



# Libra Energy

2023, 17 april

## Agenda

1. Charging methods and safety
2. Zaptec Go
3. Zaptec Pro and system charging
4. Zaptec App and Portal



Vision

*We change our world with  
cutting-edge charging solutions*

# Leading provider of charging solutions

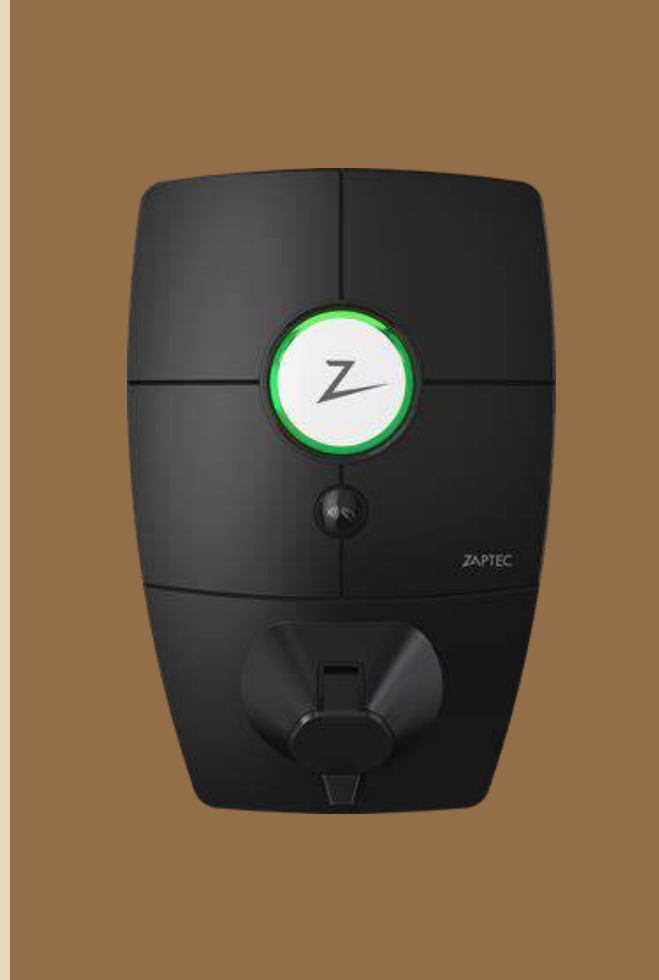
Zaptec Pro

Zaptec Go

Zaptec Portal

Zaptec App

Zaptec Sense



# EV Charging



# Standard and Safety

- ✓ **Approved security**
- ✓ **Reliable and futureproof**
- ✓ **5- year warranty**

Certified products, IEC 61851-1, EVSE mode 3

Certified RCD Type B, IEC 60423 (Pro)

Certified RDC-DD, IEC 62955 (Go)



IEC 60529: *IP54*

IEC 62262: (IK code) *IK10*

IEC 60695-1-10: Fire hazard testing

IEC 61851-1, EVSE mode 3

NEK EN 61851-22 Charging system for evs

IEC 62196-2. Plugs, socket-outlets and vehicle connectors

# Home Charging

Zaptec Go



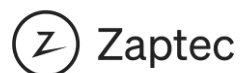


An enlightening idea



# Zaptec Go

- A super small 22 kW smart charger!
- Enlightened Type 2-kontakt
- Always online- WiFi and LTE-M
- Eco Mode
- RFID
- Integration with 3- party



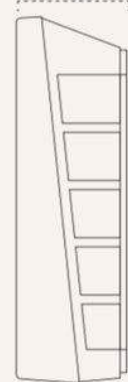
Down to the details



W:180mm

D:75mm

H:242mm



Go is an alternating current charging station in accordance with IEC 61851-1, EVSE Mode 3.

**Dimensions (mm)**  
W: 180 x D: 75

#### Protection circuit

A fuse on installation circuit for charging stations.

#### Power supply network, Voltages

and TT  
± 10%  
± 10%

#### Current and charging output

32A/3-phase (TN networks)  
at 32A/3-phase (IT networks)  
at 32A/1-phase IT/TN

#### Charging socket

IEC 62196-2 Type 2 Female  
Electronic lock, can be permanently locked by user

#### Earth fault protection

RDC: DD 6mA according to IEC 62955.  
Electronic, automatic reset by replugging Type 2 cable

#### Energy metering

Integrated 3-phase energy meter  
-1% accuracy on readings

#### HMI, Identification and configuration

Bluetooth Low Energy (BLE 4.1)  
RFID/NFC reader – Mifare Classic, Type A  
RGBW LED circle for device status  
1,2W power usage at standby

#### Standards and approvals

CE compliance in accordance with IEC 61851-1:2017 and IEC 62955, and the Radio Equipment Directive 2014/53/EU and ROHS Directive 2011/65/EU.

#### Temperature range

-30°C to +40°C

#### Degree of protection

IP54, indoor and outdoor use  
IK8 impact protection  
UL94 5VB flammability rating  
UV resistant

#### Electrical protection

Protection class II (4kV AC and 6kV impulse, insulation)  
Overvoltage category III (4kV)

#### Software interfaces available

Zaptec App  
Zaptec Go+ subscription service  
Zaptec API available (limitations apply to Go installations)  
OCPP 1.6J box level – available Q3 2021.

# One size. Six colors



reddot winner 2022

# Uncompromised Security

- Certified with the highest safety standards - TÜV SÜD
- IP54 certified for water and dust
- Earth fault RDC -DD 6mA



