

# Home Energy Manager

## Operating instructions

Part number 9Y0.915.686.x

## Legal Notice

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## Notes on these instructions

Always pay attention to the warning and safety instructions in this booklet. The manufacturer cannot be held liable in the event of improper handling contrary to these instructions.

The "Conditions of Acceptability" of supplied accessories must also be noted and adhered to.

## Target group for these instructions

These instructions are aimed at persons who are entrusted with or responsible for operating the Porsche Home Energy Manager.

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## Basic safety principles

### DANGER!

**Danger to life due to electrical voltage!**



**Injuries due to electric shock and/or burns, possibly resulting in death, are possible.**

During all work, make sure at all times that power to the system is switched off and secured so it cannot inadvertently be switched on. Do not open the housing of the Home Energy Manager under any circumstances

### Qualification of personnel

The electrical installation may only be performed by persons with the relevant knowledge of electrical/electronic equipment (electrician). These persons must provide proof that they have the specialist knowledge required to install electrical systems in the form of an examination certificate.

Improper installation can endanger your own life and that of others.

Requirements for the electrician performing the installation:

- Ability to evaluate test results
- Knowledge of IP ratings and their use
- Familiarity with fitting the electrical installation materials
- Knowledge of the applicable electrical/electronic and national regulations
- Knowledge of fire safety measures and general and specific safety and accident prevention regulations
- Ability to select suitable tools, testers and, if necessary, personal protective equipment, as well as the electrical installation materials for ensuring tripping conditions
- Knowledge of the type of power supply network (TN, IT and TT system) and the resulting connection conditions (neutral connected to earth in socket, protective earthing, required additional measures)

## Notes on installation

Electrical installation must be performed in such a way that:

- Shock protection of the entire electrical installation is in place at all times, in accordance with locally applicable regulations.
- The fire safety regulations in force at the site are complied with at all times.
- The user interface and USB ports of the Home Energy Manager are accessible to the customer without restriction and without risk of electric shock.
- If the optional wall-mounted distribution box is used, the cables of the current sensors must not exceed the permitted total line length of 3.0 m.
- The inputs for voltage measurement and the relay on the Home Energy Manager must be equipped with suitable backup fuses.
- The correct length and product-specific bending radii must be complied with when laying installation cables.

If the installation environment requires Overvoltage Category III (OVCIII), the input side of the external power supply must be equipped with protective circuitry (e.g. a varistor) that conforms to local regulations.

## Installation at high altitude

The supply leads of sensors that are installed in electrical facilities at an altitude of over 2,000 m or that must conform to Overvoltage Category III (OVCIII) due to their installation location require additional insulation in the form of a shrink-fit hose or suitable insulating hose with a breakdown strength of 20 kV/mm and minimum wall thickness of 0.4 mm along the entire length of the cable between the sensor output (housing) and the input terminal on the Home Energy Manager.

## Product information

The Porsche Home Energy Manager works in combination with the Porsche charger as an energy management system.

The Porsche Home Energy Manager measures and individually assesses the available amount of energy and the electricity consumption. The Energy Manager communicates with the Porsche charger via an interface, and lets it know how much energy can be made available to the hybrid or electric vehicle for charging the vehicle battery.

The electrician configures the Energy Manager for you via a web application, and sets all the necessary values there. This way, your existing electrical installation is protected against "blackout" and your vehicle can be charged at low cost. However, this feature is only available if different electricity rates/prices and/or an existing photovoltaic system are used.

When vehicle charging begins, the so-called negotiation phase starts and the Energy Manager generates price and output tables in accordance with the current ISO/IEC 15118 standard.

Transmission between the Energy Manager and the Porsche Mobile Charger Connect takes place via Ethernet, PLC network or WiFi using the EEBus protocol.

During charging, the Energy Manager updates the maximum available charging current in real time based on the latest data.

## Proper use

The Porsche Home Energy Manager is primarily used to safeguard the electricity supply (blackout protection) by preventing the building's main fuse from tripping.

The following count as improper use:

- Carrying out your own modifications or additions to the Porsche Home Energy Manager.
- All other use of the Porsche Home Energy Manager not described in these instructions.

