enelion

Installation guide

enelion.com/en/help

MODEL LB-32-3-X-0-X-XX-MRG-00
MODEL LB-32-3-X-0-X-XX-RG-00

LUMINA

3in1 modular structure – build and upgrade your dreamed solution using the same base module.
Quick installation – get your EV charger ready to work online in no more than 15 minutes of the installation process.

Dear Our Loyal Customer

Congratulations on your purchase of the Enelion charger and thank you for your trust.

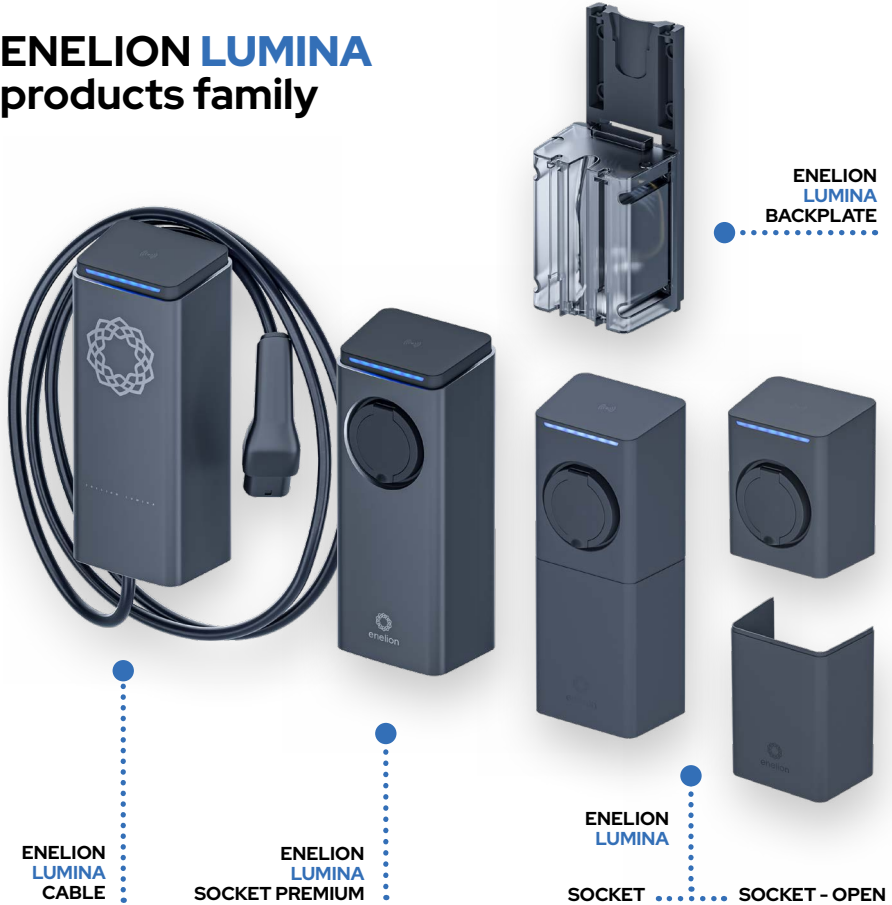
Before installing the device, please ensure that the box contains all of the components.

The current version of the operating and installation manual is available at:
enelion.com/en/help

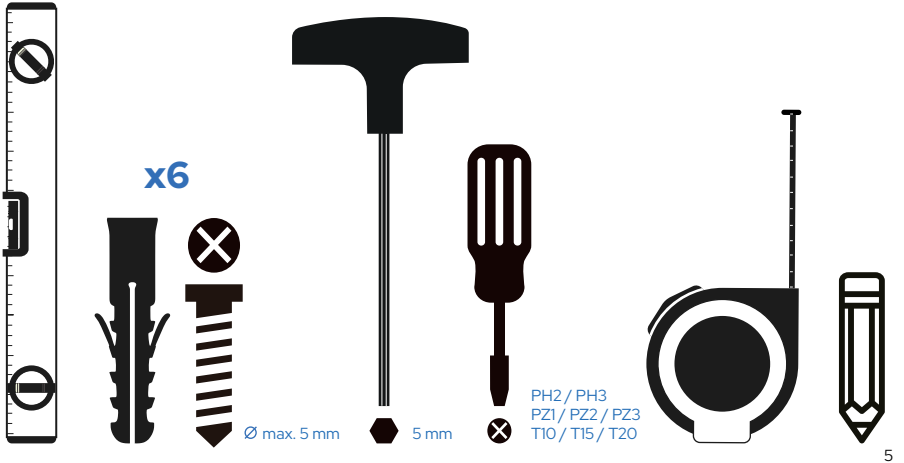
Please read this manual before attempting to install or commission the charger.