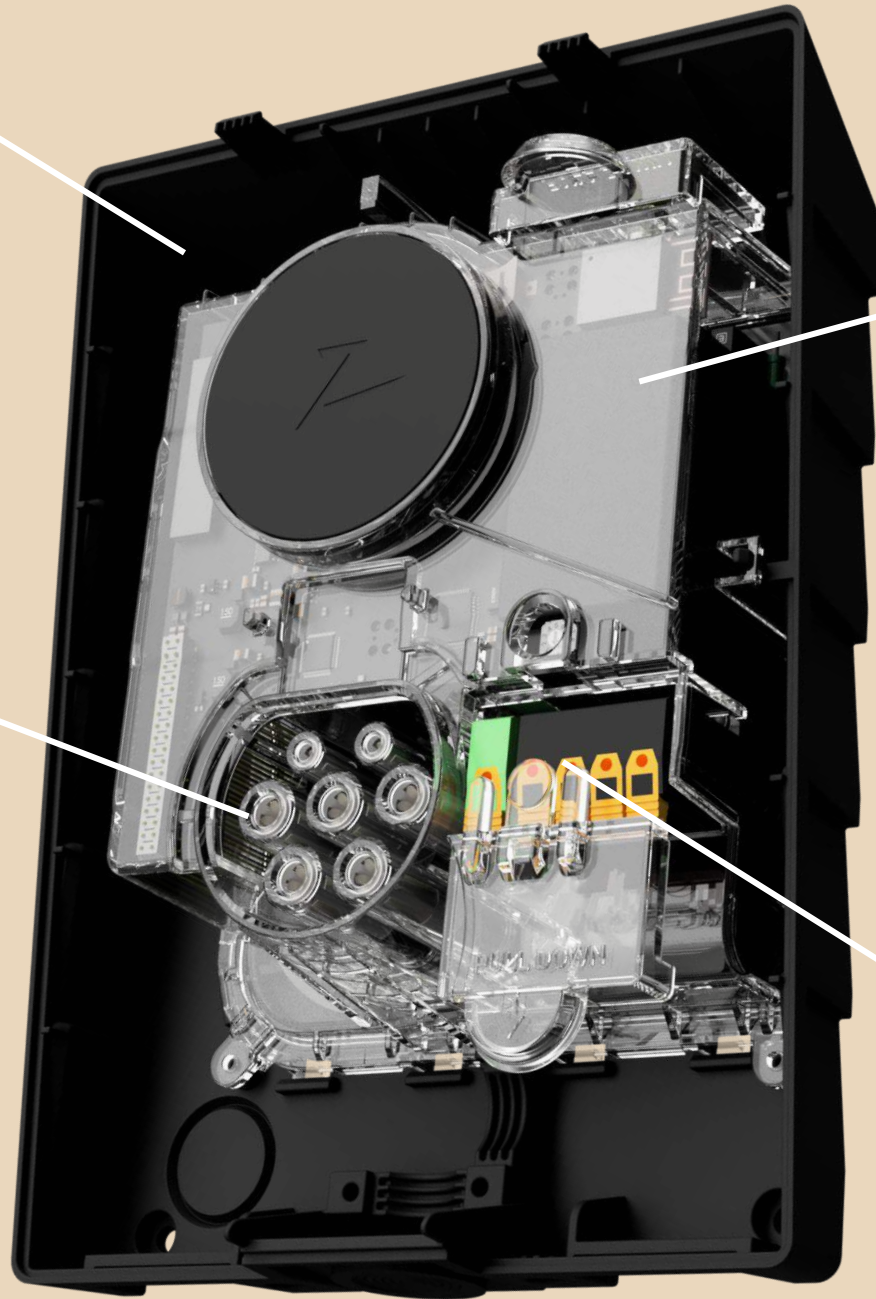
Best i test

Built-in  
leveler

Touch and waterproof enclosure

Type 2- contact

Quality contact from known  
**Phoenix Contact**



Super easy installation



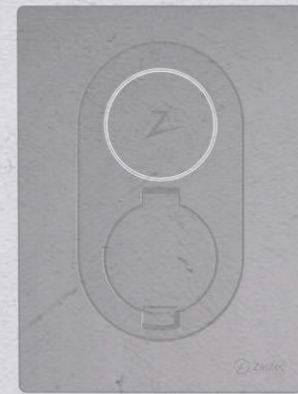
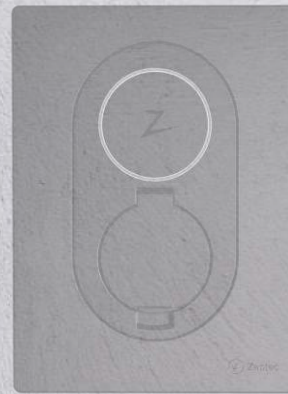
# Installation



- Requires double pole Type A RCD and overcurrent protection
- Supports 1 and 3- phase charging on IT grid
- Use cables with or without cable clamps
- In-app configuration



# Multi installation



- Max three chargers per installation
- Requires double pole Type A RCD and overcurrent protection
- In-app configuration
- Load balancing in cloud

# System Charging

Zaptec Pro





# Product specification



## Pro

## Go

Compatible with all electric vehicles (22kW)



International standard, type 2 socket



RCD type B with automatic reset



No

RCD -DD 6mA

No



eMeter



Bluetooth and RFID



IP54 & Ik10



Phase balancing



No

3x 40A fuse



No

Communication

WiFi / PLC / 4G

WiFi / 4G

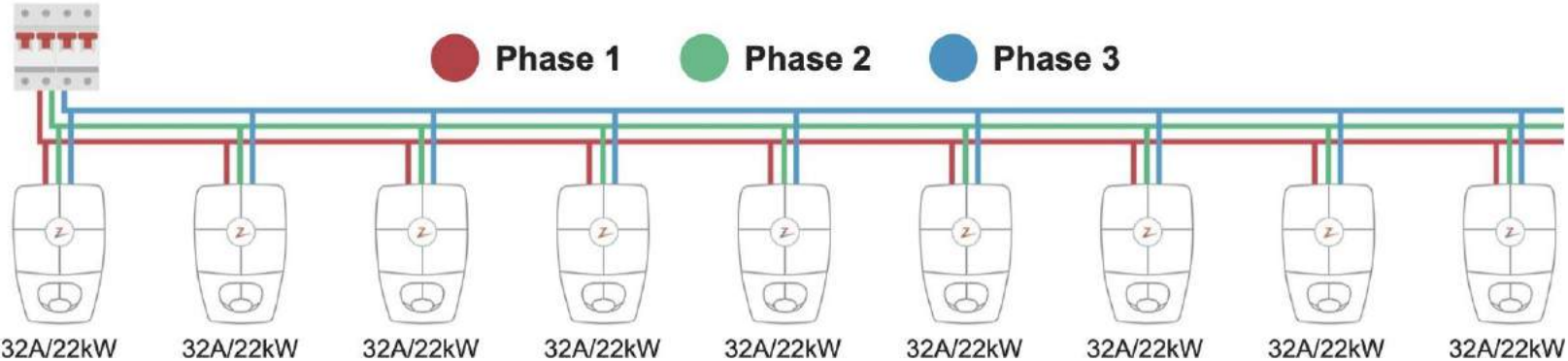
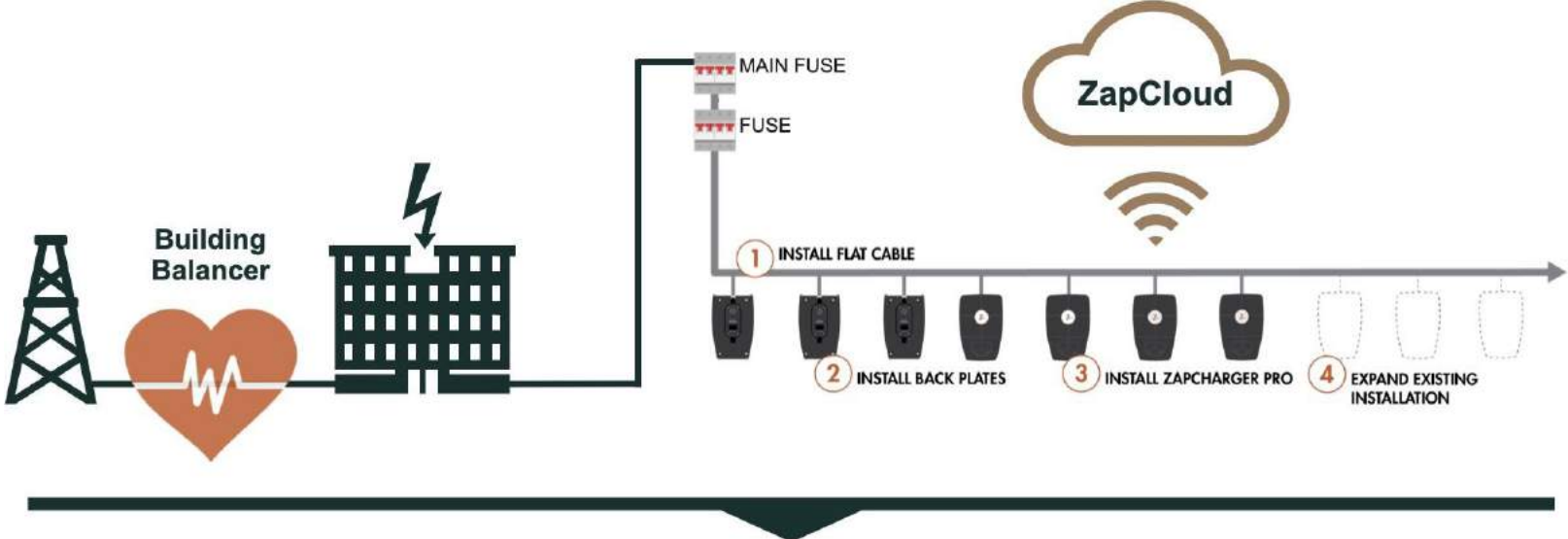
Authentication



