Ensto NXT

EN Installation Instructions
User Guide

RAK151_EN
2026-04-08

Contents

Installation Instructions

User Guide

Installation Instructions

1. Safety instructions

Electrically skilled person

- **The installation must only be done by a qualified professional.**
- **Read these instructions carefully before you install, operate or maintenance the charging station.**
- **Obey the instructions in this manual and make sure that the installation complies with national safety regulations, installation methods and restrictions.**
- **The information provided in this manual in no way exempts the installer or user from responsibility to obey all applicable safety regulations.**
- **Keep this manual for future reference.**

WARNING

Danger of electric shock! Risk of fire!

- ***Improper installation can cause personal injury and property damage.***
- ***Do not switch on the power supply before the installation work is completed.***

2. Description of symbols

	WARNING - Indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury or considerable damage to the equipment.
	Electrically skilled person is a person with relevant education and experience to enable him or her to perceive risks and to avoid hazards that electricity can create.
	Identifier for plug and socket outlet AC / EN62196-2 / Type 2
	Radio-frequency identification reading area for automatical identifying of RFID tags.
	Environmental instructions

3. Abbreviations

Abbreviation	Description
LED	Light Emitting Diode
MCB	Miniature Circuit Breaker, protects cables and equipment from over load and short circuits
OCPP	Open Charge Point Protocol, protocol how the charger communicates with the backend systems
RCBO	Residual current Circuit Breaker with Overcurrent protection
RCD	Residual Current Device, protects humans and animals from electric shock
RDC-DD	Residual direct current detecting device, protects humans and animals from electric shock
RFID	Radio Frequency Identification, information remote reading/writing system, here used to identify authorized charging station users
USB	Universal Serial Bus, specifications for cables, connectors and protocols
Modbus / RS-485	Based on RS-485 topology, standard defining the characteristics of drivers and receivers for use in serial communications systems.

4. Delivery contents

- Charging station
- Cable gland M32
- Installation Instructions / User Guide in English, other languages please see www.legrand.com
- Envelope containing the password addressed to INSTALLER
- Envelope containing the password addressed to OPERATOR
- Label set of RCBO testing instructions

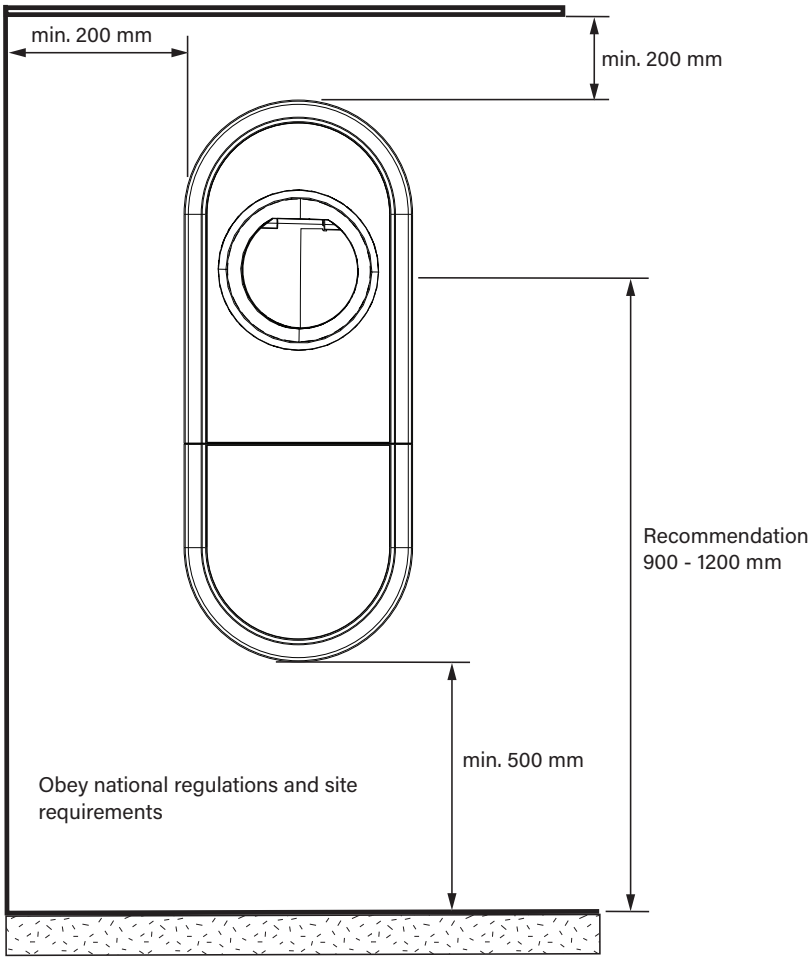
5. Mounting instructions

5.1. Before installation

Remove the the charging station from its package. Do not scratch the surface of the the charging station after removal from the package.