Table of content

ENELION LUMINA products family



Additional tools necessary for installation



Features


INTERFACE LED
RFID
LTE
SOCKET TYPE 2
WI-FI
SPACE FOR OPTIONAL
BACKUP POWER SUPPLY
SPACE FOR OPTIONAL
CERTIFIED ENERGY METER
SPACE FOR OPTIONAL
230V CEE 7/3 SOCKET

Technical specifications

Cover	Resistant to weather conditions; polycarbonate housing / anodized aluminium*
Ingress protection	IP54
Impact protection	IK10
Flammability rating	UL94-V0
Charging connector	AC Type 2 socket with safety lock (option to be locked permanently by the user), complies with IEC 62196-2 / AC Type 2 cable range 5 m (7.4 kW) and 7 m (22 kW)*; EN 62196-1
Residual current protection*	Integrated Enelion RCMB 6 mA DC / requires additional RCDA and 40 A overcurrent protection breaker within the circuit
Energy meter	Integrated 3-phase with ±1% reading accuracy
MID Energy meter	Built-in* / digital, complies with ModBus (RS485)**
User interface	LED Light status bar; dedicated mobile application that connects with the EVSE via OCPP 1.6**
Online communication module	• Integrated LTE/4G modem (allows to install two microSIM cards** – one slot is open, second is occupied by Enelion microSIM card) • WiFi 2.4 GHz b/g/n – direct access point to EVSE with functions of HotSpot hiding and Wi-Fi connection
ISO 15118	Digital commutation of EVSE complies with ISO 15118**
V2G	EVSE fully complies with the V2G requirements
OCPP	EVSE Communication complies with the protocols OCPP 1.6 J and OCPP 2.0.1**
User authorization	• RFID/NFC – Mifare Classic / Free Charge • Dedicated mobile application that connects with the EVSE via OCPP 1.6**

Charging current/power	7.4 kW / 32 A / single-phase 22 kW / 32 A / 3-phase (TN earthing configuration)
Charging voltage	3 x 400 V AC / 230 V AC (±10%)
Supply voltage	3 x 400 V AC / 230 V AC (±10%) (TN / IT) The power cord can be fed in from the top, bottom or through the back of EVSE
Other	• Battery backup of the control module power supply* • Wireless communication with other Enelion EVSEs and Enelion Energy Guard • Configuration of the station does NOT require any additional tools • Dynamic Load Balancing* • Remotely controlled schuko socket* • Temperature and humidity monitoring inside the EVSE • ModBus interface (RS485)
Operating temperature	-30°C to +55°C
Max. above sea level	2000 m
Height	390 mm
Depth	133 mm
Width	155 mm
Weight	Approx. 3 kg
Complies with the norms:	2014/53/EU (RED) 2011/65/EU (RoHS) 2014/30/EU (EMC) 2014/35/EU (LVD)

* optional
** shall be available from the second generation of the 3.0 EVSE

Safety instructions

Please read this manual before attempting to install or commission the charger.

Safety instructions for installation

- Do not carry out outdoor installation during precipitation or strong winds if there is a risk that water or debris may enter the device.
- Carry out all operations described in this manual after ensuring that there is no voltage in the power cord.
- This product may only be installed, repaired or serviced by an authorised electrician.
- All local, regional and national electrical installation regulations must be observed.
- Installation must not be carried out near explosive atmospheres or in areas where there is a risk of running water.
- Risk to life from high electrical voltages.
- The product must be permanently installed in its final location.
- The product must be installed on a wall or structure with sufficient load bearing capacity.
- The clamps on the rear panel are live when the power circuit is closed and must never come into direct contact with anything other than the Lumina plug-in electronics.
- Lumina's network SSID and password are required for installation and configuration; they can be found on the back of the charging head.