# Zaptec technology

- Safer charging at higher speeds and at lower “all-in” costs

- ✓ Each station gets up to **22kW**
- ✓ **66%** lower installation cost
- ✓ Significant increase in number of chargers for a given power intake



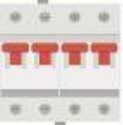
250A MAIN FUSE BUILDING

202A Allocated to housing apartments



48A ALLOCATED ENERGY dedicated to EV charging

40A CIRCUITE FUSE 1



40A CIRCUIT FUSE 2



32A/22kW



32A/22kW



32A/22kW



32A/22kW



32A/22kW



32A/22kW



32A/22kW



32A/22kW



32A/22kW



32A/22kW



32A/22kW



32A/22kW



32A/22kW



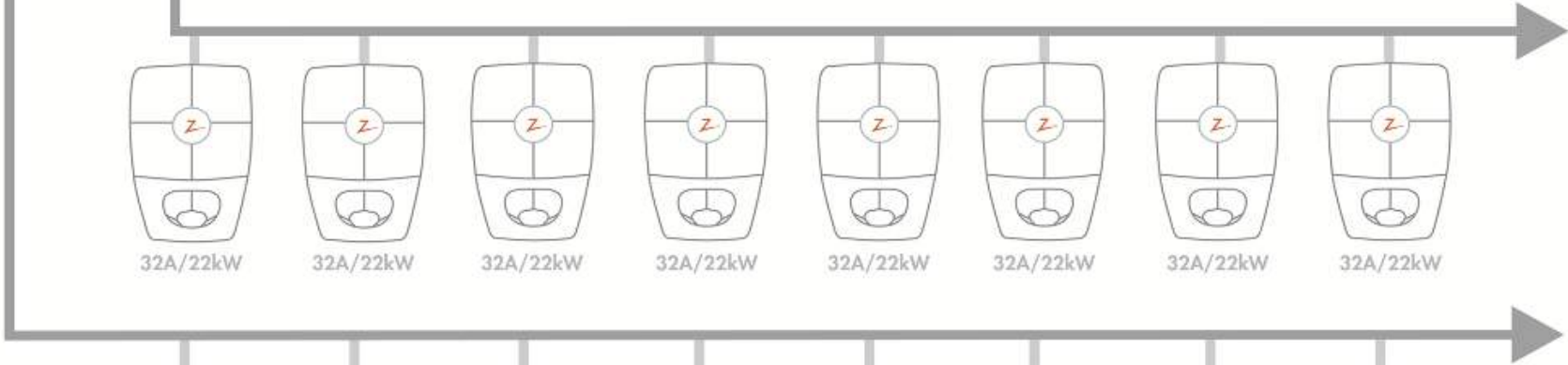
32A/22kW



32A/22kW



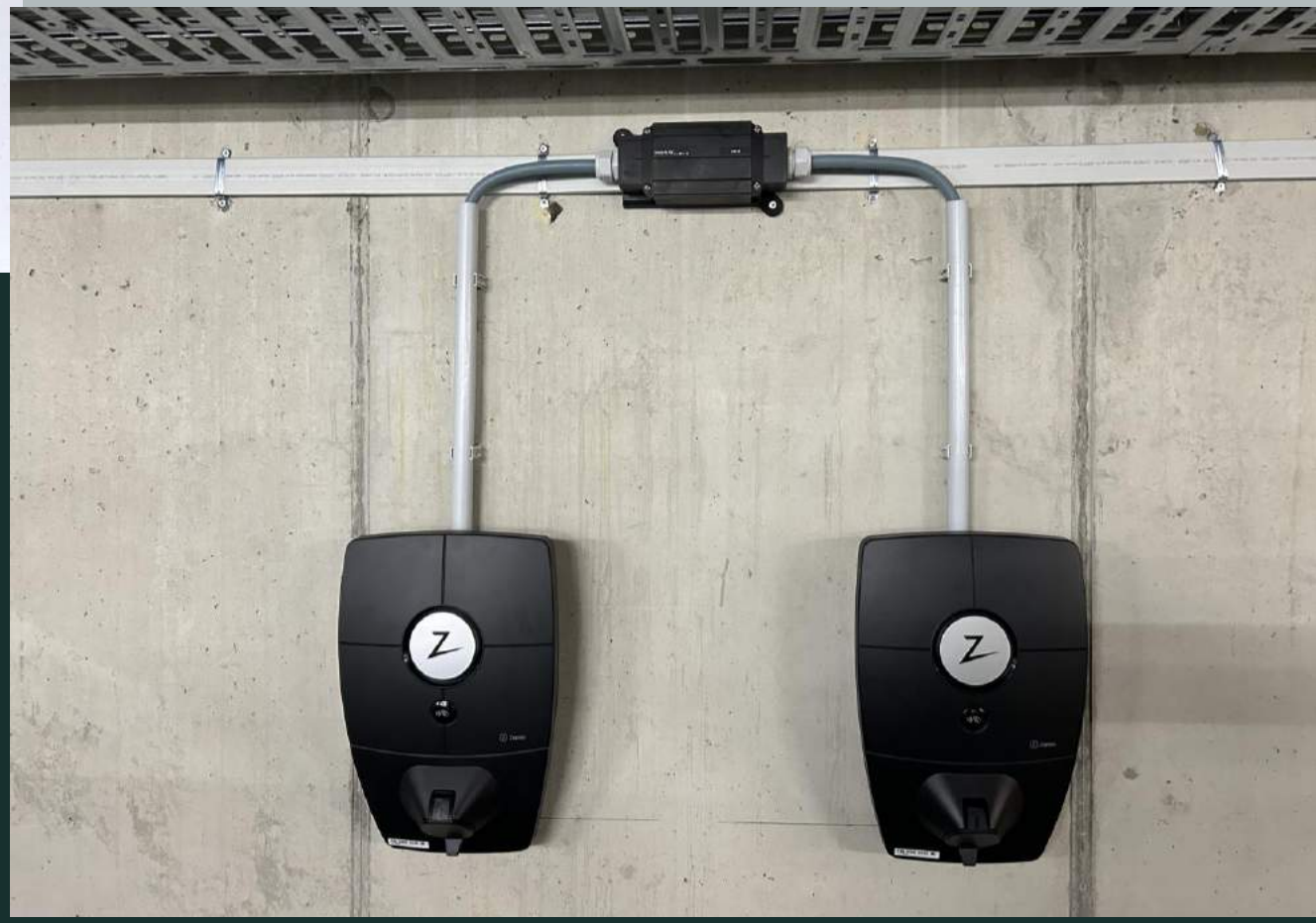
32A/22kW





Installation with  
round cable ↑

Installation with  
flat cable ↓



# Charging columns

Placement of charging stations (Mount in ceiling, wall or with column)