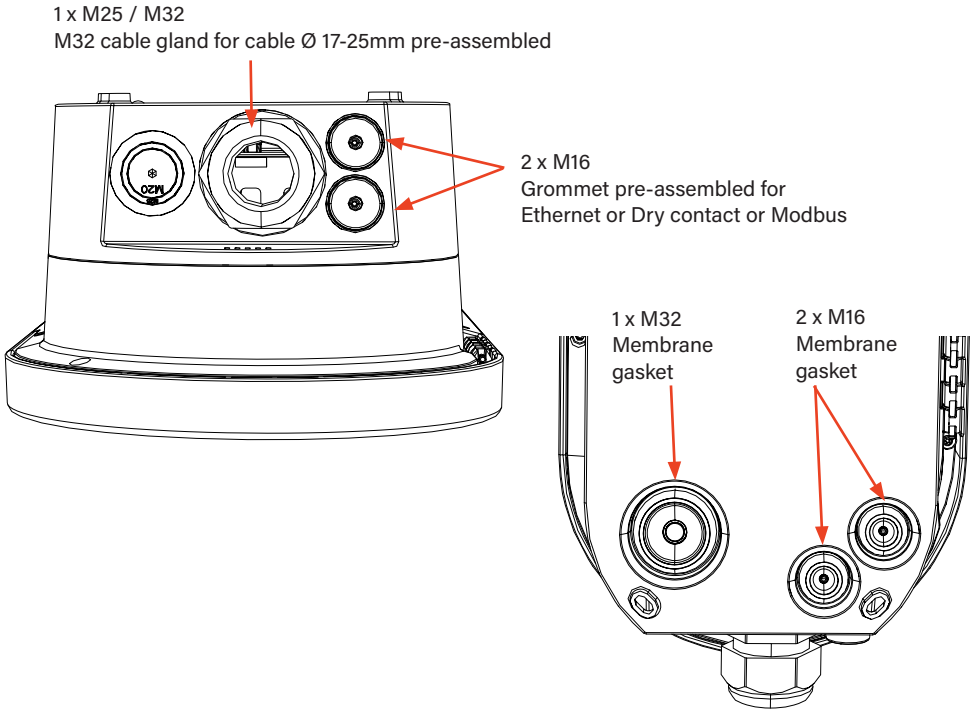
When selecting installation site, take into consideration the following:

- The charging station is applicable for indoor and outdoor use.
- The minimum space necessary for operating and maintenance.
- High ambient temperatures and direct strong sunlight may limit the charging capacity of the charging station.



5.2. Cable entries

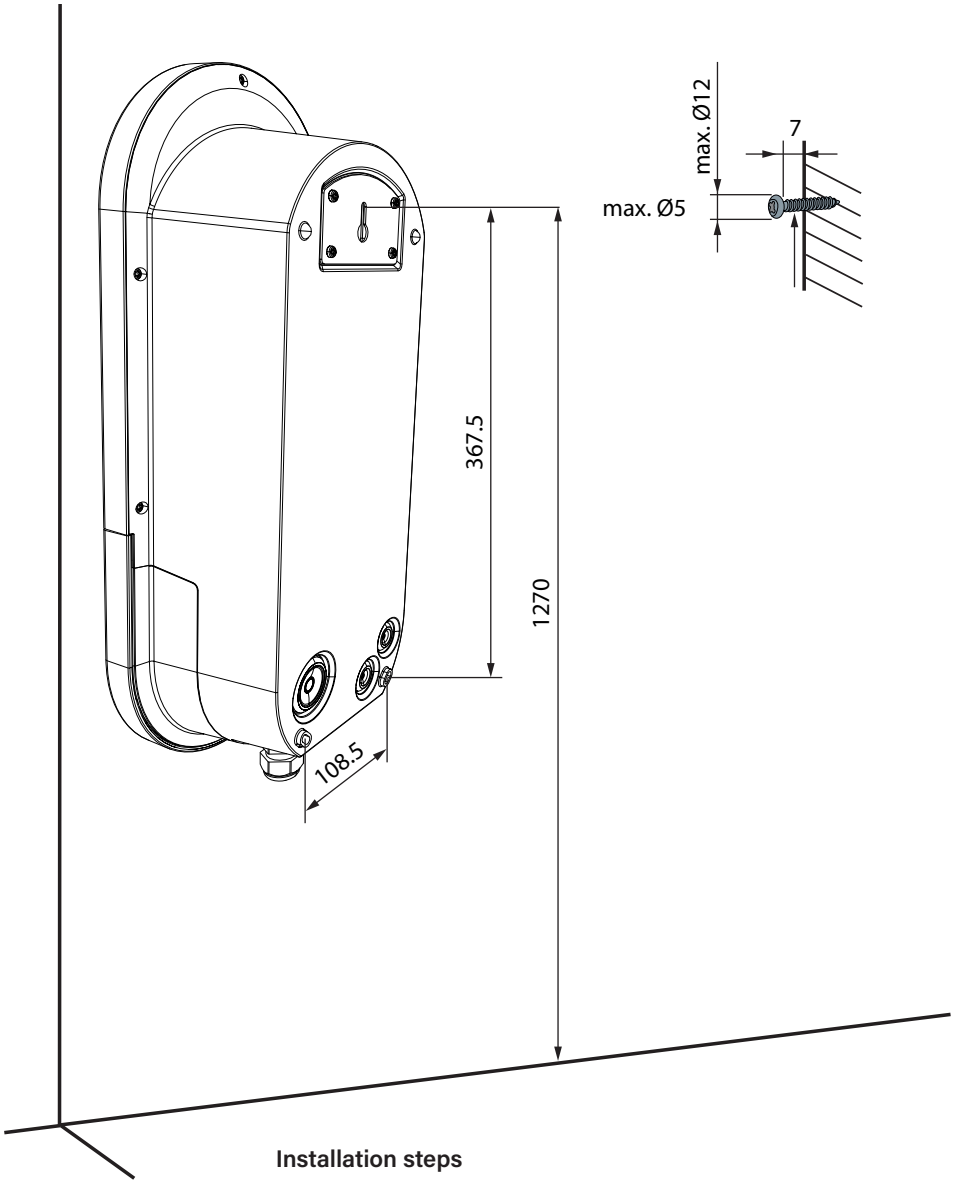
- Take the cable routing into consideration when planning the installation. The supply cable can be routed into the enclosure from the rear or bottom. Default cable routing is from the bottom.
- The M32 cable gland for the supply cable and 2 x M16 membrane gaskets for signal cables is pre-assembled on the bottom of the charging station.
- When the charging station is installed on the EVTL55.00 pole adapter or the EVTL57.00 pedestal, use the pre-assembled grommets on the rear of the charging station. See instructions: **Mounting Kit for Ensto NXT charging stations**.



