# **Smappee EV Wall**

**Installation manual** 





| <b>Document accuracy</b> The specifications and other information in this document were verified to be accurate and complete at the time of its   |
|---|
| publication. Due to ongoing product improvement, this information is subject to change at any time without prior notice. For the latest information, see our online documentation: <a href="mailto:smappee.com/downloads">smappee.com/downloads</a> |
|   |

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# 1 Introduction

Thank you for purchasing this EV Wall charging station for electric vehicles, the smartest charging station.

This installation manual tells you how to install the EV Wall. We recommend that you read the contents of this manual carefully, to ensure a safe and proper installation and enable to use all the advanced features of this product to the full.

#### Intended use

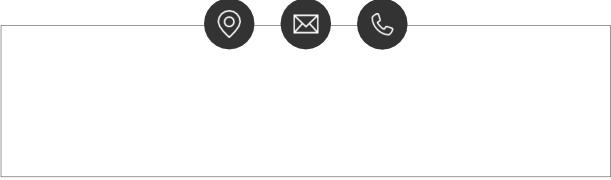
This charging station is designed for charging electric vehicles using either the fixed Type 2 charging cable (if equipped) or a compatible Type 2 charging cable connected to the socket outlet. The use of intermediate adapters or extension cables is not permitted.

Use for any other purpose than EV charging as defined in the IEC 61851-series is not and constitutes misuse of the charging station. Only qualified, trained and authorised persons are allowed to install, maintain and/or repair the charging station and make sure that the technical specifications and installation requirements are met. Incorrect installation and testing of the charging station could potentially damage either the vehicle's battery or the device. Any resulting damage is excluded from the warranty of the device. Any modification that is not in writing confirmed by Smappee will void the warranty. For more information, refer to <a href="maintain.">smappee.com/legal-documents</a>.

# Support

Only qualified electricians or equivalent may install the charging station. If you have any questions, please contact your service partner.

Please have the following information ready to hand to speed up the process: Article number and serial number which you can find on the identification label of the charging station.



Should your local distributor be unable to help you, or you have a suggestion for us, you can contact Smappee at: **support@smappee.com**.

Smappee NV Evolis 104 8530 Harelbeke Belgium

# 2 Safety instructions

# 2.1 Safety warnings and precautions

#### WARNING

Carrying out activities on this charging station without the relevant knowledge and qualifications can lead to serious accidents and death. Only carry out tasks for which you are qualified and have been fully instructed.



Only certified electricians may carry out the installation, which must be in accordance with the national safety regulations.

Fully read and follow the safety instructions below before you install, service or use your EV Wall. Incorrect installation, repairs or modifications can result in danger to the user and may void the warranty and liability.

# 4

#### CAUTION

Risk of electric shock.

Refer to the accompanying documentation whenever you see this symbol.

Please observe the following safety precautions to avoid potential electric shock, fire, or personal injury:

- Use the correct tools and provide sufficient material resources and protection measures.
- The charging station is, when installed correctly, intended to be used by untrained individuals to exclusively charge their electric vehicle.
- Do not allow children to operate a charging station.
- When a charging station is in use, adult supervision of any children present is required.
- Switch off electrical power supply to your charging station before installation or maintenance work.
- Do not use the charging station if it is damaged or defective.
- Do not immerse the charging station in water or any other liquids.
- Do not expose the charging station to heat, flame or extreme cold.
- Do not attempt to open, repair, or service any parts. Contact Smappee or your service partner for further information.
- Only use the charging station under the specified operating conditions.
- While charging the charging cable must be completely unwound and connected to the electric car without overlapping loops. This to avoid the risk of overheating the charging cable.
- After charging store the charging cable properly so it does not present a tripping hazard. Make sure the charging cable cannot become damaged (kinked, compressed or driven over).
- Do not place any objects on the charging station.

#### 2.2 Maintenance

- Observe the maintenance schedule (page 39).
- Clean the outside only with a dry, clean cloth.
- Do not use abrasive agents or solvents.
- May not be carried out during rain or if air humidity exceeds 95 %.

## 2.3 Transport and storage

- Disconnect electrical power supply before removing the charging station for storage or relocation.
- Only transport and store the charging station in its original packaging. No liability for damage incurred will be accepted if the charging station is transported in non-standard packaging.
- Store the charging station in a dry environment within the temperature range specified in the technical specifications.

# **3 Overview of the EV Wall**

# 3.1 Models

| Article number   | EAN           | Description              |
|------------------|---------------|--------------------------|
| EVWC-332-BR-E-B  | 5425036934849 | EV Wall Black            |
| EVWC-332-C8R-E-B | 5425036934863 | EV Wall Black with Cable |
| EVWC-332-BR-E-W  | 5425036934832 | EV Wall White            |
| EVWC-332-C8R-E-W | 5425036934856 | EV Wall White with Cable |

## 3.2 What's in the boxes

If the EV Wall has a charging cable, there is a Charging cable box attached to the EV Wall box.