Safety instructions for use

- Never use or touch the device if it is damaged or not functioning properly.
- Always perform the recommended maintenance, installation and any repair work by an authorised service centre and in accordance with local requirements.
- Do not use water to extinguish a fire.
- Never clean the station with high pressure or running water.
- Do not immerse the station in water or other liquids.
- If the light bar on the device lights up red, there is an error.
- Never touch the contacts of the type 2 socket/plug and never insert foreign objects into it.
- Never use the charging cable if it is damaged or if the connector is wet or dirty.
- Do not use extension cables or adapters in connection with the station.
- The charging cable can only be disconnected from the station by pulling on the plug handle, not on the cable.
- Make sure that the charging cable does not cause a tripping or running over hazard.
- Even though the station is designed to withstand normal weather conditions, it is recommended to protect it from direct sunlight or exposure to extreme weather conditions.
- Do not use the station near strong electromagnetic fields or in the immediate vicinity of radio transmitters.

Before the installation

- This product may only be installed, repaired or serviced by an authorised electrician. All local, regional and national electrical installation regulations must be observed.It is recommended to consider future charging needs before installation.
- The power supply to the Enelion charging terminal must be provided from an electrical switchgear. The switchgear must have the required protection in the form of a type B or C overcurrent circuit breaker and a current rating of 32 A or less, suitable for the configuration of the device. To declare compliance with EN IEC 61851-1:2019-10, each charging point must also be individually protected against Type A and Type B residual current. This requirement must be fulfilled by one of the following:
  1. installation of a type B residual current device (RCD B 30 mA/40 A) or RCD EV (30 mA/40 A) in the switchgear,
  2. installation of a residual current device type A (RCD A 30 mA/40 A) in the switchgear using the Enelion RCM B – Residual Current Monitor type B provided on the charging terminal.
- The final selection of the protective equipment must be made by an authorised designer or qualified electrician.
- For maximum charging power, it is recommended to use cables with a conductor cross-section not exceeding 6 mm^2. This is also the maximum diameter that can be installed in the connection terminals. For convenient installation, flexible power cords of the wire type terminated with collets are recommended.
- A residual current monitor (RCM) can be integrated into the Lumina charger. This will switch off the current to the electric vehicle if: a residual current of 4–6 mA DC occurs. The RCM is reset by disconnecting the charging cable and reconnecting it.

Load	Charging power	
Ampere (A)	1 phase (kW)	3 phase (kW)
6	1.4	4.1
8	1.6	5.5
10	2.3	6.9
13	3.0	9
16	3.7	11
20	4.6	13.8
25	5.8	17.3
32	7.4	22

The table above shows what charging power you can expect from your installation.

The table is for information purposes only.

Installation

Do not carry out outdoor installation during precipitation or strong winds if there is a risk that water or debris may enter the device.

All of the operations described in this manual should be carried out after making sure that there is no voltage in the power cord.

This product may only be installed, repaired or serviced by an authorised electrician. All local, regional and national electrical installation regulations must be observed.

enelion.com/en/help

In addition to the steps described on the following pages, we recommend watching the installation videos.

01 Preparation

In the box with the Lumina charger, you will find a template to help you choose the installation location and prepare the installation holes.

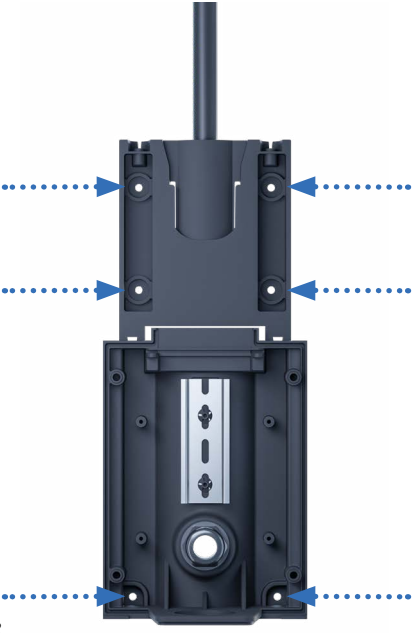
We recommend that you position the station so that the top edge of the charging station is approximately 130 cm from the floor.