Accessories			
Part number	**Description**	**Quantity**	**Note**
KTM24.32/BLACK	Cable gland M32 for cable Ø 17-25mm	1 pc	Pre-assembled
ORGM16B	Grommet for cable Ø 5 - 9mm	2 pcs	Pre-assembled
ORMM32B	Membrane gasket for cable Ø 12 - 24mm	1 pc	Pre-assembled
ORMM16B	Membrane gasket for cable Ø 5 - 10mm	2 pcs	Pre-assembled
PMR1217.32B	Black cover plug for M32 opening		Not included
KTM24.25/BLACK	M25 cable gland for cable Ø 10 - 16mm		Not included
PMR1219.3225B	Black reduction nipple, M32 => M25		Not included

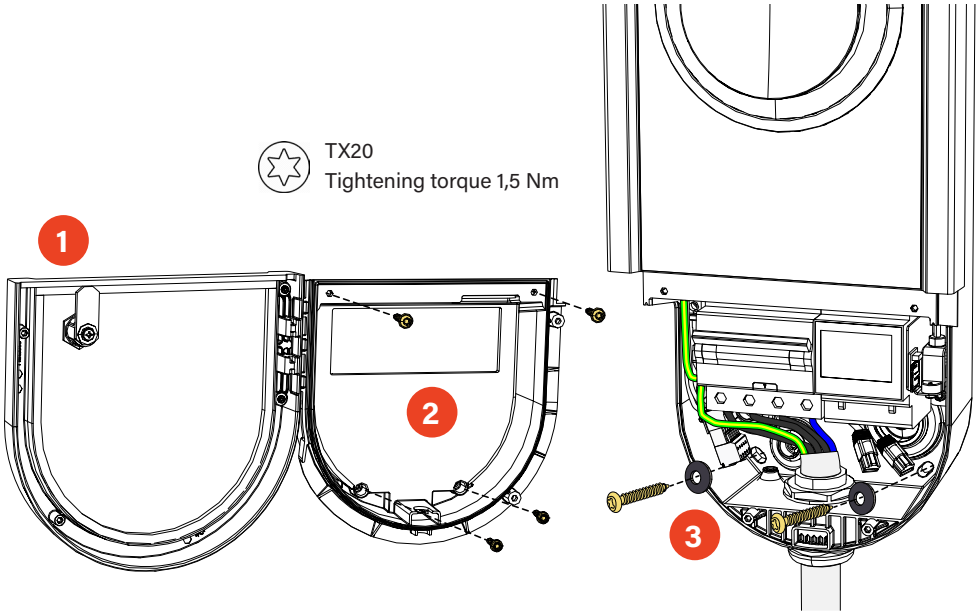
5.3. Wall mounting

- Make sure that the wall is robust and stable. The mounting surface must be flat and vertical.



Installation steps

1. Select appropriate screws for the the wall material.
2. Fasten the upper screw 1270 mm measured from the ground surface. The plug holder will be at a height of 1200 mm.



3. Open the installation box hatch by unlocking the hatch lock with a coin or suchlike **[1]**.
4. Remove the entire installation box cover by unscrewing the fastening screws (4 pcs) **[2]**.
5. Hang the charging station on the screw you attached to the wall.
6. Attach the charging station to wall with two washers and fastening screws (not included) **[3]**.
7. Pull the electrical cables approx. 150mm through the cable glands.
8. Cut the supply cable cores to required lengths. The earth cores must be long enough so that, if a fault occurs, they are the last conductors to become detached.
9. Strip 11 mm of insulation from each conductor and connect them to the supply terminals.
10. Load management connections: If it is necessary to connect the charging station to an energy meter or an external control device, connect the required control cable to the pre-installed connector**.**
11. Ethernet: RJ45 connectors (2 pcs) are pre-installed to the charging station.
12. Put the installation box cover back in right position and fasten with the screws you removed.
13. Close the installation box hatch.

Cable entry from the rear

- Remove the included cable gland from the bottom. Close the cable entry with a cover plug, PMR1217.32B (accessory).
- Route the supply cable and possible data cables through the grommets on the rear.

6. Electrical connections

The voltage and current ratings including cable sizes must comply with national regulations. The system dimensioning must be done by a qualified electrical designer.

6.1. Power supply

The default setting for the earthing system is TN network.

EVN323A-A...

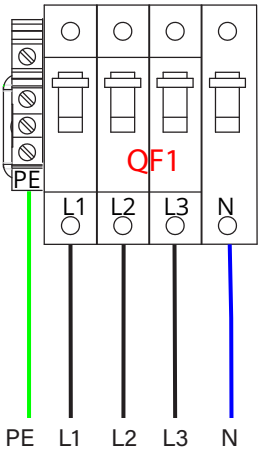
- A Residual current protection device (RCD type A, 30mA) and a circuit breaker (MCB max. 32A) for the charging outlet must be installed in the switchboard

EVN323A-B...

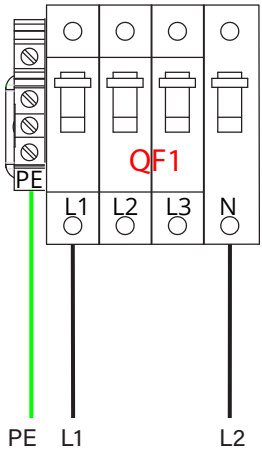
- A combined device with residual current circuit breaker and over current protection (RCBO) is integrated.
- A label set of RCBO testing instructions is included in the delivery. Attach a language specific label on the installation box hatch.

Note! Connect these charging stations to a 3-phase supply, otherwise the RCBO test button does not work.