#### **EV** Wall box

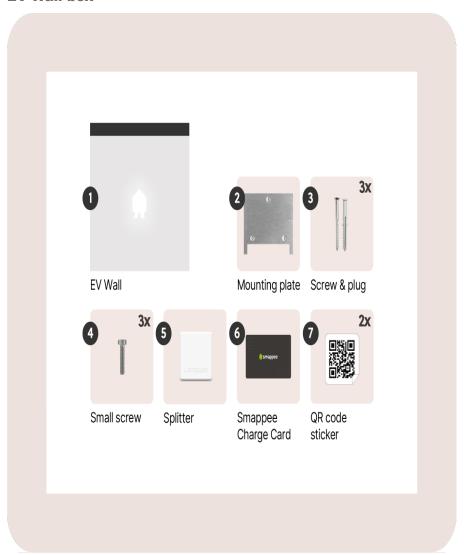


Image 1: Content of the box with the charger

| ID | Quantity | Description                     |  |  |
|----|----------|---------------------------------|--|--|
| 1  | 1        | Smappee EV Wall                 |  |  |
| 2  | 1        | EV Wall mounting plate          |  |  |
| 3  | 3        | Screw and plug (Ø 6 mm x 50 mm) |  |  |
| 4  | 3        | Small screw (M4 x 6 mm)         |  |  |
| 5  | 1        | Quick Install Guide             |  |  |
| 6  | 1        | Smappee Charge Card             |  |  |
| 7  | 2        | QR code for Scan and charge     |  |  |

# Charging cable box

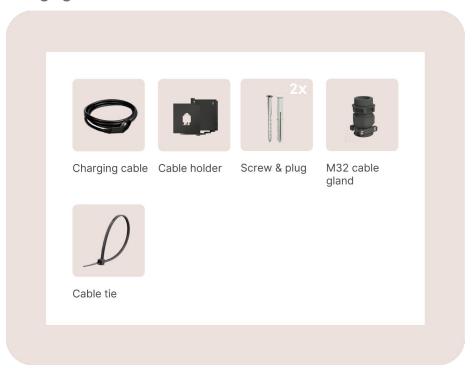


Image 2: Content of the box with the charging cable

| ID | Quantity | Description                     |  |  |
|----|----------|---------------------------------|--|--|
| 1  | 1        | Charging cable                  |  |  |
| 2  | 1        | Cable tie for strain relief     |  |  |
| 3  | 1        | Cable holder                    |  |  |
| 4  | 2        | Screw and plug (Ø 6 mm x 50 mm) |  |  |
| 5  | 1        | M32 cable gland                 |  |  |

# 3.3 Directional determination

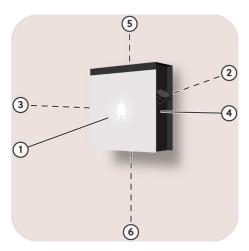


Image 3: Directional determination

| ld | Description |
|----|-------------|
| 1  | Front       |
| 2  | Rear        |
| 3  | Left        |
| 4  | Right       |
| 5  | Тор         |
| 6  | Bottom      |

# 3.4 Identification label of the EV Wall

#### Position of the identification label of the EV Wall

The identification label is on the bottom of the charging station.



Image 4: Position of the identification label

#### **Identification label of the EV Wall**



Image 5: Identification label

| No. | Description  |
|-----|--|
| 1   | Manufacturer   |
| 2   | Article number   |
| 3   | Electrical rating  |
| 4   | Operating temperature  |
| 5   | Manufacturing date   |
| 6   | QR code to scan during configuration of the charging station |
| 7   | Ingress protection rating                                    |
| 8   | CE   |
| 9   | RCM  |
| 10  | Serial number  |
| 11  | EAN-code   |
| 12  | Waste disposal symbol  |

# 3.5 Technical specifications

| Feature   | Description  |  |  |
|---|--|--|--|
|   | Socket   | Type 2 cable   |  |
| Physical properties                                     |  |  |  |
| Dimensions  | 300 mm x 300 mm x 110 mm   |  |  |
| Weight (excluding packaging)                            | 7.4 kg   | 12.4 kg (including cable holder)                               |  |
| Socket  | Type 2 socket with shutter   | N/A  |  |
| Charging cable  | N/A  | 1 x 8 m Type 2   |  |
| Supply line connection                                  | Terminal block, flexible cond conductors up to 10 mm²  | uctors up to 6 mm² or solid                                    |  |
| Stationary / moveable                                   | Fixed installation   |  |  |
| External design   | Enclosed assembly  |  |  |
| Mounting method   | Wall   |  |  |
| Technical features                                      |  |  |  |
| Maximum nominal power                                   | Single-phase connection: 7.4 Three-phase connection: 22  |  |  |
| Charge mode   | Mode 3 (IEC 61851)   |  |  |
| Connection case   | Case A and B (Socket)<br>(IEC 61851)   | Case C (Fixed cable)<br>(IEC 61851)                            |  |
| Metering  | MID metering, certified class  | В  |  |
| Integrated Residual Current Protection                  | 6 mA DC RCM and 30 mA RCD type A   |  |  |
| Required external circuit breaker                       |  | three-phase) or 1 x 4P (three-<br>of maximum 40 A, type B or C |  |
| Supported power systems                                 | TN-C, TN-C-S, TT, IT <sup>1</sup>  |  |  |
| Grounding   | TN system: PE wire TT system: Independently installed ground electrode < 100 Ohm spreading resistance IT system: connected to a shared reference (common earth) with other metal parts |  |  |
| Rated voltage (U <sub>N</sub> )                         | 230/400 VAC  |  |  |
| Rated insulation voltage (U <sub>i</sub> ) of a circuit | 500 V  |  |  |
| Rated impulse withstand voltage (U <sub>imp</sub> )     | 4 kV   |  |  |
| Rated frequency (f <sub>N</sub> )                       | 50 Hz / 60 Hz  |  |  |
| Rated current (Ina)                                     | 32 A   |  |  |
| Rated current (Inc) of a circuit                        | 32 A   |  |  |
| Rated peak withstand current $(I_{pk})$                 | 6 kA   |  |  |