ONEPOLE 2





Capacity

Dynamic load -and phase balancing

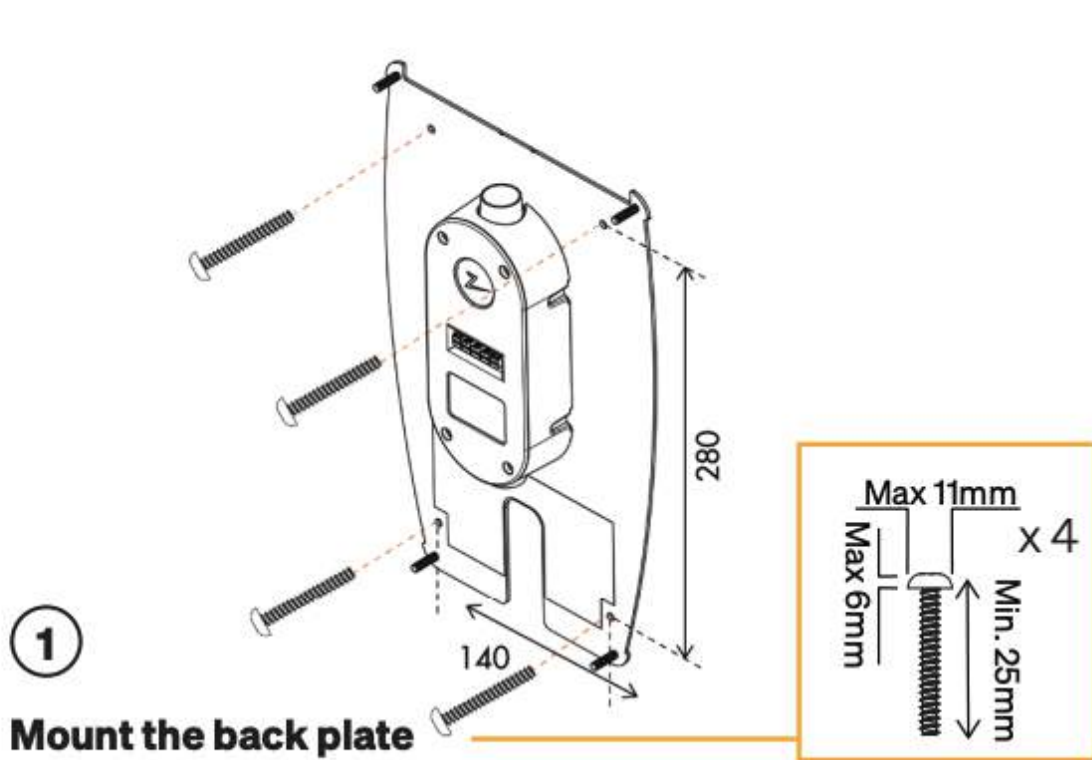
# Capacity

400V TN

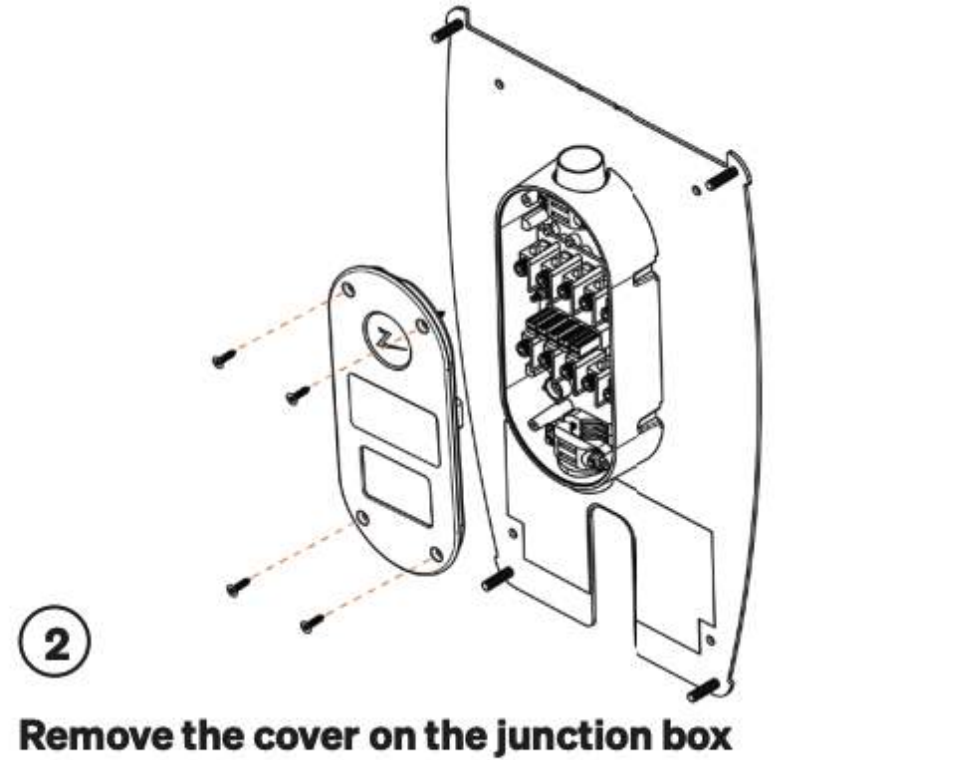
- Distributes the load evenly across all phases.
- Prevents uneven load distribution of the load and provides optimal utilization of the network's capacity



# Mounting of backplate



If the wall structure requires plugs/drilling, you must ensure that dust and dirt do not get into the junction box.  
Screw requirement: Head max 12mm diameter,  
Head max height 6mm, length min 25mm.

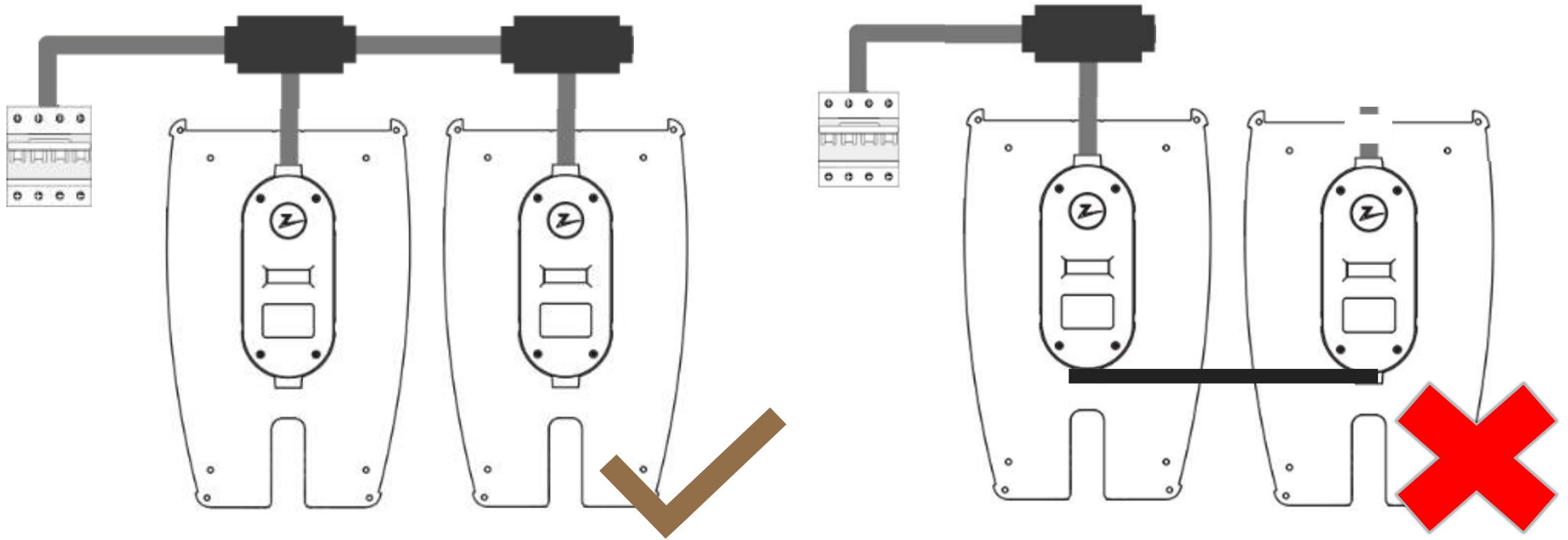


Undo four screws and open the cover to access the junction box.



