ENEQUI

QuiPower Interface

User Manual

Take charge

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⚠ **NOTE!**

All information in this document has been compiled and checked with the greatest possible care. Nevertheless, this publication may contain technical or other inaccuracies or typographical errors. The information contained herein is subject to periodic changes; such changes will be incorporated into new editions of the publication.
Enequi may make improvements and/or changes in the services described in this publication at any time. Enequi assumes no liability for the use of outdated documents. Installers and users are therefore advised to check the current version at www.enequi.com or by scanning the provided QR code.

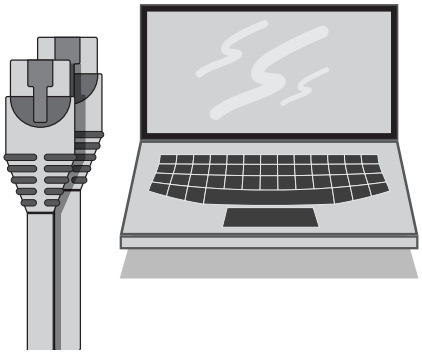
1. Connect to QuiPower Interface

QuiPower Interface makes it easy to control, change settings or monitor the energy usage of QuiPower Storage.

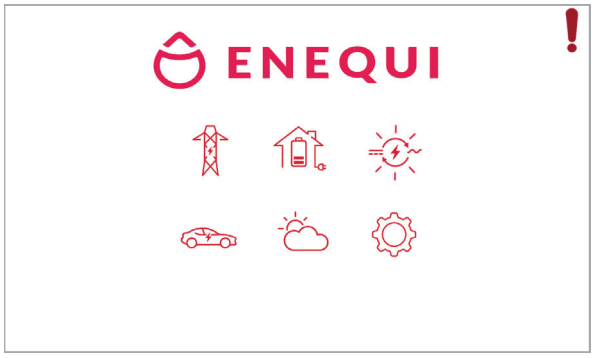
QuiPower Core and QPS Hydride have an RJ45 port for the user to connect to the QuiPower Interface easily.

To be able to connect to the interface, you need the following:

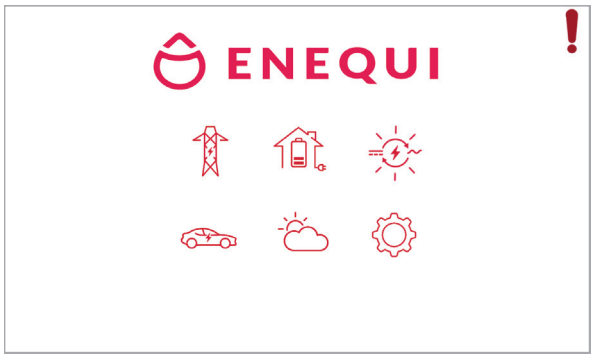
- a network cable
- a computer with an ethernet port
- any web browser



1. Connect a network cable to the RJ45 port and the other end to a computer.
2. Click on the link below or copy the URL into any web browser: http://192.168.148.201:8080/webvisu.htm
3. The connection to the QuiPower Interface is successful when the browser displays the home screen.



2. QuiPower Interface



The display shows the home screen of the QuiPower Interface, tap on selected icon to:

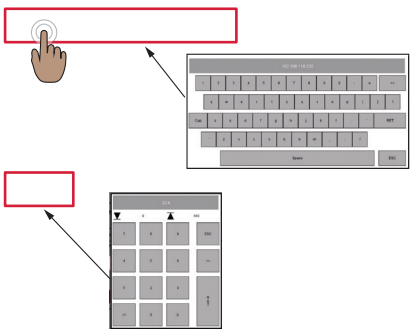
- Review the current status of the battery storage, inverter or car charger.
- Analyze historical and actual performance data for the entire system (**DAY, MONTH** or **YEAR**).
- Enter settings to set or to power a function on/off.

View real time kW status above the corresponding icon.

Red colored icons indicates active.

Dimmed icons indicates deactivation.

Input box



Tap on the input box to open numeric keyboard. Write the new value, Press RET to confirm, ESC to escape or << to delete.

2.1. Description of Icons

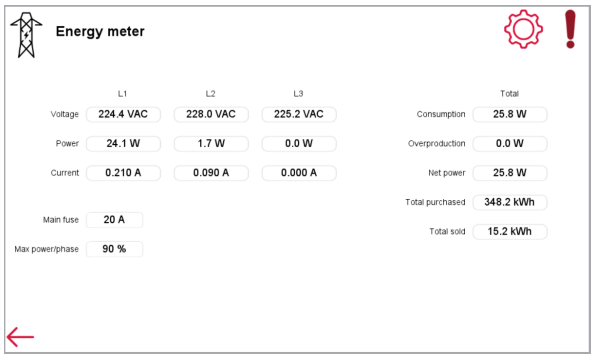
⚠ **NOTE!**

Some screens, settings and values may vary depending on the connected QuiPower Storage system.

	Energy Meter
	Battery Storage Battery icon display real time charging status.
	Bidirectional Inverter
	Hybrid Inverter
	Car Charger Connected cars displayed below the symbol.
	Weather Forecast
	Settings
	Power Peak
	Tariff Settings
	Fault Codes
	Return to Home Screen
	Update Button
	Online and Offline symbol
	Toggle Button Enable or disable a function.

2.2. Energy Meter

2.2.1. Real Time Data



Voltage: Actual voltage on lines L1, L2 and L3.