<sup>1</sup> Caution: not all electric vehicles support the IT system. For 3 x 230 V charging, a voltage transformer might be necessary.

| Feature  | Description   |                            |  |
|--|---|----------------------------|--|
|  | Socket  | Type 2 cable               |  |
| Rated conditional short-circuit current (I <sub>cc</sub> ) | 6 kA  |                            |  |
| EMC classification   | Class B   |                            |  |
| Connection method  | AC, permanently connected                           |                            |  |
| Interfaces & Connectivity                                  |   |                            |  |
| Information status   | RGB LED   |                            |  |
| Session activation   | Plug and charge, Swipe RFI<br>Pay Station           | ID, Scan QR code, optional |  |
| Connectivity   | Ethernet 100BASE-T, Wi-Fi                           | 2.4 GHz                    |  |
| Communication protocol                                     | OCPP 1.6 JSON, ready for the                        | update to OCPP 2.0         |  |
| Certifications and Standards                               |   |                            |  |
| Product certification                                      | CE, ACMA  |                            |  |
| Standards  | IEC 61851-1 (2017), AS/NZ                           | S 3820:2020                |  |
| Environment  |   |                            |  |
| Enclosure material   | Magnelis (housing), aluminium (front plate)         |                            |  |
| Enclosure standard colours                                 | RAL 9016 (star white), RAL 7021 (black grey)        |                            |  |
| Protection degree  | IP 54   |                            |  |
| Mechanical impact protection                               | IK10  |                            |  |
| Pollution degree   | 3   |                            |  |
| Electrical safety class                                    |   |                            |  |
| Stand-by use   | LED brightness 0%: 2 W<br>LED brightness 100%: 5 W  |                            |  |
| Environmental conditions                                   | Indoor and outdoor use                              |                            |  |
| Operating temperature                                      | -25 °C to 40 °C                                     |                            |  |
| Storage temperature  | -25 °C to 60 °C                                     |                            |  |
| Relative humidity  | 0 % to 95 %, non-condensing                         |                            |  |
| Maximum installation altitude                              | 0 – 2000 m  |                            |  |
| Access   | Locations with restricted and non-restricted access |                            |  |

#### NOTE

- The operating temperate assumes the ambient temperature of a product delivered in the default enclosure colour RAL 7021 (black grey). Direct exposure to sunlight may have an adverse effect on the temperature range.
- If the product is exposed to lower or higher ambient temperatures, continuous operation cannot be guaranteed. If temperatures exceed the maximum values, the charging station will automatically decrease the charging current to decrease the internal temperature of the charging station. This stabilises the internal temperature and makes it less likely that a charging session will be unexpectedly paused.
- If the product is directly exposed to sunlight, the automated temperature management may automatically start below the maximum ambient temperature. Therefore, wherever possible, avoid exposing the charging station to direct sunlight.
- Where products are exposed to the elements of nature, the enclosure can be subject to gradual aging of the material, which can result in product discolouration over time.
   Therefore, wherever possible, place the product in a sheltered place to optimise the life of the materials.



# 4 Prepare the installation

For overload protection or optimised self-sufficiency, additional Smappee Infinity components must be installed to measure the Grid and Solar, Battery or other submetering if applicable.



#### NOTE

For more information, refer to the Smappee Academy.

The first step is to prepare the physical installation of the EV Wall as described in this chapter.

# 4.1 Installation prerequisites

- Obtain all necessary permits from the relevant local authorities.
- Local regulations may be applicable and can vary depending upon the region or country.
- Make sure that there is sufficient space around the charging station as specified in the IEC 60204-1 standard.

#### NOTE



When positioning the EV Wall, take into account that the power supply cable and twisted pair cable are entering the housing at the bottom through cable glands. The central M32 cable gland is for the power supply, the M20 cable gland for the twisted pair cable.

- Make sure that the installation area of the charging station is adequate for usability and ventilation purposes.
- Refer to local wiring regulations to select the conductor sizes and use only copper conductors.
- Calculate the existing electrical load to find the maximum operating current for the charging station installation.
- The appropriate wire gauge of the supply cable depends on the power rating and distance between the meter cabinet and the charging station. The voltage drop must not exceed 5 %. It is advisable to have a maximum voltage drop of 3 %.
- The power supply connection must be protected against short-circuiting and over-current with an individual circuit breaker. This circuit breaker must be 2-pole (for single-phase), 3-pole (threephase without neutral) or 4-pole (three-phase with neutral), curve B or C, and have a current rating of maximum 40 A (or otherwise in compliance with local standards and regulations).

#### NOTE



Some EVs are not compatible with a 3 x 230 V grid due to a built-in security in the EV. Contact your EV manufacturer for more information. If your EV is not compatible with this grid topology, or if you would like to achieve higher charging power than what is possible on a delta grid topology, you can install a transformer that converts the  $3 \times 230 \text{ V}$  topology to a standard  $3 \times 400 \text{ V} + \text{N}$  topology.

 Make sure that there is one twisted pair cable for the internet connection available for each EV Wall. For more information, refer to Connect the EV Wall to the internet (page 25). Route the power supply cable and the twisted pair cable, if applicable, to the position where the charging station will be installed.