The electrical cable can be connected to the station from above, from below and directly from behind the station at the gland marked on the template.

The design of the station allows both wall and pole installation (additional installation components required – sold separately). We suggest that there is local WiFi network coverage at the station installation site and/or LTE mobile network coverage if the station is to be used online.

02 Installation of mounting plate

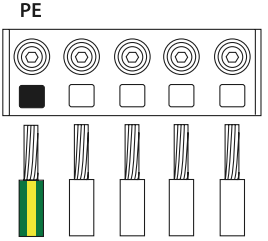
Turn off the power before installation.
Connect the electrical cable.
Hang the mounting plate according to the template.
Secure electric cable in the gland.

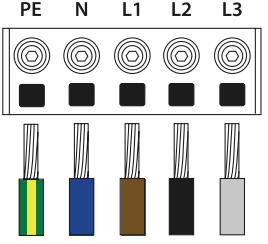


03 Electrical connection

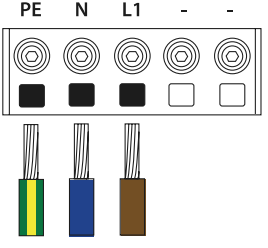
For maximum charging power, it is recommended to use cables with a conductor cross-section not exceeding 6 mm^2. This is also the maximum diameter that can be installed in the connection terminals. For convenient installation, flexible power cords of the wire type terminated with collets are recommended.

Installation of the cables in the station cable terminals does not require any special tools.

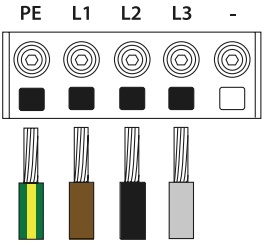




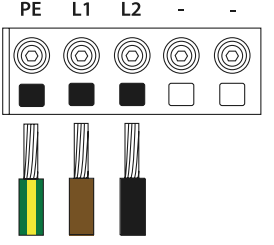
TN1-phase (230 V)



IT/TT3-phase (230 V)



IT/TT1-phase (230 V)

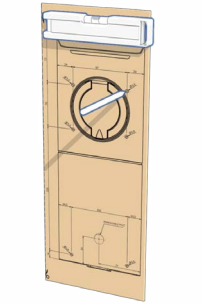


CAUTION! It is recommended to use the existing colour code used in the wiring. Depending on the standard in your country, the cable colours may differ from those shown.

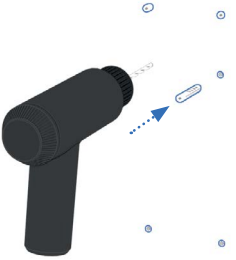
CAUTION! Before switching on the power, make sure that the cables are connected correctly. Test this by pulling on each wire.

After preparing the installation, close the cover.