TN / TT network



IT network



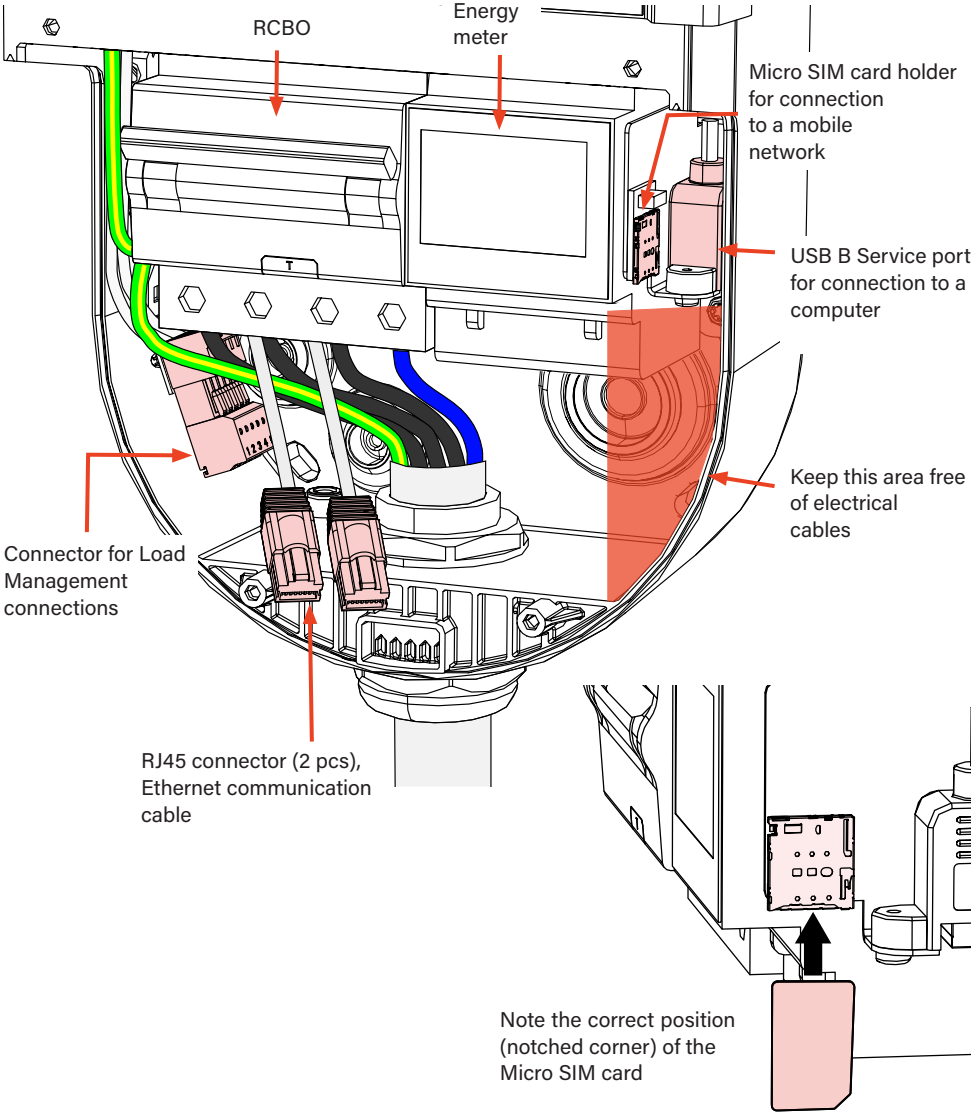
Supply Cu 2.5 - 10 mm²
M32 gland: cable Ø 17-25mm
M25 gland + reduction nipple: cable Ø 10-16mm

7. Commissioning

Before commissioning the charging station must be installed according to the installation instructions.

By default all charging stations are operating in free charging mode (standalone operation). In this free charging mode external communication (Ethernet, 4G, LAN or WiFi) is not active. If you connect the charging station to some back-office (online mode), first make sure that the basic functionality is working before establishing communication.

7.1. Components in the installation compartment



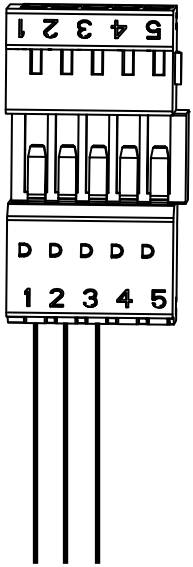
7.2. Load management connections

Connect external control devices for load management to the pre-installed connector.

Note! Load management does not support IT earthing system.

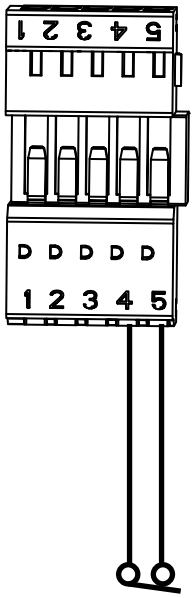
7.2.1. Energy meter

- Make sure that the signal conductors are connected correctly to the energy meter. See the energy meter instructions for more information.



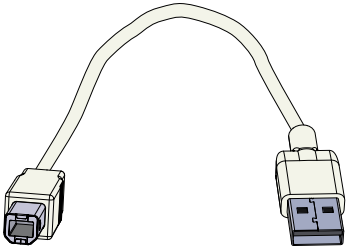
7.2.2. External control device

- Connect a dry contact module for override mode to the terminals 4 and 5. Remove the jumper from the pre-installed connector.
- The input on the charging station side is based on so called dry contact terminal Normal Open / Normal Closed (NO / NC). This is configurable via the charging station settings. The charging station supplies the input terminal with +12V and detects if the dry contact terminal is open or closed.



7.3. Connecting to the charging station

If you want to change the default settings, you must connect to the charging station via web configuration tool to be able to start configure the commissioning settings. Use Firefox, Chrome or Windows Edge web-browser for configuring.



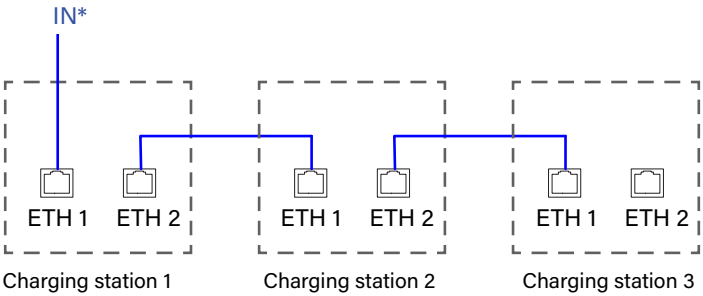
USB B
Connect to the charging station

USB A
Connect to the computer

7.4. Ethernet connections

Internet connection can be established with 4G, Ethernet or WiFi.