## Overview and specification

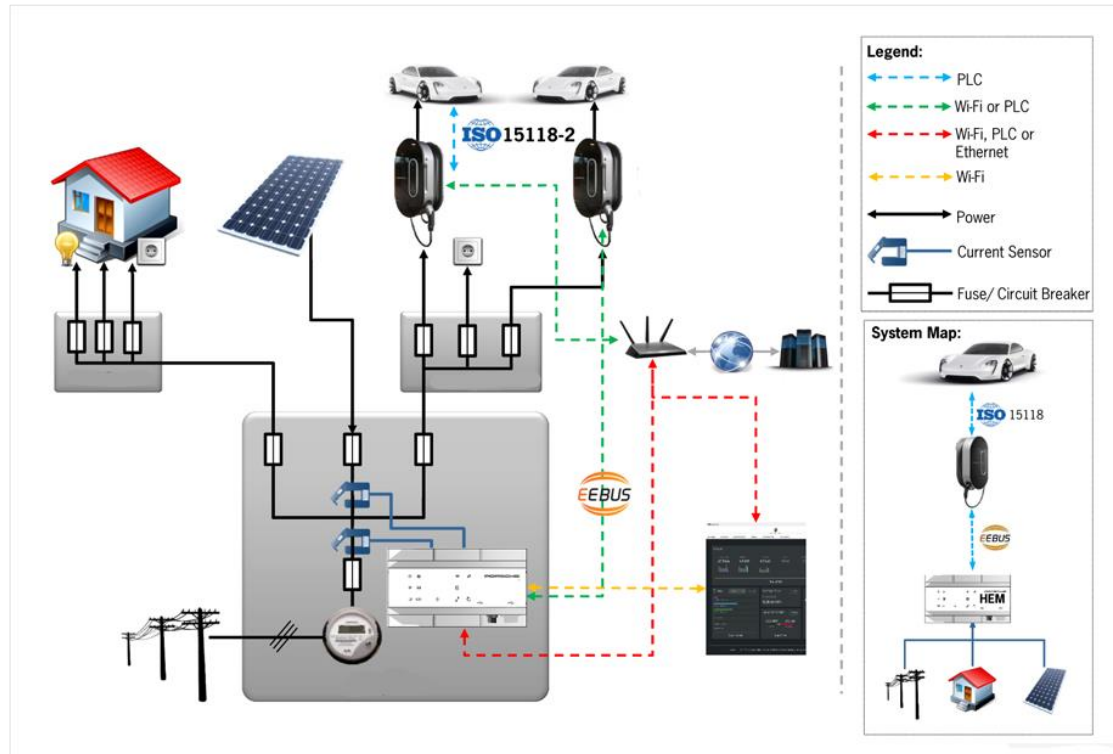


Fig. 1: Integration of the Home Energy Manager

## Displays and controls

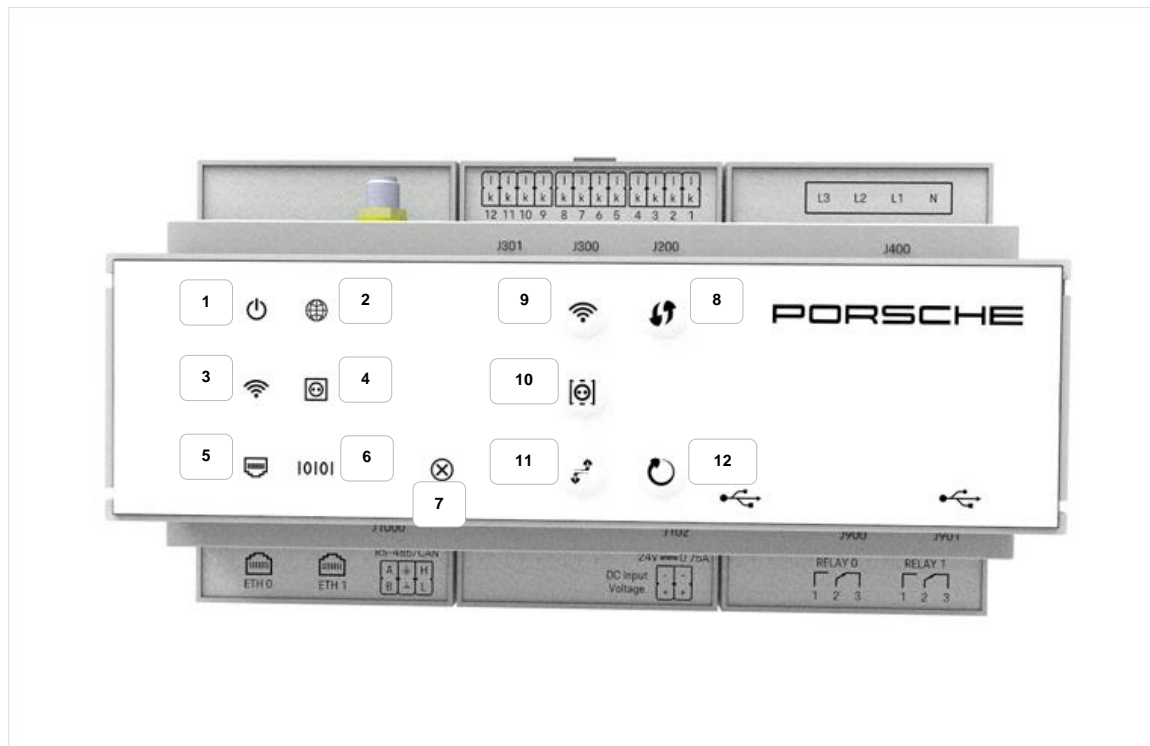


Fig. 2: Home Energy Manager displays and controls



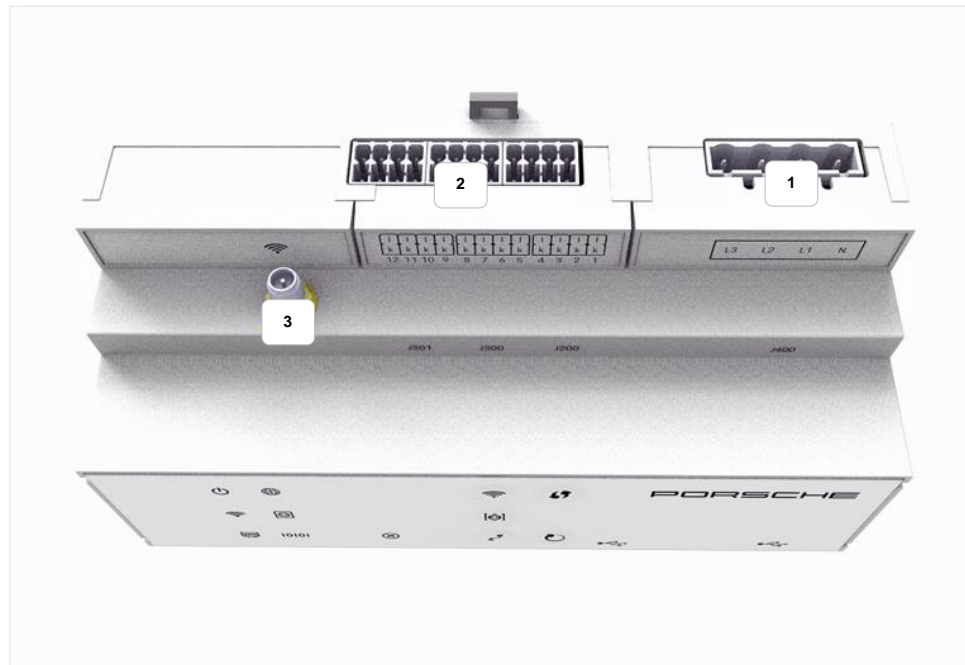
Item	Meaning	Description
1	Power status On/Off	On: LED lights up green
2	Backend status On/Off	On: LED lights up green
3	WiFi status On/Off	LED flashes blue: No client connected LED lights up blue: At least one client connected LED flashes green: No network connection LED lights up green: Network connection present
4	PLC network status On/Off	LED flashes green: Attempting network connection LED lights up green: Network connection present
5	Ethernet status On/Off	LED lights up green: Network connection present
6	RS485/CAN status	

