaged during transportation, do not proceed with the installation, and notify the distributor.

The original packaging must be used should the charger be returned to the manufacturer.

4.4 TRANSPORT

Although the enclosure has been tested against mechanical impact and ingress protection, the charger must be protected from mechanical impact/shock or any situation that may cause damage.

The charger must be transported in either a horizontal or vertical position using the following methods:

- Folding Trolley
- Pallet truck
- Forklift truck

 The user manuals of each must always be read and understood prior to use.

4.5 UNPACKING

The charger must be handled correctly to mitigate the risk of damage.
Unpacking must be performed with the charger in a **horizontal position**.

4.6 STORAGE

! If the charger is not installed immediately after reception, the following points should be considered to avoid damage:

- The charger must be stored in its original packaging.
- Keep the charger free of debris.
- Keep it away from water splashes, welding sparks, etc.
- Cover the charger with a breathable protective material to prevent condensation due to ambient humidity.
- Chargers in storage must not be subjected to weather conditions other than those indicated in section "General Specification table."

5. INSTALLATION INSTRUCTIONS

Installation of the EEG-2S-22P-D involves the assessment and use of an appropriate foundation type (metallic base) as described in this section.

5.1 UNLOCKING PROCESS

The access door of the charging station is fitted with a lever for two cylinders. The left cylinder belongs to the owner of the charging station (CPO) and the right to the grid operator.

a. Opening of the access door

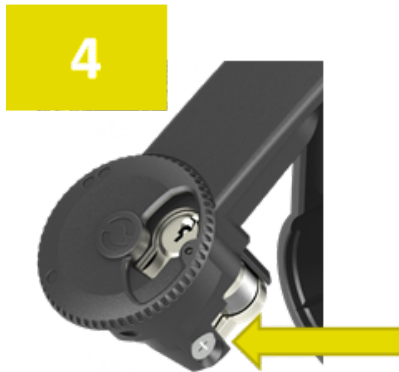
To open the access door, follow the next steps

1. Use the supplied key/s or the supplied passe-partout key if no cylinders are installed to open the lock (View B, 6)
2. Extract the lever from the lock
3. Move the lever to the left or right to open the door



b. Installing grid operator cylinder

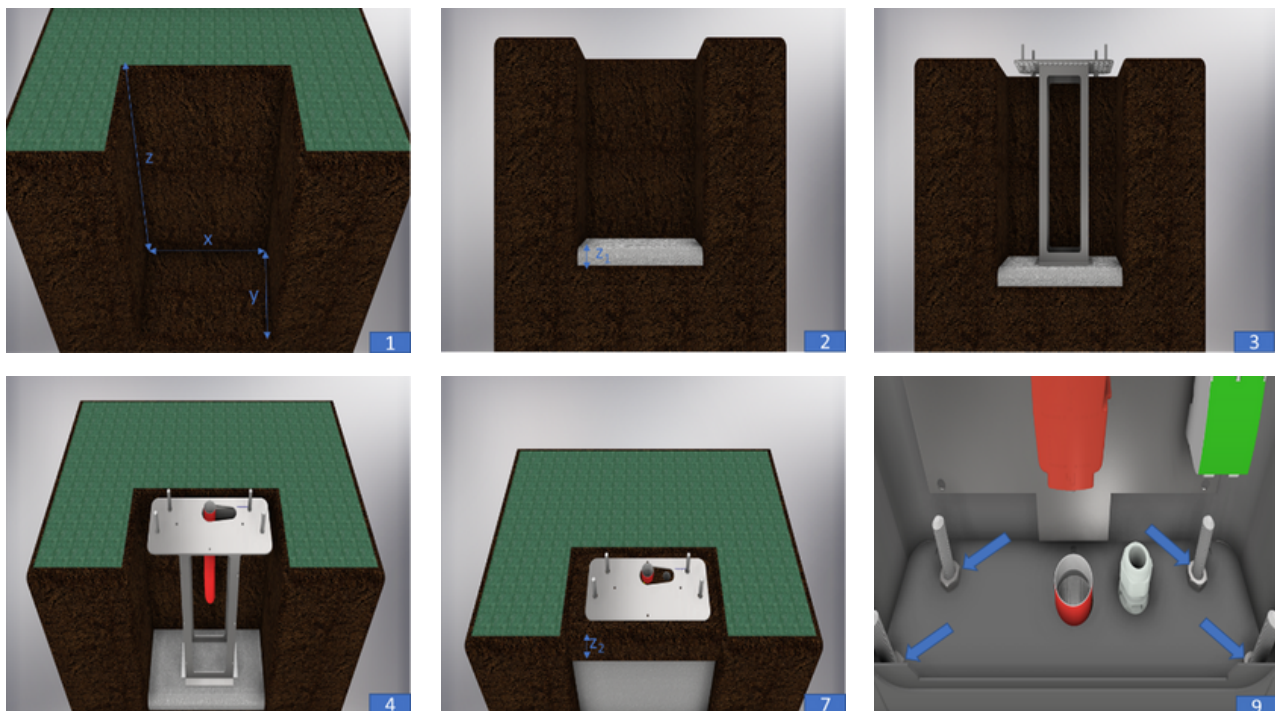
4. Insert the cylinder in the lever by adjusting properly the locking cam and secure it with the supplied M5 screw