Daisy Chaining the Ethernet connections is allowed.



*Take into account that STP (Cascading Switches) is enabled in the Ethernet switch or disable the STP on the charging station.

7.5. WiFi coverage area

A charging station can be connected to local WiFi network as client mode or access point mode. In access point mode max. 20 charging stations can be connected.

Internet connection can be established with 4G, Ethernet or WiFi.

Please contact your Legrand representative for detailed information.

Examine the available signal strength to make sure that the communication (4G, WiFi), reception and connectivity are working.

If you want to use a WiFi network, first do a WiFi survey to make sure that the network works correctly. The survey helps you to identify potential issues and optimize coverage.

General steps how to do a WiFi survey

1. **Plan the survey.**
   Define the purpose of the survey: estimate coverage, identify dead spots, optimize performance etc. Define the survey areas, including indoor and outdoor spaces.
2. **Collect necessary tools.**
   Get a WiFi survey tool or software. There are various free and commercial options available, such as Ekahau, NetSpot and Acrylic Wi-Fi Home.
3. **Prepare the survey environment.**
   Make sure that the WiFi network is working. Make sure that in the survey area are not any objects or interference sources that may affect signal propagation, such as large metal objects or other electronic devices.
4. **Configure survey settings.**
   Set the parameters in the survey tool based on your requirements. Select the appropriate frequency bands (2.4 GHz), set the channel width and specify the survey duration.
5. **Do the survey.**
   Walk through the survey area by following a systematic path, while the survey tool records the WiFi signal strength and other relevant data. Take note of the specific locations where measurements are taken.

6. **Analyze the survey data.**
   After the survey is completed, use features of the survey tool to analyze the collected data. Look for areas with low signal strength, high interference, or excessive co-channel and adjacent-channel interference. Identify potential sources of interference or coverage gaps.

7. **Take corrective measures.**
   Based on the survey results, take necessary actions to optimize the WiFi network. You may have to adjust access point placement, modify channel assignments, install additional access points or install additional repeaters to improve coverage.

8. **Repeat the WiFi survey if necessary.**
   If important changes are made to the network infrastructure or if you want further optimization, do additional surveys to evaluate the effectiveness of the modifications.

To get accurate results use professional tools which are intended for WiFi surveys. We recommend that you consult with a wireless network specialist or professional if you want in-depth analysis or trouble-shooting assistance. Take into consideration that the WiFi environment is by nature changing, so it can change during the life cycle of the charging system.

8. Technical data

Electrical connections	EVN323A-...
Nominal supply voltage	3-ph, 400 VAC *
Nominal frequency	AC 50 Hz
Charging current (nominal)	32A
Charging power (nominal)	22 kW
Idle power loss (load not connected)	approx. 6 W
Supply connections and terminals	L1, L2, L3, N, PE Cu 2.5 – 10 mm² (Aluminium not allowed) Recommended 10 mm² at nominal power Tightening torque: 2,5 Nm M32 gland: cable Ø 17-25mm M25 gland + reduction nipple: cable Ø 10-16mm
Grid connections	TN / TT (3-ph) / IT (2-ph, 230Vp-p)

* Supply voltage range 360 ... 460 V

Please note that typically electric vehicles do not tolerate more than 7 volts of fluctuation in the main voltage during the charging session.

Design and mechanics	
Material	Polycarbonate
Color	Frame: RAL7021 “Anthracite” Cover: Black sticker (RAL9005)
Installation box	Mechanical hatch lock
Weight	approx. 5.5 kg (charging station) / 6.2 kg (total)
Package dimensions LxWxH	672 x 262 x 215 mm
Ingress protection rating	IP54
Shock protection rate	IK10
Operating temperature	-25 °C ... +50 °C
Environmental service conditions	Indoor and outdoor use
Mounting	Wall / Ground
EV supply equipment classification	Equipment for locations with restricted access
Mechanical resistance for stationary assembly	Medium resistance
Resistance of insulating materials to abnormal heat and fire	Glow-wire test at 650degC as defined by IEC 60695-2-10
Relative humidity during operation	95 %, non-condensing
Operating altitude	Up to 2000 m
Storage	-40 °C ... +70 °C, humidity < 95 %, non-condensing, enclosed storage
Overvoltage Category	OVC III
Standard	IEC 61851-1:2019, general requirements for electric vehicle conductive charging system
Approvals / markings	CE

User interface	
Socket outlet	Mode 3 / Type 2 ▪ The use of adapters or conversion adapters to connect a charging cable to the charging outlet is not allowed. ▪ The use of cord extension sets to extend the charging cable range is not allowed.
Charging status indication	3-color LED ▪ Green / Ready ▪ Blue / Charging ▪ Red / Error
Use access	RFID (ISO/IEC 14443A, NFC) Free access Mobile apps via 3rd party operators ISO15118 (Plug & Charge support)
Energy measurement	MID class B energy meter according to EN50470-3 MID certification does not cover 1-phase system

Safety features	EVN323A-A...	EVN323A-B...
Protective devices	RCD: At least type A 30mA, comply with IEC 62423, must be installed in switchboard MCB: Max. 32 A, comply with IEC 60898-1, must be installed in switchboard	RCBO: residual current circuit breaker and over current protection integrated, type A 30mA, class C, nominal current 32A
	RCD-DD: integrated 6mA DC residual current detection	
	Overvoltage and undervoltage protection (configurable)	
Control voltage	12 VDC	
Temperature control	High ambient temperatures and direct strong sunlight may limit the charging capacity of the charging station	
Welding detection	Detection of faulty closing of the contactor contacts	
PE monitoring	Checking the connection between the control unit and PE ▪ PE monitoring does not replace the tests that are described in chapters **11. Installation / Commissioning checklist** and **12. Maintenance / Preventive maintenance instructions**	
Emergency opener	In the event of a power failure, the plug of the charging cable is automatically unlocked so that the user can remove it. The emergency opener is integrated as a circuit on the controller of the charging station.	