7	Status: Error	LED lights up amber: Warning, error present LED lights up red: Warning, critical error
8	WPS button	Press button briefly (< 1 sec) to establish a hotspot
9	WiFi button (access point)	Press button briefly (< 1 sec) to switch on WiFi Press and hold button (> 1 sec) to switch off WiFi
10	PLC network button	Press button briefly (< 1 sec) to switch on PLC network
11	CTRL button	Press CTRL (< 5 sec) to restart the software Press CTRL+ RESET (>5 sec, <10 sec) to reset the configuration Press CTRL+ RESET (>10 sec) to restore the default settings
12	RESET button	

Item	Meaning	Description
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## Connections on top of device

## Overview of device connections



Item	Designation
1	Voltage measurement
2	Current sensors
3	WiFi antenna

Fig. 3: View of connections on top of the device

## Connections on underside of device



Fig. 4: View of connections on underside of the device

Item	Designation
4	USB 1
5	USB 2
6	Relays
7	Power supply
8	RS485/CAN
9	ETH 1
10	ETH 0

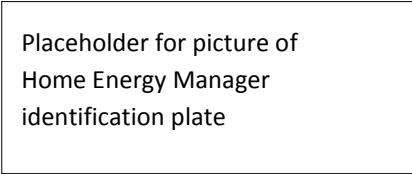
## Technical specifications

Description	Value
Housing dimensions (height x depth x width)	90 x 45 x 162 mm
Protection class	IP 20
Ports	2x USB 3x PLC 1x WiFi 2x Ethernet 12 x CT Input 1x RS485/CAN
Space requirement	Horizontal pitch 11.5
Current measurement	0.5 A to 600 A (depending on current sensor) Max. cable length 3.0 m
Voltage measurement	100 V to 240 V (AC)

Description	Value
USB interface	Max. total length 3.0 m
Input for Home Energy Manager	24 V/0.75 A
External power supply (input)	100 V to 240 V (AC)
External power supply (output)	9 V to 36 V (DC)/18 W
Relay (voltage/load)	Max. 250 V (AC) Max. 3 A resistive load
Temperature range Storage temperature	-40 °C to 70 °C
Temperature range Operating temperature	-20 °C to 45 °C (at 10 % to 90 % relative humidity)

Table 1: Technical specifications

## Energy Manager identification plate



Placeholder for picture of  
Home Energy Manager  
identification plate

Fig. 5: Home Energy Manager identification plate

## Product scope of supply


The scope of supply of the Porsche Home Energy Manager varies depending on the installation location. If there is insufficient space (horizontal pitch 11.5) in the existing distribution cabinet, you can order an optional wall-mounted distribution box for mounting the Home Energy Manager on the wall outside the distribution cabinet. Depending on the order, the scope of supply may include the following components:

- Porsche Home Energy Manager (HEM)
  - External mains power supply unit
  - Distribution box for wall mounting (optional)
  - WiFi antenna HiRO H50284 Wireless 802.11n
  - One set of push-on connectors
  - 3x current sensors for 100 A
- (or choice of country versions)
- 2x current sensors for 200 A


## Disposing of the packaging

To protect the environment, dispose of packaging materials correctly in accordance with local environmental protection regulations. Hand any residual materials to a certified specialist disposal company in your area.

## Starting up

Press the Power On/Off button  to switch on the Home Energy Manager so it is ready for operation.

## Settings and operation

The electrician configures the Energy Manager via a web application, and sets all the necessary values there. For this purpose, pressing the WiFi button  creates a hotspot that gives the electrician access to the configuration via the web application.

Please give the electrician access to the following to enable this work to be carried out:

- Access to your home network
- Access to your MyPorsche ID
- Information on electricity rates/prices

The web application offers you an extensive range of configuration options. Get advice from the electrician performing the installation, and make use of the web application's Help features.



The access point remains available for a period of 20 minutes, if the device has not connected. If the Home Energy Manager and ICCPD have not found one another, repeat the access procedure.