5.2 INSTALLATION PROCESS INSTRUCTIONS

Follow the next steps for charger installation:

1. Dig a hole of $z = 650\text{mm}$ depth and of a $x = 600$ & $y = 300$ mm surface area
2. Level the first $z_1 = 50\text{mm}$ with a quick drying concrete
3. Place the metallic base inside the hole after the first layer of concrete hardens
4. Feed the red cable pipe (of power supply cable) through any of the four openings of the metallic base
5. Earthing cable at installation might be available on a separate pipe, so follow step 4. for this case as well.
6. Check that the metallic base top plate is levelled with the ground and make the appropriate corrections to align in all directions.
7. Fill in the hole further with quick drying concrete to cover up to $z_2 = 100\text{mm}$ from the ground surface
8. Once step 7 is completed and the concrete is hardened, fill in the rest of the hole with material matching the installation (soil/pavement, etc.)
9. The fasteners included in the packaging should be used for fastening the charger after attaching it to the base



Picture 6. Installation preparation instruction steps

6. POWER SUPPLY CONNECTION

This section describes the requirements and process for connecting the power supply cabling to the charger. Please read carefully before starting the connection process.

6.1 SAFETY INSTRUCTIONS FOR CONNECTING POWER SUPPLY

- ⚠ • Make sure there is no voltage present on the unit before starting the connection.
- Do not switch on the power to the unit until you have successfully made the rest of the connections and the unit is closed.
- Use the Personal Protective Equipment specified in section 2.2 “Personal Protective Equipment (PPE)”.
- During the connection, make sure of the proper installation of the cables on the unit's terminals so that active parts are not left uncovered.
- Respect the polarity of the power supply wiring.
- ⚠ • EUNICE WIND accepts no liability for any damages caused by an incorrect connection.