Control and communication	
Operation mode	Standalone / Online
Wireless	4G/LTE WiFi 2.4 GHz (IEEE802.11b/g/n) ▪ Encryption is based on WPA2-PSK (CCMP) 2 radios (hotspot and client simultaneously)
Wired	LAN / Ethernet
Protocol	OCPP1.6-JSON
Dynamic Load Management (DLM)	Local, embedded software feature over IP Protocol

Sustainability data	
SVHC (Substances of Very High Concern)	SCIP is the database for information on Substances of Concern In articles as such or in complex Products established under the Waste Framework Directive (WFD) Search related SVHC article (“Ensto NXT”) from the link https://echa.europa.eu/scip-database

9. Cybersecurity

- Ensto branded EV charging stations are designed to meet the essential cybersecurity requirements outlined in Directive 2014/53/EU (EN18031-1,-2:2024).

9.1 Cybersecrity actions

- The manufacturer provides regular firmware updates. To guarantee secure operation it is essential to update the latest firmware. The responsibility to update the charger station firmware is under operator/owner/back-office provider.
- By default, the charging stations do not collect personal data and the manufacturer is not liable for personal data handling, this is the responsibility of the operator/owner/back-office provider.
- The following telemetry data is available for authorized charging sessions: Session number, Start date, Start time, Duration, Energy, RFID tag, User name. Connecting this information to personal data is the responsibility of the operator/owner/back-office provider.
- For secure connection between the charging station and back-end encrypted communication must be used (for example secure version of OCPP WebSocket, WSS:/ and https for webUI connection).
- Factory reset erases all collected data and settings.

9.2 Unique access passwords

- Unique access passwords are purposed to access and configure the charging station settings via unit webUI. To comply with cybersecurity standards, unique passwords are generated and set for each individual charging station during the manufacturing process.
- Further, unique passwords are printed and placed in individual envelopes inside the charging station.
- The owner of the charging station is in responsible for safeguarding the valid unit passwords from misuse and ensuring that annual maintenance and other necessary activities to keep the charging station operational can be performed.
- The unique passwords define different user access rights (INSTALLER, OPERATOR) as detailed below.
- The charging station OWNER should change the operator and installer passwords immediately after the installation is completed.
- Password recovery service is available. Defined handling fees will apply. For detailed information, please contact Sales Support.

It is the responsibility of the password holder to protect the password from misuse.

NEVER GIVE YOUR PASSWORD TO AN UNAUTHORIZED PERSON!

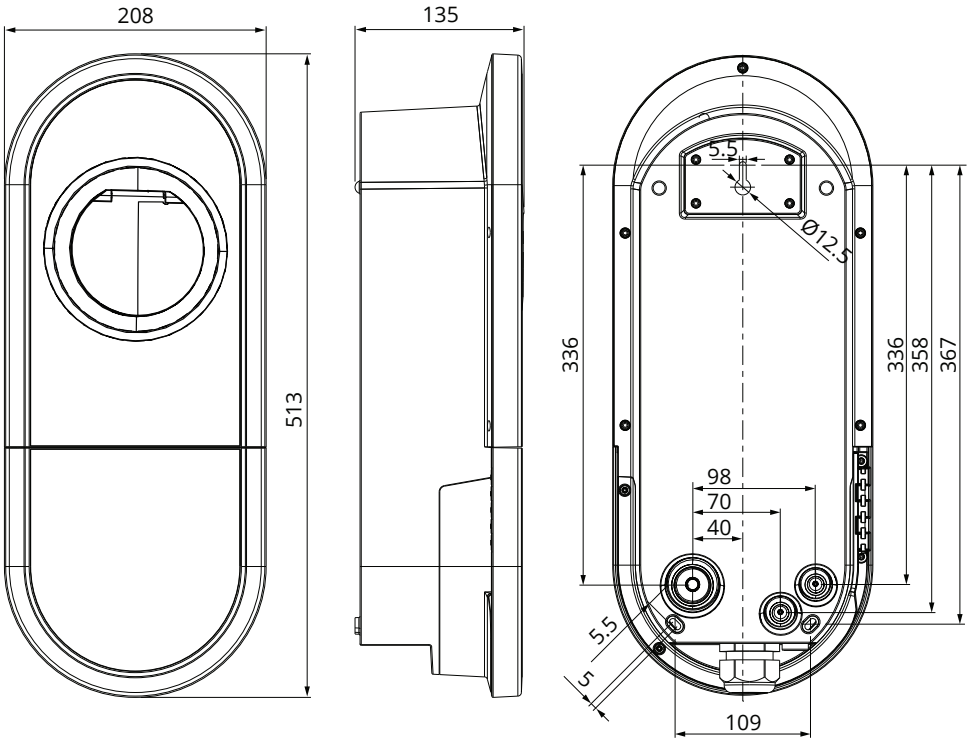
9.2.1 INSTALLER password

- Your unique password is in the INSTALLER addressed envelope, which is located inside the charging station delivery box.
- The ELECTRICAL INSTALLER can use the installer password to perform the electrical installation and commissioning of the charging station.
- When the installation and commissioning is completed, the INSTALLER envelope must be given to the charging station owner.

9.2.2 OPERATOR password

- Your unique password is in the OPERATOR addressed envelope, which is located inside the charging station delivery box.
- The OPERATOR has full access to the charging station configuration.
- When the configuring is completed, the OPERATOR envelope must be given to the charging station owner.