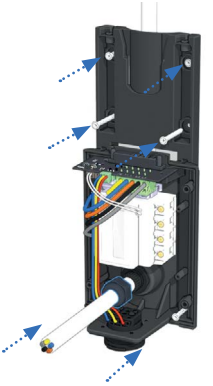
04 Step by step



01 Template leveling – marking holes



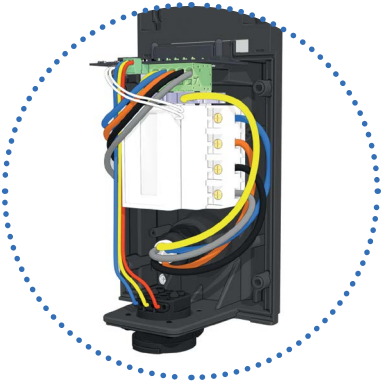
02 Drilling holes – inserting pins



03 Screwing the backplane to the wall – tightening the cable gland

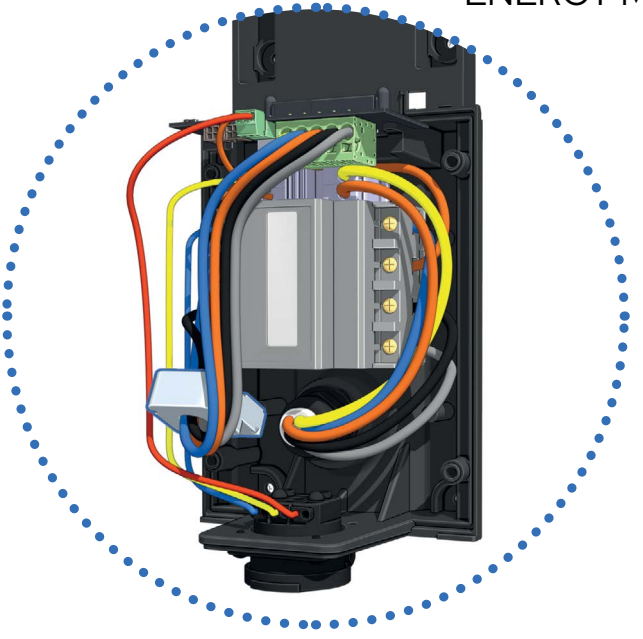
04 Stripping the insulation from the cable

05 Connecting the wires



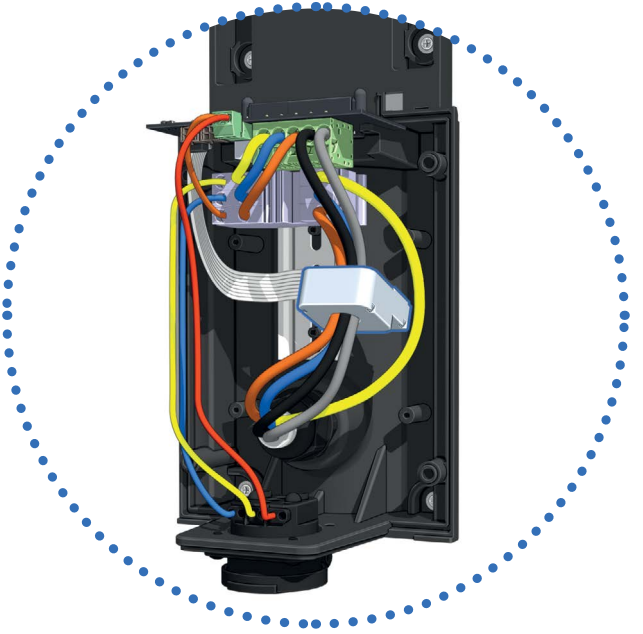
Enelion Lumina
with optional
230V CEE
7/3 SOCKET and
optional CERTIFIED
ENERGY METER

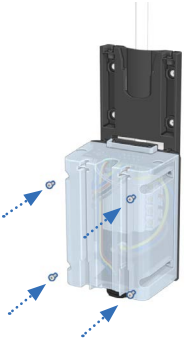
MODEL LB-32-3-X-0-X-XX-MRG-00



Enelion Lumina with optional 230V CEE 7/3 SOCKET

MODEL LB-32-3-X-0-X-XX-RG-00





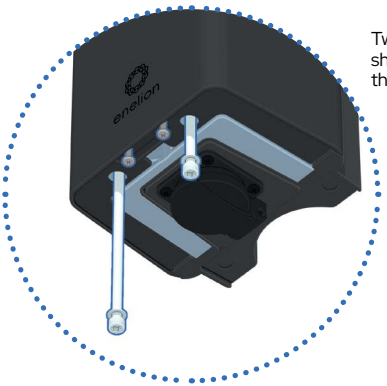
06 Mounting the cover with four screws

07 Head installation

08 Installation of an alternative head

09 Tightening the head two bolts from above

10 Installing the reflector



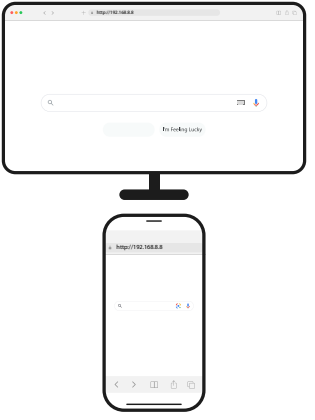
Two long and two short screws from the bottom

05 Start-up and configuration of the station

Switching on the safety devices, which turns on the voltage at the station, should be carried out by a suitably qualified person.