#### NOTE

Make sure that there is at least 30 cm (1 ft) power supply and 30 cm (1 ft) twisted pair cable length available at the location of the EV Wall to be able to connect it easily.

Use the supplied mounting plate (page 18) to attach the EV Wall.

# **4.2 Tools (not included)**

- Torque wrench with extension bar and socket (inner hex 2.5 and 4 mm and screw width 8 mm)
- Multimeter and earth ground meter
- Wire stripper and cutter
- Needle-nose pliers
- Ferrules crimper (only for stranded power supply cables)
- RJ45 crimping tool
- Rock drill diameter 8 mm (only for floorplate)
- Hammer
- Screwdrivers

# 4.3 Supplies (not included)

- Power supply cable
- Circuit breaker for power supply
- Circuit breaker for Power Box (only for 3 x 230 V with transformer)
- Wi-Fi extender if the signal is weak or absent
- Twisted pair cable (4 pairs) and RJ45 connectors, minimum Cat 5 depending on the environment
- Ferrules, when using stranded power supply cables or decreasing the length of the charging cable

## 4.4 Prepare the EV Wall

#### **Context**

For safe and compact transport of the EV Wall:

- The EV Wall mounting plate is in the same box as the EV Wall, together with the supplies.
- The charging cable is in a separate box, together with the cable holder, 2 screws and 2 plugs.

#### Instructions

Proceed as follows.

- Remove the cardboard packaging.
  Keep in mind to store the cardboard, as this can be used to safely store the frontplate while
  installing the EV Wall.
- 2. Unscrew the two inner nuts that hold the front plate.
- 3. Make sure to keep the nuts for later use.
- 4. Lift the front plate.



Image 6: View on the front plate

- 5. Disconnect the black 12-pin cable to the PCB from the front plate.
- 6. Remove the front plate.

Put the plate in a safe location where it cannot be scratched or damaged. Put the nuts on the threaded rods to avoid losing them.

As a result, the EV Wall is prepared for the next steps.

# 4.5 Install the EV Wall mounting plate

#### **Context**

The EV Wall mounting plate lets you smoothly attach the charging station to a wall.



Image 7: View on the EV Wall mounting plate

#### **Instructions**

- Put the mounting plate on the position where the EV Wall will come.
   Make sure the mounting plate is positioned with the 2 insert holes on the bottom.
   Make sure the mounting plate is level.
- 2. Use the mounting plate to mark the position of the screws on the wall.
- 3. Drill three holes of 10 mm diameter through the slots to a depth of 50 mm.
- 4. Insert the supplied wall plugs into the holes.
- 5. Attach the mounting plate, with the 3 bulges facing the wall, with the supplied screws.

# 5 Installation and configuration

#### **CAUTION**



The installation must be carried out by a qualified professional who has read this manual and works in compliance with local and national standards. Neglecting this may lead to severe injuries or hazardous situations while working with electricity.

#### CAUTION



The electric system must be entirely disconnected from every power source prior to performing installation or maintenance work. Make sure it is not possible to connect the electric current during installation. Put up caution tape and warning signs to mark the work areas. Make sure no unauthorised people can enter the work areas.

#### **CAUTION**



The charging station contains electric components that may still contain electrical charge after being disconnected. Wait at least 10 seconds after disconnection before commencing work.



#### CAUTION

Adaptors or conversion adaptors and cord extension sets are not allowed to be used.

This procedure describes the required steps for the physical installation of the EV Wall.

- 1. Attach the EV Wall (page 20)
- 2. Connect the power supply of the EV Wall (page 21)
- 3. Connect the charging cable (page 23)
- 4. Install the cable holder (page 24)
- 5. Connect the EV Wall (page 25)
- 6. Install the front plate (page 30)

After the physical installation, the configuration can be done. For more information, refer to:

- 7. Configure the EV Wall with the Smappee App (page 31)
- 8. Complete the installation of the EV Wall (page 32)
- 9. Give the owner a smooth start (page 33)

# 5.1 Attach the EV Wall to the mounting plate

#### Context

The EV Wall mounting plate lets you smoothly attach the charging station to a wall.



Image 8: View on the EV Wall

#### Instructions

- Position the EV Wall in front of the mounting plate.
   Attach the EV Wall to the mounting plate. Use the three M4 x 6 mm hex screws.

# 5.2 Connect the power supply of the EV Wall

#### **Context**

Each EV Wall has a MID meter that measures the power supplied to the charging station. No other components must be installed to measure the charging station consumption.

Each EV Wall has must have its own circuit breaker. For more information, refer to Installation prerequisites (page 15).

#### Instructions

- 1. Guide the power supply cable through the cable gland in the middle of the EV Wall. Tighten the cable gland.
- 2. Cut the power supply cable to the sufficient length. For stranded wires, add a wire end ferrule to each conductor.
- 3. Connect the power supply wires as follows:

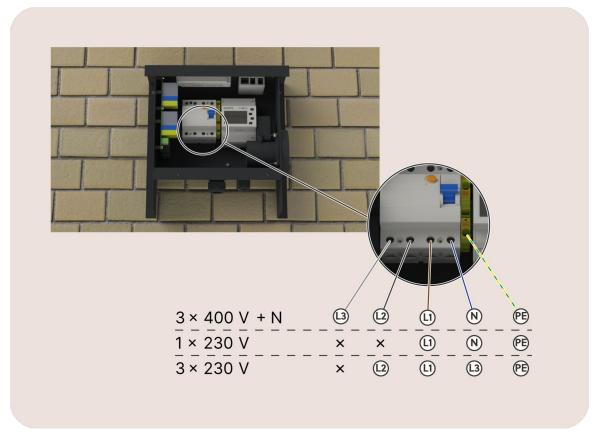


Image 9: View on the power supply connection for each grid type

- Put the green/yellow conductor in the corresponding terminal block for the protective earth (PE).
- Put the blue conductor, if applicable, in the corresponding connection point for the neutral (N)
  of the residual current device.