10. Dimensional drawings



11. Installation / Commissioning checklist

Introduction

Examine the mechanical and electrical installation in accordance with this checklist to make sure that the charging station is properly installed.

Checking the Installation

Examine the visual, mechanical and electrical installation when the charging station is de-energized.

CATEGORY	X	ITEM
Overall look		You have received the ordered material.
		You have removed the protective plastic wrapping.
		You do not see any scratches or damages.
Mechanical installation		The charging station is mounted properly on the installation site.
Electrical installation		The charging station's power supply capacity meets electrical planning (cable size, protective devices...). Review the local electrical design plan.
		The PE-cable screw is tight.
		The power supply conductors (L1, L2, L3, N and PE) are properly connected.
		The insulation of the power supply cable and the individual cores (L1, L2, L3, N and PE) is intact.
		The voltage between PE and N is less than 10 V.
		The PE conductor resistance is less than 3 Ω.
Operational check		All the LED states / colors (green, blue, red) and the RFID reader are functioning. ▪ Use a car simulator. ▪ Create fail and charge. ▪ Red at bootup, green at idle and blue while charging.
		Test the functionality of the electric protective device. Depending on the charging station model, the device is integrated in the charging station or installed in the switchboard.
Ready for use		The correct SW is in use.
		Correct operating mode ▪ Standalone ▪ Online
		Test the data communication, if it is in use. Examine the available signal strength to make sure that the communication (4G, WiFi), reception and connectivity are working.

12. Maintenance / Preventive maintenance instructions

Recommended 1 x per year, take into consideration local regulations and national standards.
Protect the charging station against pollution (water, snow, dust).

WARNING

Danger of electrical shock or injury! Risk of fire!

Disconnect power before working inside the device or removing any components.

X	MAINTENANCE ACTION
	Retighten all the screws on electric components.
	Examine the Mode 3 socket for burn or damaged parts. If necessary, replace it (socket cost is not under warranty).
	Examine the charging cable for wear out and mechanical damage. If necessary, replace it.
	Examine the sealings for wear out. If necessary, replace the sealings.
	All the LED states / color (green, blue, red) are functioning. ▪ Use a car simulator. ▪ Create fail and charge. ▪ Red at bootup, green at idle and blue while charging.
	Make sure that the PE-cable screw is tight.
	Test that the voltage between PE and N is less than 10 V.
	Test that the PE conductor resistance is less than 3 Ω.
	Test the surge arrester, if there is any.
	Check if there are software updates available. Update always the latest version released by the charging station manufacturer.
	Restart the charging station from F0. Make sure that it will restart properly.
	Clean possible dirt and dust from the surface of the charging station. Wipe carefully with a moist cloth.
	Examine the visible metal parts for rust. Apply anti-corrosion agent, if necessary.
	Test the functionality of the electric protective device every six months. Depending on the charging station model, the device is integrated in the charging station or installed in the switchboard.

Maintenance actions done by:	Date:

13. Testing instructions for the electric protective device

EVN323A-A...

Test the residual current device at the supply line.

EVN323A-B...

- Press the **TEST** button.
- The rocker turns to **0** position.
- Turn the rocker back to **I** position.
- If a fault occurs, contact an electrician.

Note! If a 3-phase charging station (EVN323A-B...) is connected to 1-ph, 230 VAC, It is not possible to test the RCBO with the test button due to RCBO internal wiring. Use a Type 2 socket test adapter.

14. Troubleshooting

Charging station is off, no lights on

Issue	Corrective action
Mains voltage does not exist in the supply terminals (L1, L2, L3).	Make sure that the supply conductors are properly connected. Make sure that there is power available.
The circuit breaker F0 is off.	Turn the F0 on.
The PWR LED indicator on the controller is not on.	Make sure that power supply to the controller is available.

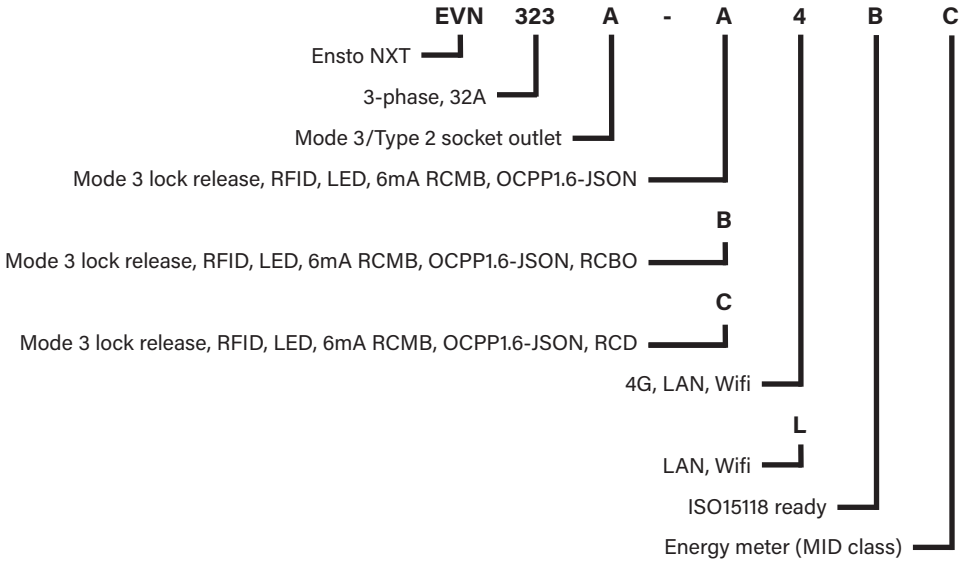
Charging cable is locked in Mode 3 socket outlet

Issue	Corrective action
Unexpected fault has occurred while the power is on.	Turn off the power from the F0 and pull the charging cable out from the socket.
The power is off.	Open the front cover. Switch the Mode 3 lock into open position.

Configuration via web browser

Issue	Corrective action
The PC does not recognize the USB plug and a connection to the controller cannot be established via web browser.	Make sure from Windows operating system settings via “Device Manager” that RNDIS network adapter is available. If not, contact your local IT support.