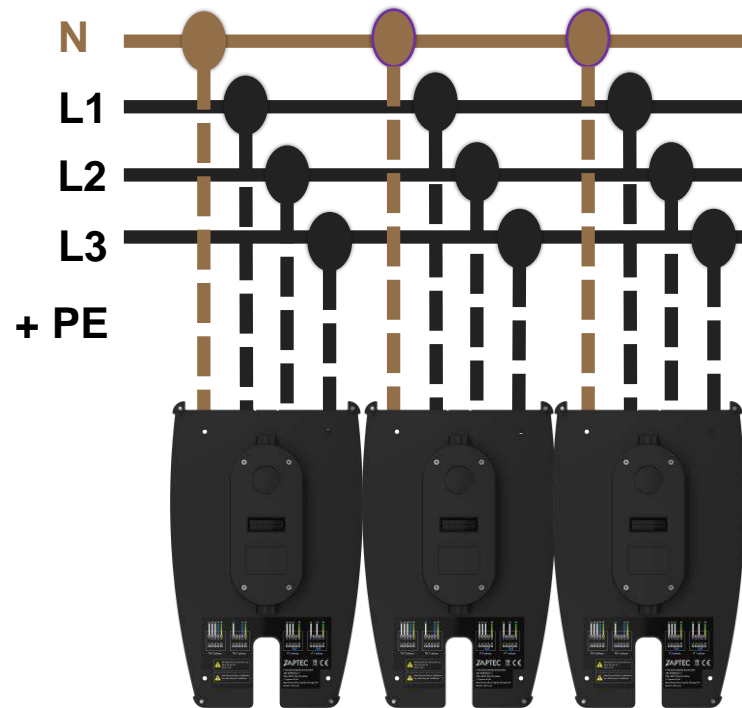
# Electrical wiring and connection

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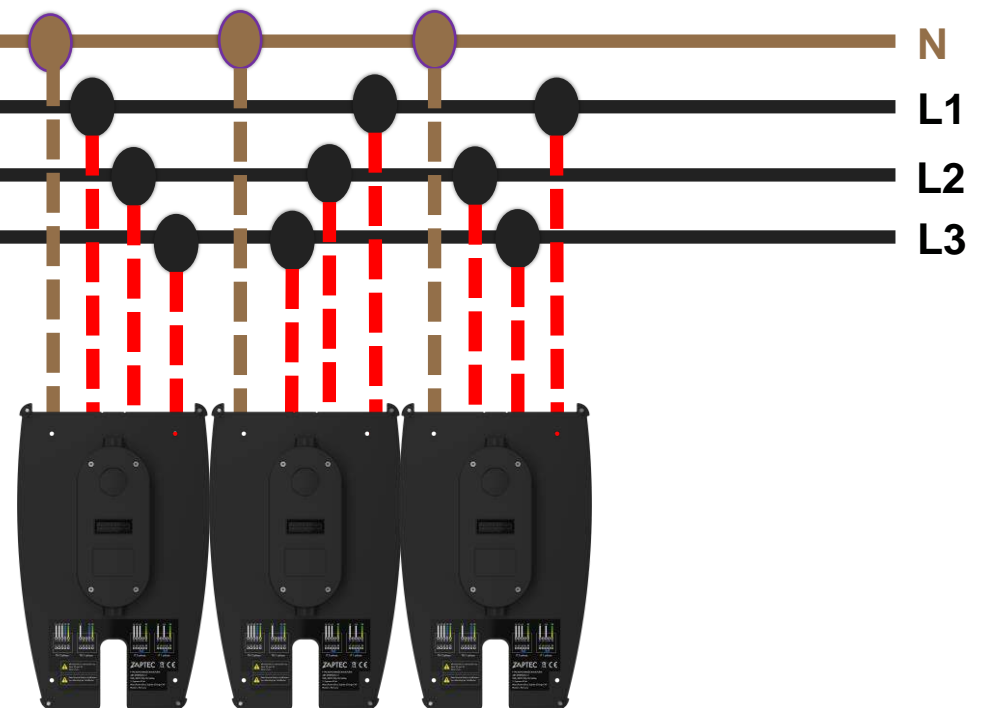


# Installation of Zaptec Pro

Dynamic phase and load balancing



3-phase Static phase rotation



## What is a PLC module?

A module that converts an ethernet signal to travel on the electrical grid.



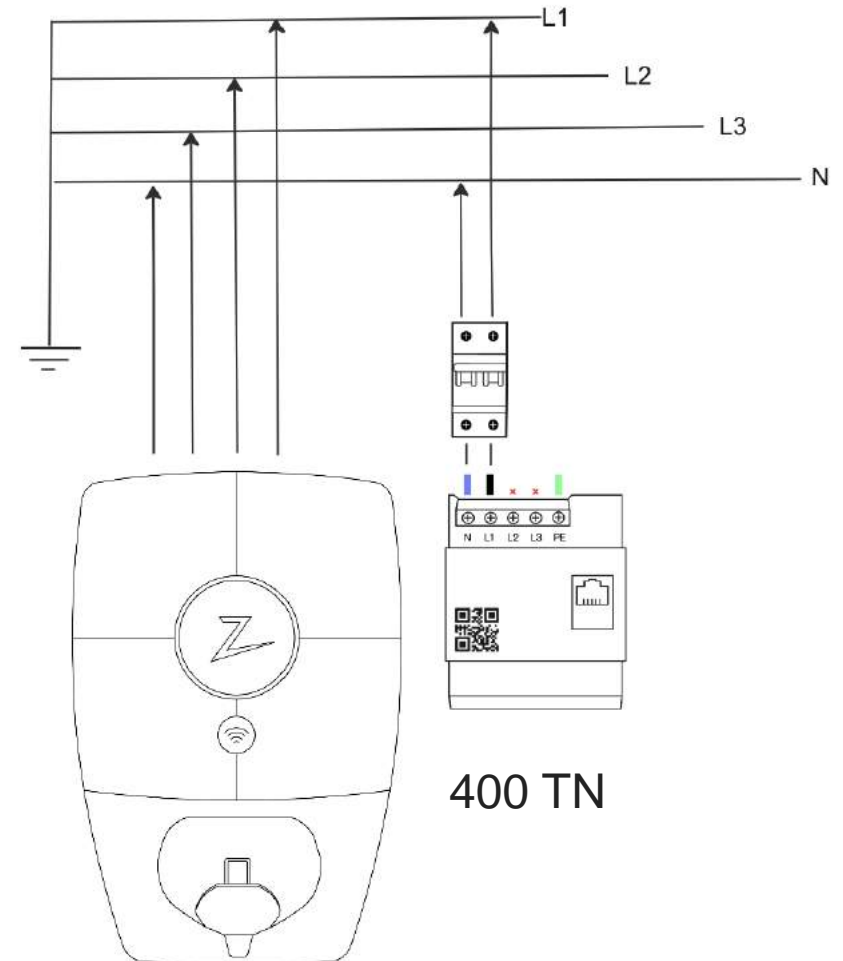
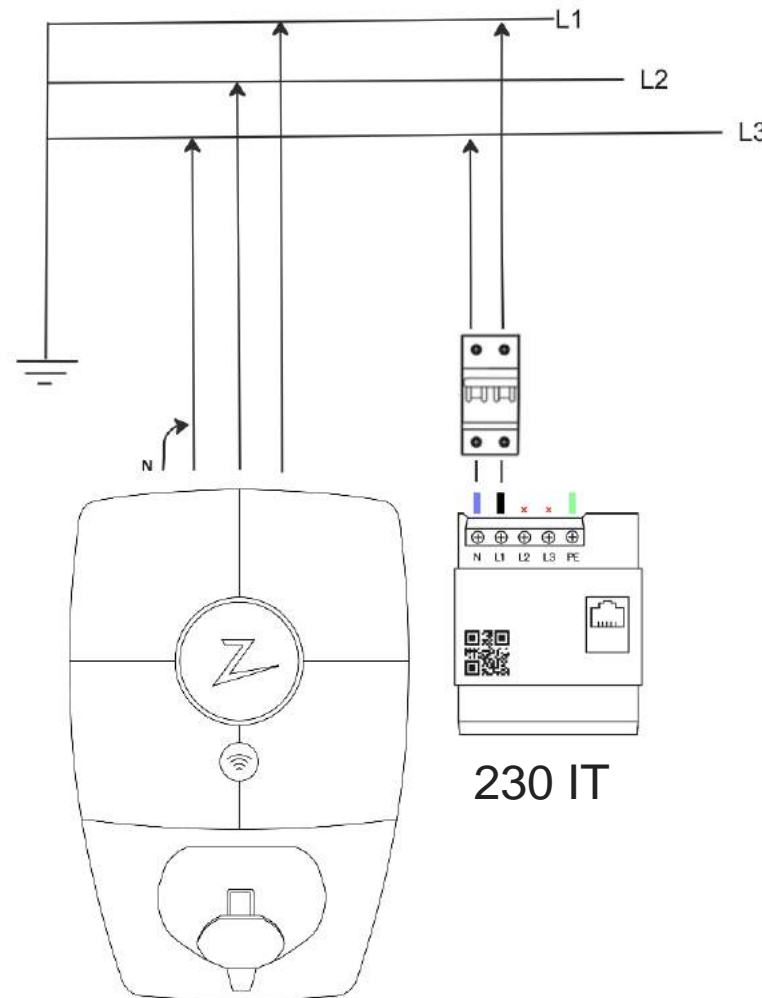
# Powerline – 1-phase connection