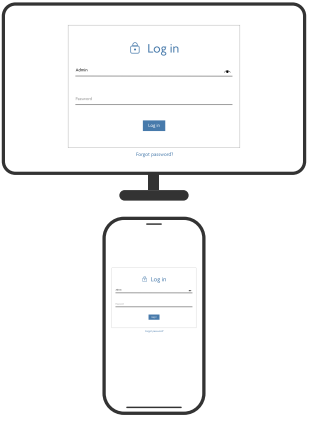
Using a telephone or computer, search for the Lumina station's AP with the SSID listed on the back of the charging head.

After connecting to the Lumina station's AP with the SSID and password given on the back of the charging head, type the following into the address bar of your browser: http://192.168.8.8



Access to the configuration panel is protected by a password, which by default is: admin.

The password can be changed if necessary.



The configuration process should be carried out according to the instructions on the panel.

Daily use and operation

01 How do I charge?

Before using the Lumina charger, ensure that the following requirements are met:

- An authorised electrician has made the electrical connection correctly.
- The charger is correctly configured.
- The software is up to date.
- If access control is configured, block it with a registered RFID tag or disable it in the configuration panel on the WiFi interface.

1. Before charging, check that the charging cable and connector are not damaged or contaminated, e.g. due to foreign objects or water.
2. Connect the charging cable to the Lumina charger and to the electric car. The charging process starts and adapts automatically to the electric car and the available power based on its configuration. If the car does not start charging, check that charging is enabled in your car and that the connectors are correctly connected.

02 Interface LED

The Lumina charging station has an LED interface that provides the user with basic information:

Status	Light type
Availability	Green flashing
Charging (energy transfer in progress)	Blue flashing from inside towards the edge
Charging (no energy transfer)	Blue flashing
Warning/minor error (the charger will attempt to return to its previous state)	Yellow flashing
Error	Red flashing
Fatal error	Steady red
Authorisation	
User acceptance	Running from left to right in green
User rejection	Running from left to right in red
Authorisation pending	White dot moving from left to right

The interface provides only basic operational information, detailed information can be read from the configuration panel.

03 Maintenance

The device is designed to operate in temperatures from -30°C to 55°C. The manufacturer does not guarantee the correct operation of the charging station at temperatures outside of the specified range. Chargers damaged by temperatures below -30°C or above 55°C are not covered under the warranty.

04 Cleaning

The correct way to clean the charger is to wipe the casing with a microfibre cloth using a cleaner dedicated to the plastic of the casing. Plastic parts (the socket) should be cleaned with a microfibre cloth using a cleaning agent dedicated to glass. Other cleaning methods (e.g. using a wire brush) may damage the casing.

Damage caused by improper cleaning of the device does not constitute grounds for warranty claims.

05 Practical details

Standards

Enelion Sp. z o.o. hereby declares that this product, the Lumina EV charging station, complies with:
2014/53/UE (RED)
2011/65/UE (RoHS)
2014/30/UE (EMC)
2014/35/UE (LVD)

The full text of the EU Declaration of Conformity is available at: **enelion.com**

Disposal

This electronic equipment must not be disposed of with household waste. There may be free collection points available in your area where you can hand over your old equipment. Please follow local regulations for proper and environmentally friendly disposal. If your old electronic equipment contains personal data, you are responsible for removing this data before returning the equipment.

Repair

If your charger requires repair, please contact your distributor.

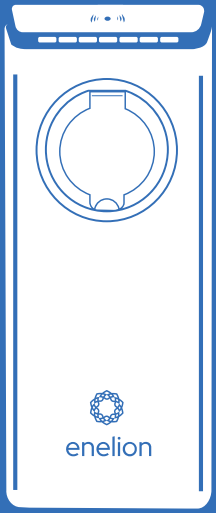
Returns and complaints

For product returns and complaints, please contact your distributor or Enelion customer service.

Customer service

Download the latest user manuals, useful documents and videos for your product on **enelion.com**

50 Pana Tadeusza St , 80-123 Gdańsk, Poland



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