15. Code key


EVN 323 A - A 4 B C
Ensto NXT
3-phase, 32A
Mode 3/Type 2 socket outlet
Mode 3 lock release, RFID, LED, 6mA RCMB, OCPP1.6-JSON
B
Mode 3 lock release, RFID, LED, 6mA RCMB, OCPP1.6-JSON, RCBO
C
Mode 3 lock release, RFID, LED, 6mA RCMB, OCPP1.6-JSON, RCD
4G, LAN, Wifi
L
LAN, Wifi
ISO15118 ready
Energy meter (MID class)

16. Warranty

Warranty conditions, see https://www.legrand.fi/en/standard-guarantee-and-liability-terms

17. Declaration of Conformity

Hereby, Legrand Finland Oy declares that the radio equipment Ensto NXT station is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: https://www.legrand.fi/en

18. Disposal

Do not dispose of electrical and electronic devices including their accessories with the household waste.

- When the charging station is at the end of its life cycle, it must be disposed of properly according to local recycling guidelines.
- The cardboard packing of the charging station can be recycled.
- Dispose of the plastic wrap with the household waste or according to local recycling guidelines.

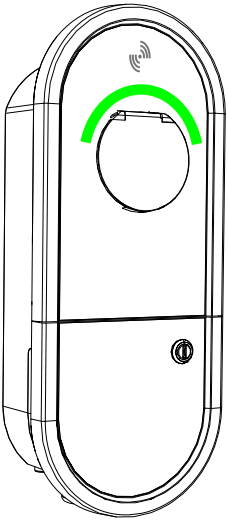
19. User interfaces

LED indicator lights will show the status of the charging station as described below:

Charging station's status	LED light	LED operation
The charging station is free and ready to use	Green	Solid
RFID read, authorization ongoing	Green	Flashing
Charging authorization rejected	Red	Solid, 3 seconds
Authorization accepted, charging allowed	Green	Waving
While you connect the charging cable	Green	Flashing twice
Your vehicle is connected, charging has not started	Green	Waving
Your vehicle is connected, but no current flowing (stand-by)	Blue	Waving
Charging ongoing	Blue	Solid
Error state	Red	Solid

20. Charging

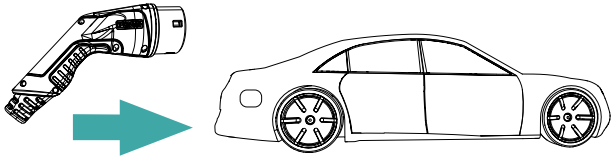
20.1. Free charging



Start charging

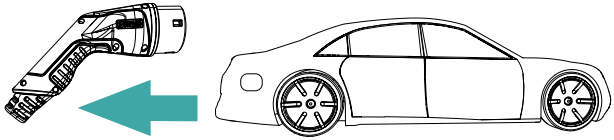
When the charging station is free and the LED indicator is solid green, you can start a charging event.

1. Plug the charging cable to your electric vehicle.
   Plug the charging cable to the charging station.
   The LED indicator turns to solid blue.



Stop charging

2. Unplug the charging cable from the charging station.
   Unplug the charging cable from your electric vehicle.
   After you have unplugged the charging station is free for the next user.

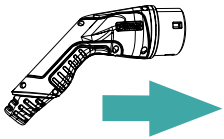


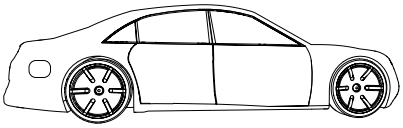
20.2. Charging with RFID

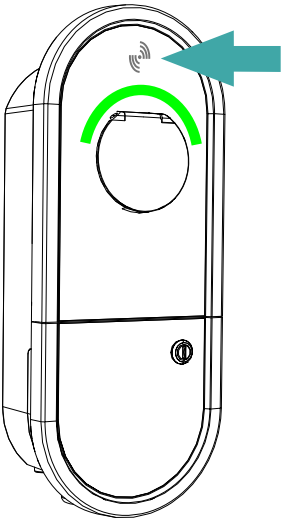
You must have an RFID tag which has a permission to access the charging station.

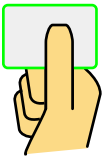
Start Charging with RFID

1. Plug the charging cable to your electric vehicle.
   Plug the charging cable to the charging station.





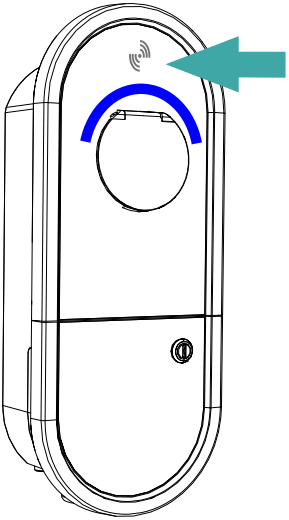


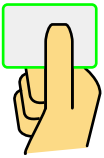


2. Show the RFID tag to the RFID reading area.
   While the RFID tag is read, the LED indicator flashes green and verifies the user permission to charge.
   - If the user authorization is rejected, the LED indicator turns to solid red for 3 seconds.
   - If the user authorization is accepted, the indicator light turns to waving green.

3. Charging event starts.
   - The LED indicator turns to solid blue.

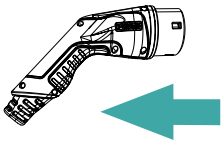
Stop Charging with RFID

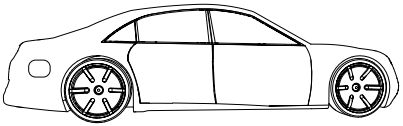




4. Show the RFID tag to the RFID reading area.
   Charging event ends.
   - The LED indicator turns to waving green.

5. Unplug the charging cable from the charging station.
   Unplug the charging cable from your electric vehicle.





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