## Installation

Zaptec Pro is wired 3-phase

## Fuse box

PLC modul is wired 1-phase



# Zaptec Sense

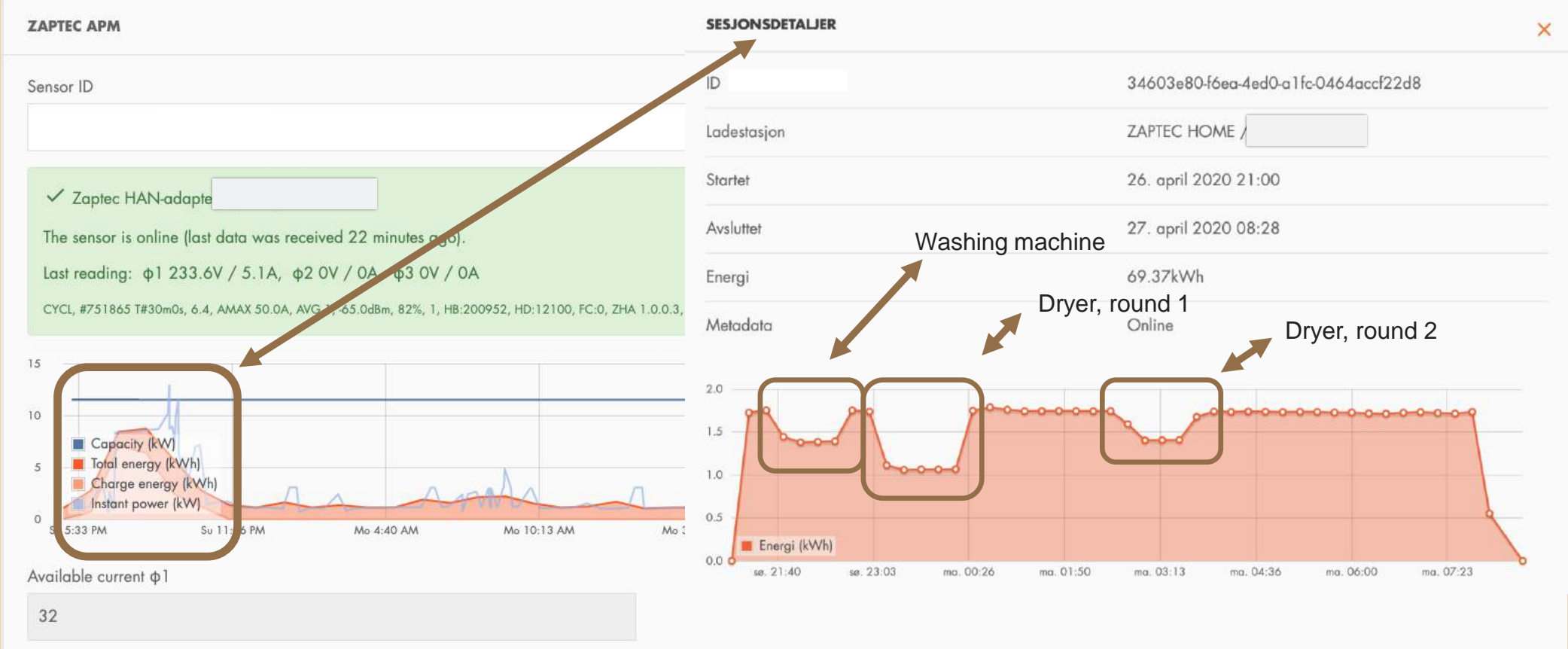
*Zaptec Sense HAN*

Even easier load balancing!

- Cost effective
- Easy assembly
- Wireless internet connection
- Can be retrofitted



# Capacity – Zaptec Sense



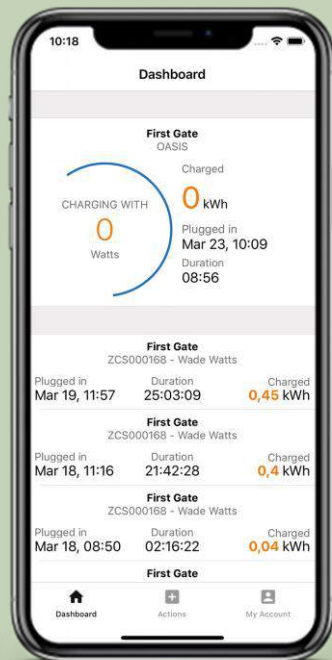
# Zaptec App



# User functionality



Dark mode



Light mode

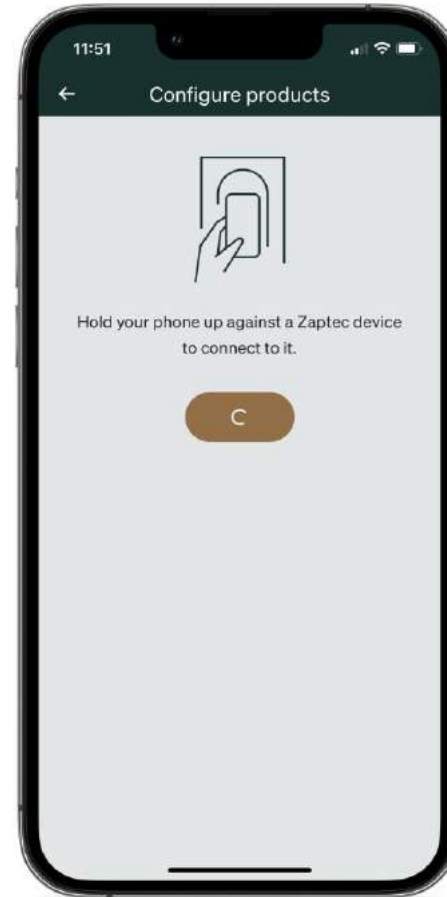
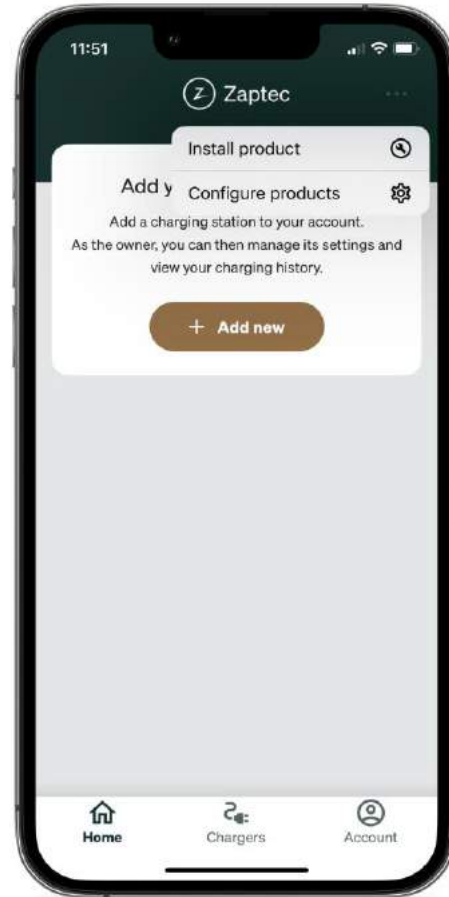
- Start and stop charging
- Dashboard
- Lock cable
- Register key fob
- Status