NOTE

For a 3 x 230 V with a transformer, the neutral wire comes from the transformer.

• Put the phase conductors in the necessary connection point of the residual current device.

#### NOTE



- L1 = brown phase 1-conductor
- L2 = black phase 2-conductor, if applicable
- L3 = grey phase 3-conductor, if applicable
   For a 3 x 230 V without a transformer, and thus no neutral conductor, put the grey conductor in the neutral connection point.

#### NOTE



If you install more than 1 charging station on a 3 x 400 V + N grid, we recommend different connection of the three phases. For more information, refer to Phase rotation (page 34).

4. Make sure that the residual current device is set to the on position. The on position is shown in Image 9.

As a result, the EV Wall is almost ready for power.

# 5.3 Connect the charging cable

#### **Context**



#### NOTE

This section is only relevant if the EV Wall comes with a fixed charging cable. If you have a socket-variant, go to Connect the EV Wall (page 25).

The charging cable is delivered in a separate box.



Image 10: View on the cable connections

#### Instructions

- 1. Attach the cable gland to the left opening at the bottom of the EV Wall.
- 2. Guide the charging cable through this cable gland.
- 3. Tighten the cable gland.
- 4. If necessary, decrease the length of the charging cable. Add a ferrule (not supplied) on each wire.
- 5. Connect each wire to the corresponding terminal as indicated with a label.

  Do not forget to connect the CP data wire of the charging cable to the CP terminal.
- 6. For strain relief, put the supplied cable tie around the charging cable. Tighten it just after the cable gland on the inside of the charging station.

#### 5.4 Install the cable holder

#### **Context**



#### NOTE

This section is only relevant if the EV Wall comes with a fixed charging cable. If you have a socket-variant, go to Connect the EV Wall (page 25).

The charging cable can be stored in a cable holder to keep it tidy.



Image 11: View on the stored cable holder

#### Instructions

- Put the cable holder on the location of the EV Wall.
   Make sure the opening is on top and the cable holder is level.
- 2. Mark the position of the screws on the wall.
- 3. Drill two holes of 10 mm diameter through the slots to a depth of 50 mm.
- 4. Insert the supplied wall plugs into the holes.
- 5. Attach the cable holder to the wall with the supplied screws.

#### 5.5 Connect the EV Wall to the internet

#### **Context**

#### **CAUTION**



Risk of electric shock.

Make sure no tools are in the charging station and people stand free from the charging station.

Communication with the internet can occur in three ways: wired connection (Ethernet), Wi-Fi, or 4G.

The EV Wall comes standard with a Smappee Connect, which enables communication via Ethernet or Wi-Fi. If neither an Ethernet nor Wi-Fi connection is available, communication will occur via 4G. In that case, the Smappee Connect must be replaced with a Smappee 4G Connect inside the building.

## NOTE

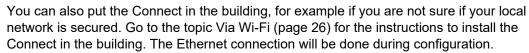


The charging station comes with a Smappee Splitter, which is only used if you put the Connect or the 4G Connect in the building. If the wired connection goes directly to the charging station, you don't need the Smappee Splitter.

#### Via a wired connection or Ethernet



#### NOTE



- 1. Guide the twisted pair cable through the right cable gland at the bottom of the EV Wall.
- 2. Cut the twisted pair cable to the necessary length.
- 3. Attach the RJ45 connector (not supplied).
- 4. Put the connector in the RJ45 port of the Smappee Connect.



Image 12: View on the RJ45 port

- 5. Tighten the cable gland.
- 6. Go to Post-requisites (page 30).

#### Via Wi-Fi

#### Proceed as follows:

1. Remove the Smappee Connect and the RJ10 cable from the EV Wall.



Image 13: View on the Smappee Connect

Retain both for reuse during the installation inside the building.

- 2. Guide a UTP communication cable through the right cable gland at the bottom of the EV Wall.
- 3. Connect the RJ45 connector of the UTP cable to the A+B port of the relay board.

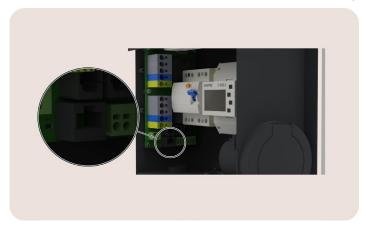


Image 14: View on the A+B port of the relay board

- 4. Route the UTP cable into the building.
- 5. Connect the RJ45 connector of the UTP cable to the A+B port of the Smappee Splitter inside the building.

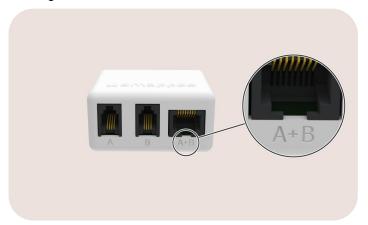


Image 15: View on the A+B port of the Smappee Splitter

The Smappee Splitter is included with the charging station and manages the communication between the charging station and the building.