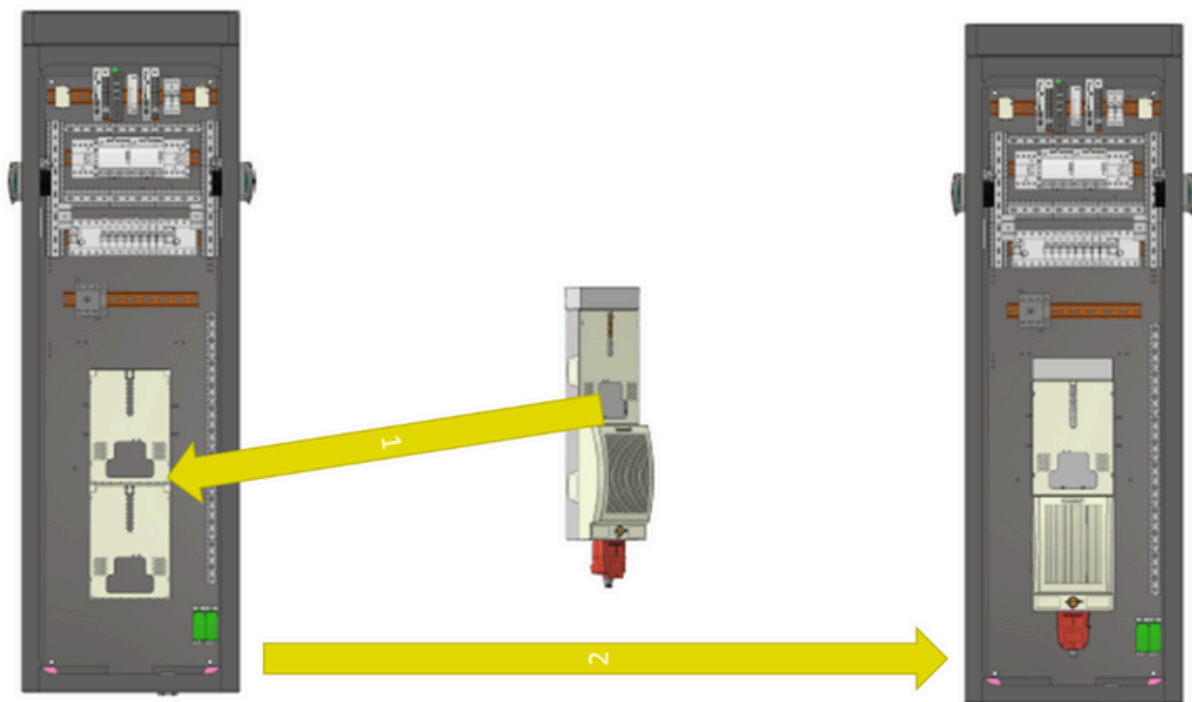
6.2 WIRING REQUIREMENTS

- The charger must be properly earthed.
- The power supply connection must be made using the appropriate cabling.
- Use wire end ferules when terminating the cables.
- The dimensioning of the ground wiring will be the responsibility of the installer and must meet applicable regulatory requirements.

ⓘ Galvanic coupling and measures to mitigate the risk of such an occurrence must be considered if aluminum cables are chosen for installation.

6.3 POWER SUPPLY CONNECTION PROCESS

The charging station is designed to comply with Elaad Connection Specifications v3.0 and thus it is equipped with a special mounting plate design to attach the CAM (View A, b).

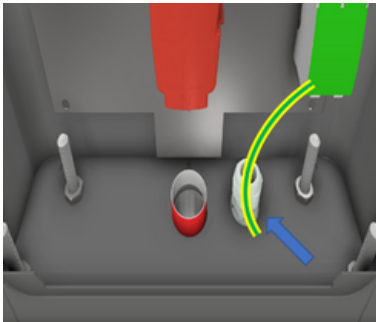


Picture 7. Mounting position of grid operator PLO

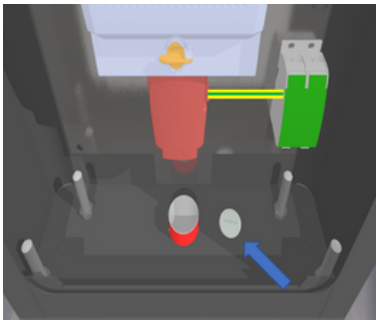
The installation of the power supply cable together with CAM (PLO) and power plug (red) and main charging station fuses (inside the PLO) is the responsibility of the grid operator.

Follow the steps below for safe operation during installation:

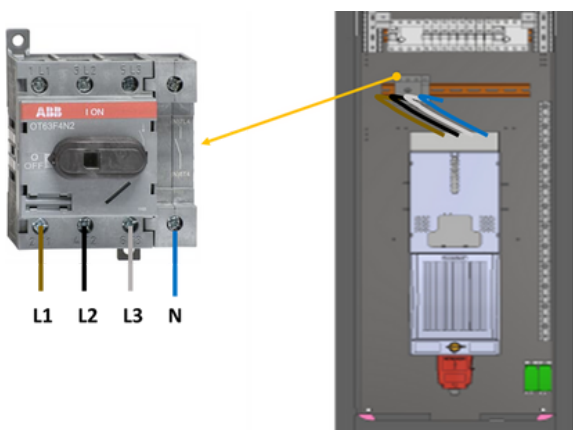
1. Switch off the all the components that provide electrical isolation like the main switch (View A, c), the miniature circuit breakers (View A, 1) and the RCDs (View A, 2) before you connect the power supply to the charging station
2. Connect installation earth cable to the ground connection terminal (View A, a)
 - If the cable is coming separately from the power supply cables, feed it through the dedicated hole of the cabinet with a cable gland as shown in the picture below



- If the earth cable is coming together with the power supply cables you can branch it from the red plug of the PLO as shown below



3. Connect the phase and neutral wires coming out from the grid operator meter to the main switch (View A, c) as shown below




4. Turn on the power line from the main panel of the power supply system.
5. Before you switch on the devices from step 1. use an electric multimeter to verify appropriate phase and line voltages at the input side of the main switch (shown in step 3 as well)
6. Switch on the devices and wait for the charger 3-5 mins to boot up

7. COMMISSIONING OF THE CHARGING STATION

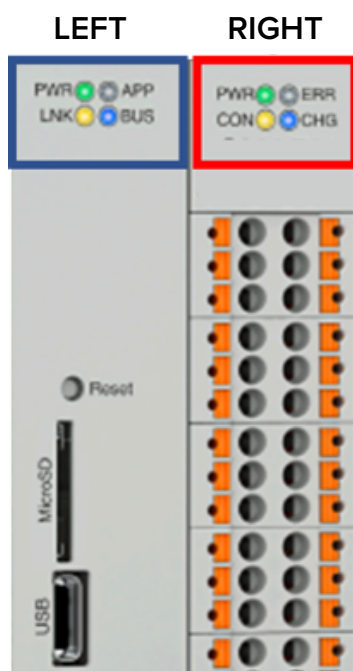
7.1 CONFIGURATION

Configuration of the charger is performed by Eunice Wind prior to shipment. Pre configuration for the connection of the charger to the back-end platform can be performed either prior to the shipment or at the connection site.