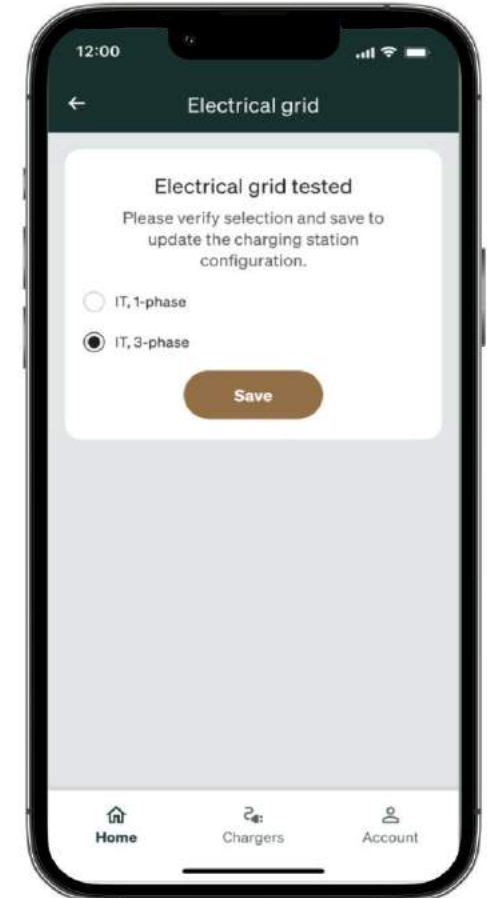
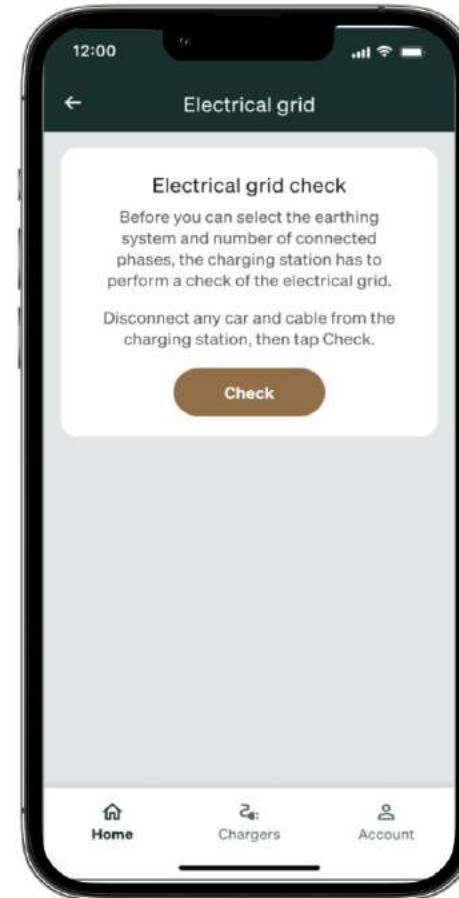
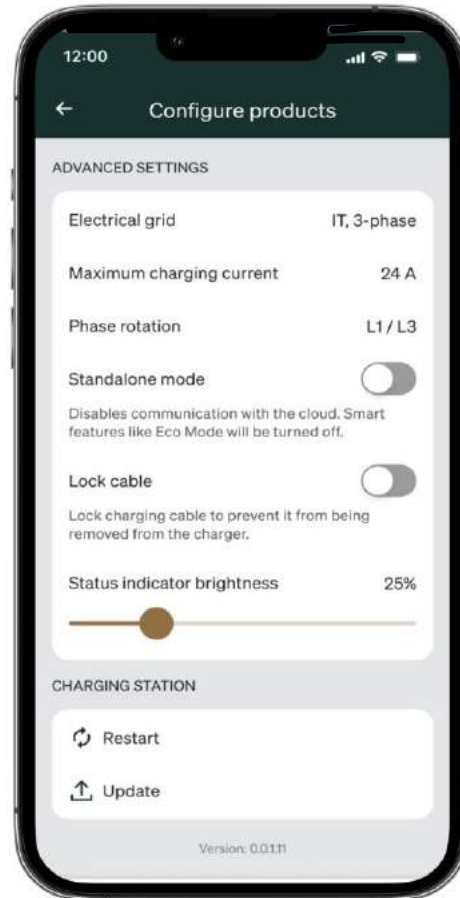
# Configure Zaptec Pro

1. Configure product
2. Find device
3. Enter PIN code



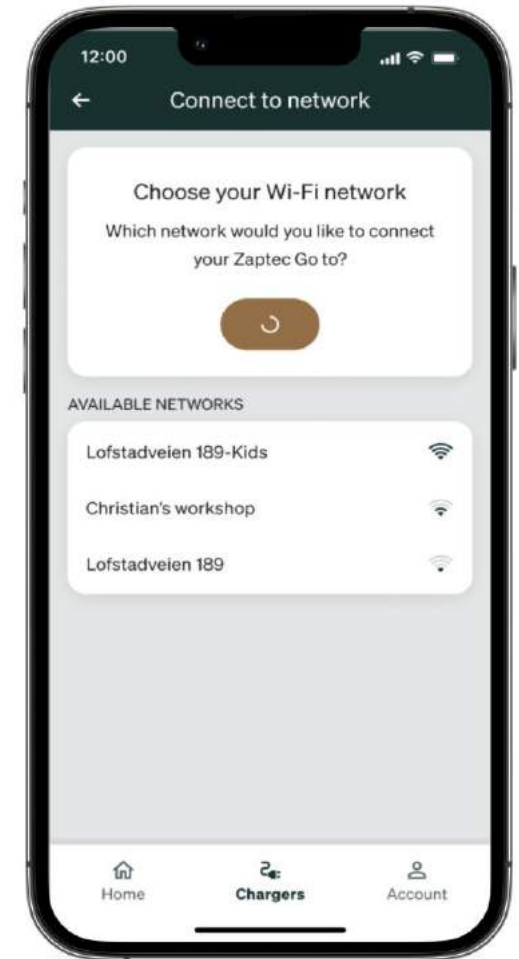
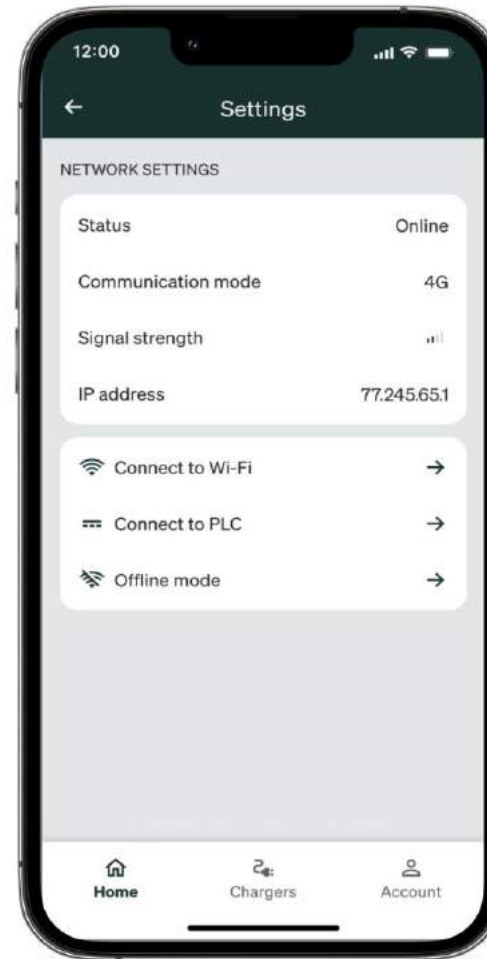
# Configure – Electrical grid