6. Check whether the RJ10 cable from the Smappee Connect is plugged into one of the two B ports and reconnect it if necessary.

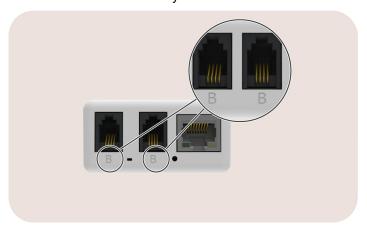


Image 16: View on the B ports of the Smappee Connect

7. Connect the other end of the RJ10 cable to the B port of the Smappee Splitter.

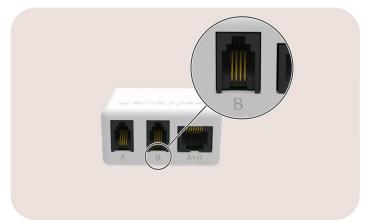


Image 17: View on the B port of the Smappee Splitter

For proper installation, a DIN mounting plate is included for the Smappee Splitter, and a wall mounting plate is included for the Smappee Connect.

8. Go to Post-requisites (page 30).

#### Via 4G



#### NOTE

The position of the antenna of the Smappee 4G Connect (upright or angled) does not affect the signal strength.

#### Proceed as follows:

1. Unplug the RJ10 cable from the Smappee Connect and remove the Smappee Connect from the EV Wall.



Image 18: View on the Smappee Connect

The RJ10 cable may remain inside the EV Wall.

Keep the Smappee Connect aside (in case a future switch from Smappee 4G Connect back to Smappee Connect is required).

- 2. Guide a UTP communication cable through the right cable gland at the bottom of the EV Wall.
- 3. Connect the RJ45 connector of the UTP cable to the A+B port of the relay board.

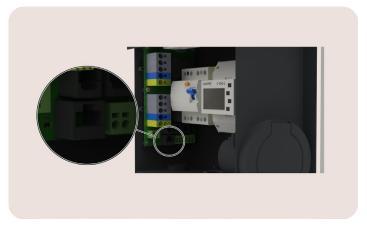


Image 19: View on the A+B port of the relay board

- 4. Route the UTP cable into the building.
- 5. Connect the RJ45 connector of the UTP cable to the A+B port on the Smappee Splitter inside the building.

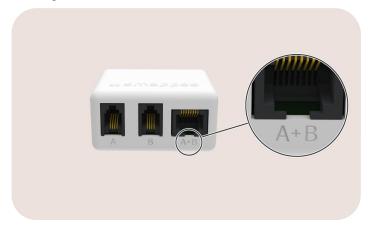


Image 20: View on the A+B port of the Smappee Splitter

The Smappee Splitter is included with the charging station and manages the communication between the charging station and the building.

6. Connect the supplied RJ10 cable from the Smappee 4G Connect to one of its two B ports.

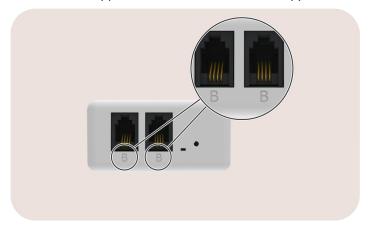


Image 21: View on the B ports of the Smappee 4G Connect

7. Connect the other end of the RJ10 cable to the B port on the Smappee Splitter.



Image 22: View on the B port of the Smappee Splitter

For proper installation, a DIN mounting plate is included for the Smappee Splitter and a wall mounting plate for the Smappee 4G Connect.

8. Go to Post-requisites (page 30).

#### **Post-requisites**

- 1. Start the power supply to the EV Wall.
- 2. Check the status of the components after approximately 30 seconds.

| Description         | More information       |
|---------------------|------------------------|
| 1 x MID meter       | Display is lighting up |
| 1 x Smappee Connect | LED is lighting up     |

For more information, refer to Colour code explanation (page 36).

3. Stop the power supply to the EV Wall.

# 5.6 Install the front plate

#### **Context**

The front plate has a PCB with RFID reader and LED for the Smappee Avatar.

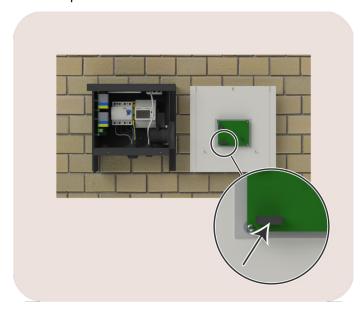


Image 23: View on the 12-pin cable

#### **Instructions**

- 1. Remove the nuts from the threaded rods of the front plate.
- 2. Connect the black 12-pin cable to the PCB attached to the front plate.
- 3. Put the front plate back.
- 4. Put the nuts on the threaded rods to avoid losing them.

As a result, the EV Wall is ready to be configured with the Smappee App.

# 5.7 Configure the EV Wall with the Smappee App

#### Instructions

Proceed as follows:

1. Scan the QR code on the front of the charger.



Figure 24: QR code on the front of the charging station

2. Follow the steps shown in the Smappee App.

### **Post-requisites**

The settings of your charging station can be adjusted in the Smappee App or the Smappee Dashboard.

- Name
- LED brightness
- Maximum current per connector and thus the charging speed per connector

# 5.8 Complete the installation of the EV Wall

#### Instructions

Proceed as follows.