## Starting the web application

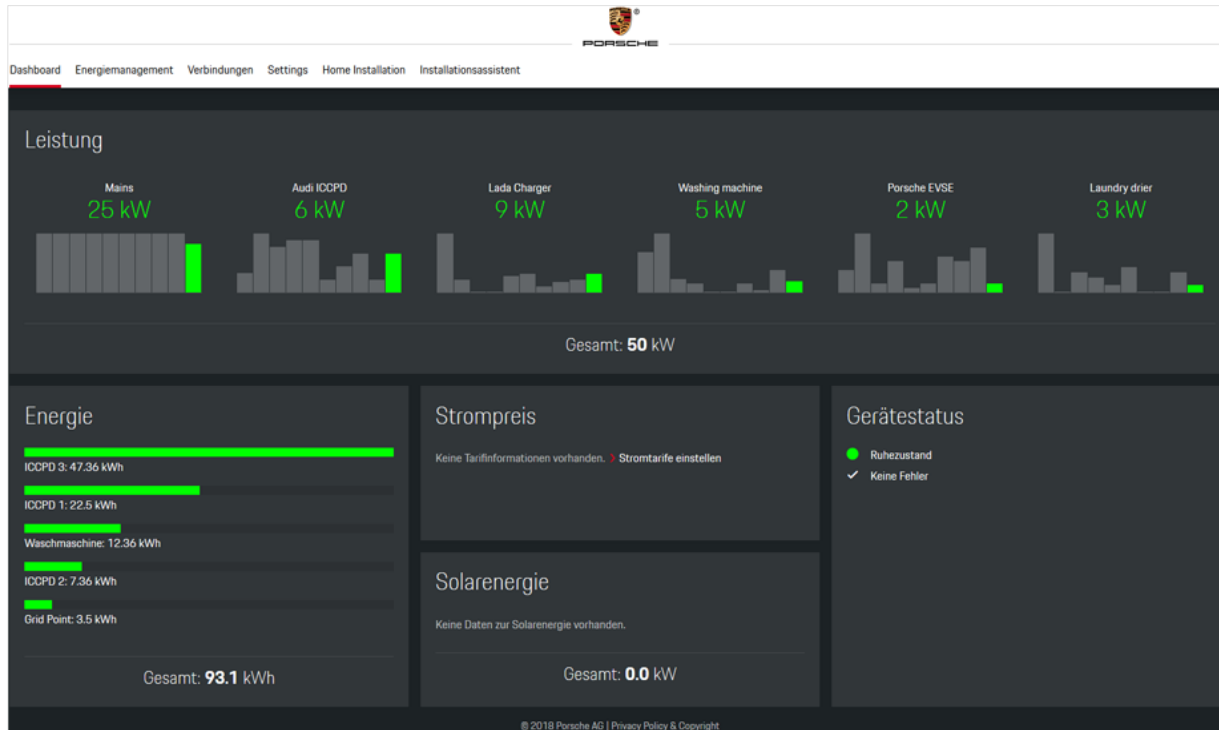


Fig. 6: Home Energy Manager web application

## Product maintenance

The Home Energy Manager is maintenance-free. If it is damaged due to transport, storage or handling, repairs are not possible.

If you open the housing of the Home Energy Manager, your warranty will be invalidated. This also applies in the event of damages due to external factors such as fire, high temperatures, extreme ambient conditions or improper use.

### FCC / IC Statements

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

#### FCC Interference Statement (Part 15.105 (b))

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

#### FCC Part 15 Clause 15.21

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

## Disposing of the product



Do not dispose of electrical/electronic waste with ordinary domestic waste. To protect the environment, dispose of devices and components in accordance with local environmental protection regulations.

Hand any residual materials to a certified specialist disposal company in your area.



## Applicable standards/directives

Standard	Description
IEC 60364	Electrical Installations for Buildings
IEC 61010-1:2010	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements
IEC 61010-2-201:2017	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2-201: Particular requirements for control equipment

Standard	Description
IEC 61010-2-030:2017	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2-030: Particular requirements for equipment having testing or measuring circuits

Table 2: Standards/directives

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