1. Tap electrical grid
2. Check
3. Veridy selection



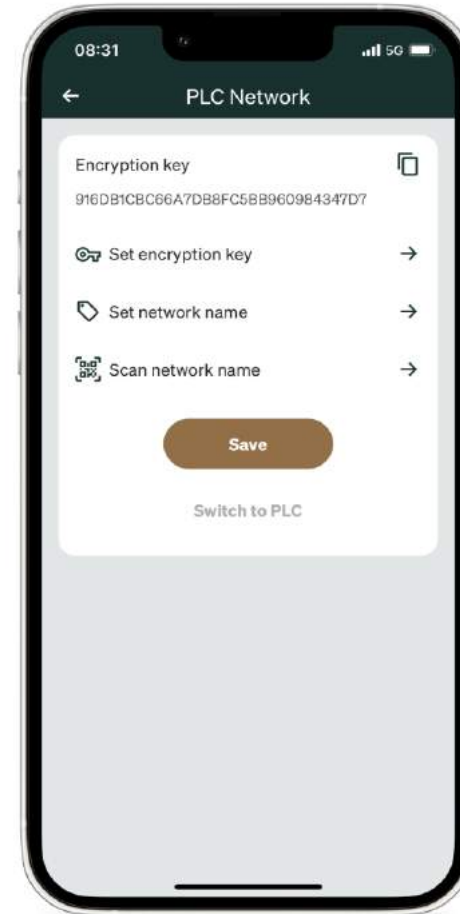
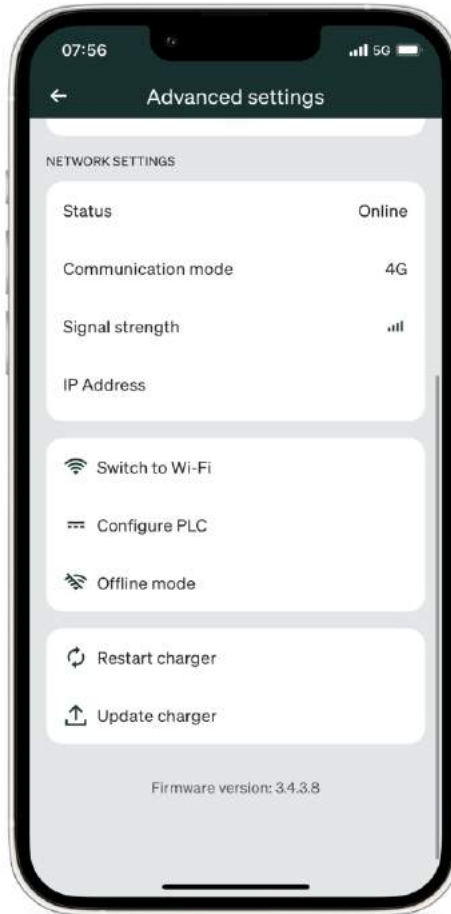
# Configure – WiFi 2.4 GHz

1. Connect to WiFi
2. Choose WiFi Network
3. WiFi password
4. Save



# PLC – Configuration

1. Choose “Configure PLC”
2. Scan network name
3. Use camera or upload photo
4. Press Save





# Ziptec Portal

↑  
portal.zaptec.com



### Login

Login

[Lost password?](#)

[New user?](#)



Same log in as in  
Zaptec App

# Dashboard

Personal overview, charging history and consumption



- My profile
- Terms for Use
- Support...
- Log out

Zaptec Portal  
Version 6.5.8.4b5a8dd8

- Dashboard
- Installations
- Chargers
- Charge history

ENERGY CYCLES

- Last week
- Last month
- Last 3 months
- Last year



Sum: 0 kWh

# Profile

Zaptec

Dashboard Installations Chargers Charge history

### My profile

First name	Last name
<input type="text" value="Zaptec"/>	<input type="text" value="Academy"/>
Email address/username	
<input type="text"/>	
Phone number	Country
<input type="text" value="+47"/>	<input type="text" value="Norway"/>
Language	
<input type="text" value="English"/>	
<input type="checkbox"/> Subscribe to warning emails for my installations	

[Terms for Use](#)

[Change email address/username](#)

[Change password](#)

[Delete account](#)

[Save](#)

CHARGE CARDS +

No charge cards are registered

[Add charge card](#)

Note: Only applies for the installations you own

[Log out](#) [Log out all devices](#)

User ID: 7be9b845-906f-4943-94e5-5854147b9f2a



# Installation

The screenshot displays the Zaptec Charge365 web interface. At the top, the Zaptec logo is centered, and navigation tabs include Dashboard, Installations (selected), Chargers, and Charge history. The user is logged in as 'Ipark (Lukket)'. On the right, there is a 'Support' link and the 'Charge365' logo.

Below the navigation, a sub-menu includes Settings, Circuits (selected), Charge statistics, Charge history, Charge report, Permissions, and Firmware. The main content area shows three circuit cards: 'Garage i8' (4 charging stations, +0 disabled), 'Garage i8 - Utvidelse' (3 charging stations, +1 disabled), and 'Utvendigvegg i2' (8 charging stations, +0 disabled). An '+ Add circuit' button is also present.

The 'Garage i8' circuit is expanded to show a power meter displaying '0 kW' and phase information: 'Phase 1: 0A of 32A', 'Phase 2: 0A of 32A', and 'Phase 3: 0A of 32A'. Below the meter are four charging positions, each with a 'Z' logo and 'Car disconnected' status:

- Position 1 (#17... ZCS000175)
- Position 2 (#91) ZCS000091
- Position 3 (#12... ZCS000129) - This position is highlighted with a purple box.
- Position 4 (#86) ZCS000086

An arrow points from the 'Garage i8' card in the sub-menu to the expanded view. Another arrow points from the expanded view to a text box on the right that reads: 'You can also set specific settings for each charger'. A plus sign icon is visible to the right of the charging positions.

STATUS

Meter value ✓ 5295.58kWh

Online? Yes (2 months ago)  
[Details](#)

Operation mode Charging

Authentication OCPP-J 1.6 authentication  
[Log](#)

← Authorisering via 3. part

Energy 22.95kWh

Charge power 7.43kW

Current  $\phi$ 1 32A

Current  $\phi$ 2 0A

Current  $\phi$ 3 0A

Cable rating 32A

← kabel

Allocated current 32A @ TN  $\phi$ 1

Offline current 15.8A @ TN  $\phi$ 3

Temperature internal 31.98°C

Signal strength ▲ 100% ▼

Charge point  
↓  
Status

# Power management



Scheduled power control

MANUELL EFFEKTSTYRING

Tilgjengelig strøm  $\phi 1$

Tilgjengelig strøm  $\phi 2$

Tilgjengelig strøm  $\phi 3$

Begrens offline-strøm ⓘ

Manual power control

# Permissions

ipark (Lukket) / Position 3 (#129)

Settings Status Charge statistics Charge history **Permissions**

**+ Give permission**

SOURCE	TARGET	ROLES
1.linje Support	*	Owner Service
Technical Support	*	<b>Owner Service System</b>

### ADD PERMISSION

**Choose who should be given permission**

Users Partner

mail@mail.com **Search**

There is no user with email address mail@mail.com. **Check to invite user.**

Next

# Any questions

**Zaptec tech support NO**  
Mandag til fredag 08:00-15:00



+47 919 03 676

[Zaptec.com/help](https://Zaptec.com/help)