1. Put the M4 nuts on the threaded rods and tighten them.

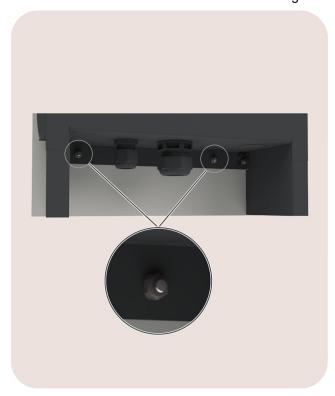


Image 25: View on the inner nuts

As a result, the EV Wall is ready for use. For more information, refer to the annex Status of the charging station (page 38).

## 5.9 Give the owner a smooth start

- Give the Smappee Charge Card to the charger owner.
   Tell them to scan the QR code on the front of the charger.



Figure 26: QR code on the front of the charging station

# **Annexes**

#### **Phase rotation**

Most of the hybrid vehicles use only one phase for charging.

When connected to a single-phase power supply, the Smappee (Cascade) Overload Protection will control the charging sessions on the L1 phase to prevent a circuit breaker from tripping.

When connected to a three-phase power supply, the Smappee (Cascade) Overload Protection can control the charging sessions on each of the three phases. When charging multiple single-phase electric vehicles at the same time, you can use phase 2 and phase 3 by doing the following:

- During the installation you can do the physical phase rotation.
- During the configuration with the Smappee App you need to set the phase mapping

#### **Example of phase rotation**

When you have an EV Wall and an EV One, connect the power supply as indicated with the bold Xs.

|  |   |       | colours<br>to be co | of the wire | n the position X |
|--|---|-------|---------------------|-------------|------------------|
| Charging stations from the Smappee EV Line | Internal wiring of<br>the phases and<br>their colour in the<br>charging station |       | 3 x 400V            | + N         |                  |
|  |   |       | L1                  | L2          | L3               |
|  |   |       | Brown               | Black       | Grey             |
|  | L1  | Brown | Х                   | -           | -                |
| EV Wall                                    | L2  | Black | -                   | Х           | -                |
|  | L3  | Grey  | -                   | -           | Х                |
|  | L1  | Brown | -                   | Х           | -                |
| EV One                                     | L2  | Black | -                   | -           | Х                |
|  | L3  | Grey  | Х                   | -           | -                |

# **Declaration of conformity**

# **EU Declaration** of conformity

Manufacturer

Smappee NV

Address

Evolis 104, 8530 Harelbeke, Belgium

Represented by

**Kurt Vandeputte** 

Function

Hereby declares, under the sole responsibility of the manufacturer, that

The product

AC conductive charging equipment

Models

EVWB-332-BR-E-W, EVWB-332-BSR-E-W, EVWB-332-C8R-E-W, EVWB-332-C8R-E-B EVWC-332-BR-E-W, EVWC-332-C8R-E-W, EVWC-332-BR-E-B, EVWC-332-C8R-E-B

Complies with the requirements of the following EU Directives, provided that it is installed, maintained, and used according to the manufacturer's instructions

- 2014/35/EU The Low Voltage Directive

- 2014/30/EU The Electromagnetic Compatibility Directive - 2014/32/EU The Measurement Instrument Directive - 2014/53/EU The Radio Equipment Directive

- 2011/65/EU RoHS Directive

#### Standards applied

Safety EN IEC 61851-1 2019/AC:2024 Electric vehicle conductive charging system -

General requirements

EN 61010-1:2010/A1:2019 Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements EN IEC 62311:2020 Assessment of electronic and electrical equipment related

to human exposure restrictions for electromagnetic fields

**EMC** EN IEC 61851-21-2:2018 EMC requirements for off board electric vehicle charging systems

EN IEC 61326-1:2021 EMC requirements for Electrical equipment for measurement,

control and laboratory use

ETSI EN 301 489-1 V2.2.3: EMC for radio equipment and services;

Part 1: Common technical requirements

ETSI EN 301 489-3 V2.2.3: EMC for radio equipment and services;

Part 3: Specific conditions for Short Range Devices (SRD)

Metering EN 50470-1:2006/A1:2018 - Electricity metering equipment (a.c.) - General requirements

EN 50470-3:2022: Static meters for AC active energy - Particular requirements

Radio ETSI EN 300 330 V2.1.1 Short Range Devices (SRD); Radio and inductive loop systems

Authorised signatory

2 depor

**Kurt Vandeputte** 

smappee

# **Colour code explanation**

## **Status of the Smappee Connect**

This status is relevant during the configuration and use of the charging station.

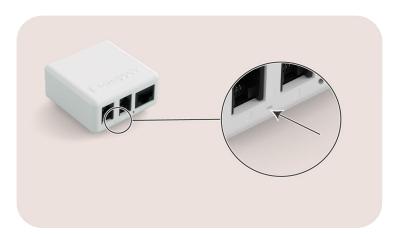


Image 27: Position of the LED on the Smappee Connect

| Colour | Status           | Meaning              | More information  |
|--------|------------------|----------------------|---|
|        | Blue continuous  | Starting up          | The Connect is starting up. If this takes more than 30 seconds, please contact support.   |
|        | Blue flashing    | Ready for connecting | The Connect is ready to be connected to the network.  |
|        | Green continuous | Connecting           | The Connect is connecting to the internet and must become <i>Green breathing</i> . If this takes more than 2 minutes, please contact support. |
|        | Green breathing  | All good             | The Connect operates correctly.   |
|        | Red flashing     | No connection        | The Connect has no connection to the internet during start-up. Find the cause of the connection issue or contact support.                     |

## **Status of the Smappee 4G Connect**

This status is relevant during the configuration and use of the charging station.