 Detailed documentation of the configuration procedure and configuration parameters can be provided by the manufacturer.

7.2 TEST BEFORE OPERATION

After the system has booted successfully (§6.3, step 6) check LED indications (Positions Left and Right on picture below) of the charging controller to verify status of the device based on the following table.



Position	Designation	Meaning	
Left	PWR (green)	System Control Status	Heartbeat: Embedded system in boot phase On: Embedded system ready for operation Flashing: Update Active
	APP (red)	Application Software	Flashing: OCPP agent active, but no connection to the backend Off: OCPP agent active, connection established to the backend
	LNK (yellow)	Cellular Connection	Flashing: Modem establishing connection On: Modem is logged into the cellular network
	BUS (blue)	Backplane bus (via the DIN rail connector)	Flashing: Addressing bus devices in the backplane bus On: Module defined as the client in the backplane bus
Right	PWR (green)	Charging Interface Status	Flashing: Charging controller starting up On: Charging controller ready for operation
	ERR (red)	Error Status	Flashing: Error status with an external cause (on vehicle side, charging cable, residual current, etc.) On: Error status in the charging controller Off: No error
	CON (yellow)	Charging Connector	Flashing: Valid charging connector detected in the charging socket On: Charging connector locked in the charging socket Off: No charging connector detected in the socket
	CHG (blue)	Vehicle Communication	Heartbeat: Vehicle connected (status B1) Flashing: Vehicle connected, charging enabled On: Vehicle is being charged Off: Charger available (status A) if ERR (red) Off as well

Next step is to proceed to a test charging session. For that you will need an EV or an EV test equipment similar to the picture below:



Each charging socket has LED status indicators on their protective cover as shown in the picture below.



The LEDs are completely configurable with respect to different charging station status and events based on customer needs. The customer has the choice to receive the charging station pre-configured from the factory prior to shipment or set it during commissioning based on configuration instructions provided by the manufacturer.

Below you can find two popular examples of charging socket LED configurations:

Configuration Socket LEDs #1

State	LED Indication
Charger Available (Status A)	Green Solid
EV Connected (Status B)	Yellow Solid
Charging (Status C)	Blue Solid
Error (Status E/F)	Red Solid

Configuration Socket LEDs #2

State	LED Indication
Charger Available (Status A)	No Light
EV Connected (Status B)	Green Solid
Charging (Status C)	Blue Solid
Error (Status E/F)	Red Solid
Charging Card Rejected	Red Flash

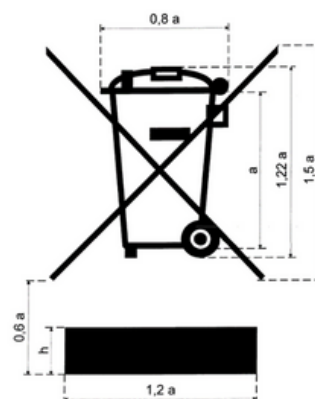
8. WASTE HANDLING

The charging station may contain components or materials that might be harmful to the environment and human life if not handled properly.

Thus, after the end of the charger's life, a waste management process must be carried out according to WEEE directive.

EUNICE WIND S.A., in accordance with its own environmental respect policy, is responsible for supporting its customers with this process.

As a responsible manufacturer and in adherence to the Waste Electrical and Electronic Equipment (WEEE) Directive, EUNICE WIND S.A. is committed to minimizing the environmental impact of our electric vehicle charging stations. The WEEE Directive aims to encourage responsible disposal and recycling of electrical and electronic equipment in order to reduce potential environmental and health hazards associated with improper waste management.



Components that are marked with a crossed out wheeled bin are electrical and electronic equipment. These components must not be disposed of with regular household waste. Users are obligated to responsibly dispose of this product in accordance with local regulations for electronic waste.

End-of-Life Disposal Instructions

Product Disposal: At the end of its operational life, this EV charging station should be taken to designated collection points for recycling electrical and electronic equipment. Contact your local municipal or recycling center to identify the appropriate disposal channels.

Battery Disposal (if applicable): If this charging station contains a battery, it must be removed following the manufacturer's instructions before disposal. Batteries should be recycled separately at specialized collection points.

Note: This is not applicable for EEG-2S-22P-D

Environmental Benefits of Recycling

Recycling electrical and electronic equipment contributes to the conservation of natural resources, reduces energy consumption, and minimizes the release of harmful substances into the environment. By participating in the proper disposal of this product, you are actively supporting sustainable practices and helping to protect our planet.



CONTACT DETAILS

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