

Brochure

English



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The best solution for faster electric charging



The number of electric cars in the Netherlands is increasing rapidly. This growth calls for smart solutions that charge batteries quickly, efficiently and safely.

EV-Optimizer offers you that solution. EV-Optimizer makes optimal use of the capacity that the existing grid connection provides to your company or home. This will ensure you a 'full battery' as quickly as possible. With EV-Optimizer, you can dispense with big or premature investments for your grid connection.

EV-Optimizer makes use of the dynamic load balancing-technique. This device measures how much power the machines in your company or home use, compares it to the maximum capacity of the grid connection, and redistributes all the 'free' power to the supply points. If your machinery or home equipment needs more capacity, less power is distributed to the electric cars. If your company or home needs less capacity, more kilowatt power is distributed to the supply points. In this way, you make optimal use of the maximum capacity of your grid connection. Real-time and without concerns.

Benefits

The benefits of EV-Optimizer are huge.
We have made an overview of the most important facts.



Dynamic

Make optimal use of the charging speed of all your supply points! Always enjoy maximum charging, at any moment of the day and whenever it's possible. Your grid connection does not require more capacity than the installation can supply.



Efficient

The efficient charging of cars causes a bigger capacity for your network of supply points. This will easily pave the way for more supply points at your company or at car parks.



Reliable

Connect your supply point at home to the smart meter in your home and charge your electric car without any worries, even while doing chores like cleaning and cooking.



Low cost

Overcome unexpected peak demands that shut down your electrical installation - and the production rate of your company! - are left behind. EV-Optimizer will take care of this.



By making use of the EV-Optimizer you can save a lot of money!

By making optimal use of the capacity you will not have to directly switch to an expansion of the existing grid connection. This will already make a difference of minimum 700 euro standing charges to your home; a company can easily count on a multiple amount of this.

Functioning

The device can measure the unused capacity of the grid connection in two ways.

Smart meter

If your business premise or home is equipped with a so-called smart meter, the EV-Optimizer will be connected to the P1-port of your smart meter. The EV-Optimizer measures how much capacity is being used, knows how much the installation can provide, and communicates the available capacity to the network of supply points.

Grid connection

If your grid connection has no smart meter or P1-port, the EV-Optimizer will make use of smart measuring current transformers to your grid connection. Using this technique, your EV-Optimizer measures the available capacity of your charging stations in a reliable way and real-time.

Installation

Every EV-Optimizer for which the installation has been approved comes with a standard two-year warranty.

The EV-Optimizer is installed in the meter box or distribution box, next to the distribution board. Since the EV-Optimizer can be connected to the P1-port of your smart meter in a number of versions, and does not necessarily have to be inside the distribution box, you can install the EV-Optimizer yourself. However, we advise you to always hire a qualified installer. The installation of the EV-Optimizer always needs to be approved by a qualified installer in view of safety and insurance.



Compatibility

The EV-Optimizer works in combination with the charging cabinets of EVBOX. Please look at our website to find an updated list of our manufacturers supporting the EV-Optimizer.

The EV-Optimizer is suitable for both the single-phase and the three-phase grid connections.

Versions



EV-Optimizer Home & SMB

- Suitable for a grid connection of maximum 40A
- Versions: 3 x 25A, 3 x 35A and 3 x 40A
- Can be connected to the 'smart meter' with P1-port (from SMR 4.0 to 5.0)
- Optional: connection by means of smart measuring current transformers
- Supports a maximum of one charging cabinet
- No external power needed when connected to a smart meter
- No subscription costs



EV-Optimizer Business

- Suitable for a grid connection of maximum 80A
- Versions: 3 x 50A, 3 x 63A and 3 x 80A
- Connection with measuring current transformers
- Suitable for six supply points
- Optional: expansion possible up to 20 supply points, depending on the brand of the supply point
- Delivered with a 12V power adapter
- No subscription costs



EV-Optimizer High Current

- For a grid connection up to 1000A
- Optionally suitable for 2500A
- Suitable for 20 supply points
- Optional: expansion possible of the amount of supply stations, depending on the brand of the supply point
- Delivered with current transformers
- No subscription costs

Mission and vision

The existing energy network has not been calculated in a way that the large-scale usage of electric driving asks for, leaving the achievement of the environmental objectives as laid down in the Paris Agreement 2020-2050 on climate uncertain. It is precisely the 'replacement' of fuel engines for electric engines that makes an important contribution to the net-zero greenhouse gas emissions mentioned in this agreement.

Smart solutions that make optimal use of the available capacity enable the use of electric cars and the expansion of the number of supply points. EV-Optimizer contributes to the optimal use of this capacity by using dynamic load balancing-techniques. In this way, we contribute to the solution for the full transition towards electric transport. EV-Optimizer also avoids extra investments in grid connections.



Technical specifications

EV-Optimizer Home & SMB

Maximum number of supply points: 1

Connection: Smart meter via P1 port

Optional: Smart measuring current transformers

Output: RS485

Min. and max. temperature: -20° to 60° C

Moisture resistance: 95%

Display status: LED lighting

Communication: RS485, RF and P1 from SMR 4.0 to 5.0

Communication protocol: EV-Box Smart Charging Protocol

Enclosure: IP20

Dimensions: 115 x 83 x 33 mm

Installation requirements: NEN1010

Possibilities: 3x25A, 3x35A and 3x40A

Options: RF dongle for wireless communication with the supply points, smart current transformers and mounting bracket

EV-Optimizer Business

Standard max. number of supply points: 6
(Optionally it is possible to support up to 20 supply points)

Connection: transformers

Output: EV-Box RS485

Min. and max. temperature: -20° to 60° C

Moisture resistance: 95%

Display status: LED lighting

Communication: RS485, RF

Communication protocol: EV-Box Smart Charging Protocol

Enclosure: IP20

Dimensions: 115 x 83 x 33 mm

Installation requirements: NEN1010

Possibilities: 3x50A, 3x63A and 3x80A

Options: RF dongle for wireless communication with the supply points, smart current transformers and mounting bracket

EV-Optimizer High Current

Standard 20 connectors (max EV-Box)

Connection: transformers

Output: RS485 EV-Box

Min. and max. temperature: -20° to 60° C

Moisture resistance: 95%

Display status: LED indication

Communication: RS485, RF

Communication protocol: EV-Box Smart Charging

Enclosure: IP54

Dimensions: 150 x 125 x 60 mm

Installation requirements: NEN1010

Possibilities: 1000A (optionally up to 2500A)

Options: Controlling multiple Hubs