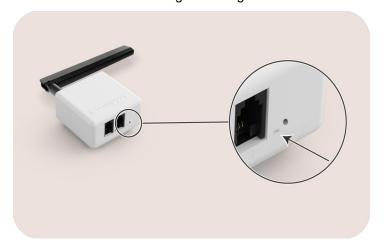


Image 28: Position of the LED on the Smappee 4G Connect



#### NOTE

Make sure your own body does not interfere with the reception.

| Colour | Status           | Meaning                  | More information   |
|--------|------------------|--------------------------|--|
|        | Cyan flashing    | Searching for 4G network | The 4G Connect is searching for network connection.  |
|        | Green continuous | Connecting               | The 4G Connect is connecting to the internet and must become Green breathing. If this takes more than 2 minutes, please contact support. |
|        | Green breathing  | Good reception           | The 4G reception is good at this position.   |
|        | Yellow breathing | Average reception        | The 4G reception is average at this position and some features may respond slowly.   |
|        | Red breathing    | Poor reception           | The 4G reception is poor at this position.<br>You must move the 4G Connect to a better<br>spot or use an alternative connection.         |
|        | Red flashing     | No reception             | The 4G Connect has no connection to the internet during start-up. Find the cause of the connection issue or contact support.             |

## Status of the charging station

This status is relevant during the use of the charging station.



Image 29: Position of the RFID reader with LED on the EV Wall

| Colour | Status           | Meaning  | Action of the user   |
|--------|------------------|--|--|
| •      | Red continuous   | Charging station is unavailable.                                 | Something is wrong or the charging station has been disabled. Enable the charging station with the Smappee App or contact your installer.  |
| A      | White continuous | Charging station is available.                                   | Connect your electric vehicle (EV) with the charging station.  |
| •      | Blue continuous  | EV is connected to the charging station but is not yet charging. | If no authorization is necessary, wait 3 seconds until you hear a sound and the LED is green. If the LED stays blue, do one of the following:  Swipe your RFID tag (charge card, RFID key,) along the blue indicator of the charging station.  Scan the QR code, if applicable |
| •      | Blue flashing    | Authorization is being verified.                                 | Wait 15 seconds until the authorization is finished and you hear a sound. The LED is red if charging has not started or green if charging has started.   |
| •      | Re flashing      | RFID tag is not authorized.                                      | Contact the supplier of the RFID tag.  |
| •      | Green breathing  | EV is being charged.   | Your EV is being charged.  |
| A      | Green flashing   | Charging session is waiting to charge or paused by an overload   | This is informative, no action required.   |
| A      | Green continuous | EV is charged  | Disconnect the charging cable and put it safely back in the storage place.   |

#### **Maintenance schedule**

To ensure safe and reliable operation, periodic maintenance and inspections are recommended. The frequency depends on usage and environmental conditions.



#### **WARNING**

Before starting maintenance activities, consider all safety precautions as listed in Safety instructions (page 5).



#### NOTE

For publicly accessible charging stations, periodic inspections may be required by local regulations. Check applicable guidelines for compliance.

| Task                                      | More information  |
|---|---|
| Visual inspection of the charging station | Check for visible damage or wear. If necessary, consult an installer for assessment or replacement.   |
| Cleaning                                  | Cleaning is optional and does not affect the operation of the charging station. For aesthetic reasons, you may wipe the unit with a dry, clean cloth. Do not use water jets, solvents, or abrasive materials. |

# **Spare parts list**

| Article no.                  | EAN           | Description   |
|------------------------------|---------------|---|
| i1-GW-3                      | 5425036931442 | Smappee Connect   |
| i1-EN3-1                     | 5425036931701 | Smappee 3phase MID meter  |
| AC-RCDA-4P40A                | 5425036935532 | RCD Type A 4P 30mA 40A  |
| EV-PCB-SIGNALBOARD-1         | 5425036935549 | EV Line Charge controller + RFID Reader                                   |
| EV-PCB-RELAYBOARD-<br>2x2P-1 | 5425036935556 | EV Line Relayboard 2 x 2P   |
| EV-CABLE-12P-1               | 5425036935587 | 12P cable EV_charg 0,5m   |
| AC-AB-SPLITTER               | 5425036935334 | A_B Splitter  |
| EVW-CBL-HOLDER-4             | 5425036934191 | EV Wall Cable holder - 4 pieces   |
| AC-IBC40-10                  | 5425036935648 | Smart Bus RJ10 Cable 40 cm - 10 pieces                                    |
| EVW-CBL-T2-332-8-NCH         | 5425036933620 | EV Wall 3-phase 32A Type 2 open-ended charging cable 8m                   |
| EVW-CBL-T2-332-8             | 5425036932470 | EV Wall 3-phase 32A Type 2 open-ended charging cable 8m with cable holder |
| EVW-COVER-B                  | 5425036933606 | EV Wall Cover Black   |
| EVW-COVER-W                  | 5425036933538 | EV Wall Cover White   |

If you need another part than listed, please contact info@smappee.com.