Power: Actual power on lines L1, L2 and L3.

Current: Actual current on lines L1, L2 and L3.

Main fuse: Value for installed main fuse.

Main power/phase: Percentage of main fuse usage. Use to protect the main fuse from overheating and to balance car charging function to other loads.

Consumption: Actual power from grid.

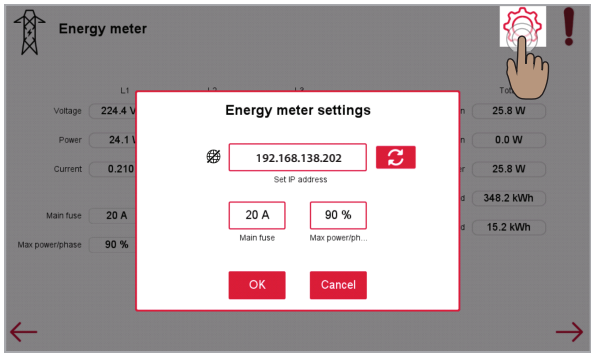
Overproduction: Actual power to grid.

Net power: Actual difference between power to and from grid.

Total purchased: Accumulated purchased energy from grid.

Total sold: Accumulated sold energy to grid.

2.2.2. Settings



⚠ NOTE!

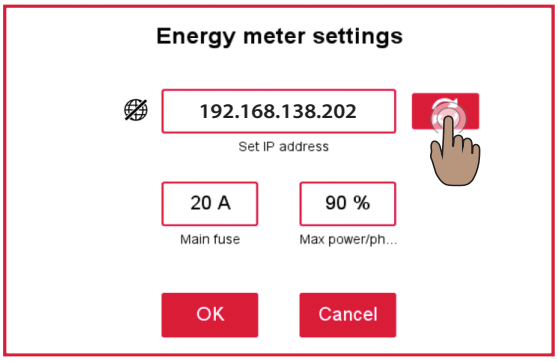
Optional settings, may vary depending on the connected QuiPower Storage system.

Tap on ⚙ to update IP address, Main fuse and Max Power/Phase.

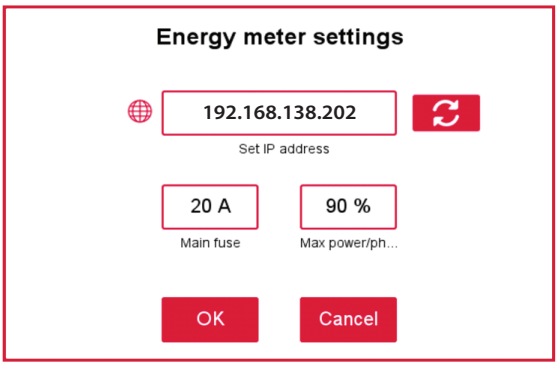
Default and recommended setting is 90%.

To change value tap on the *input box* and confirm the new settings by tapping OK.

2.2.3. IP Address:



Tap the update button to apply the new IP address to the energy meter.



The new IP address is set when the Offline icon turns red 🌐.

2.3. Battery Storage

Battery storage connected:

- YES Available
- NO Unavailable

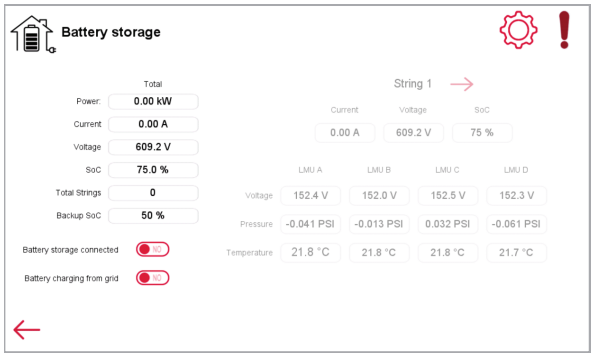
Battery charging from grid:

- YES Allowed
- NO Prohibited

2.3.1. Real Time Data

⚠ NOTE!

Some screens, settings and values may vary depending on the connected QuiPower Storage system.



Following values are from the Battery Management System (BMS).

Readings below are for the entire system.

Power: Actual total power.

Current: Actual current

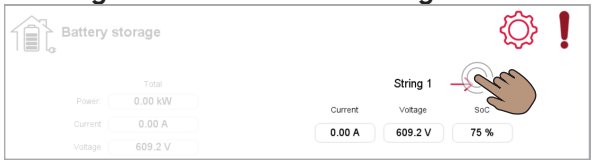
Voltage: Actual voltage

SoC: Estimated State of Charge (SoC)

Backup SoC: Minimum SoC that the battery storage must have at OFF-Grid mode.

Total strings: Actual number of connected battery strings.

Readings below are for each string.



Tap the arrow beside String1 → to switch between connected strings.

Current: Actual string current.

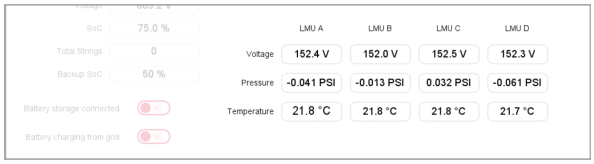
Voltage: Actual string voltage .

SoC: Actual string state of charge (SoC).

⚠ NOTE!

Some screens and values may vary depending on the connected QuiPower Storage system.

Following readings are from the Local Monitoring Units (LMU) for each Battery pack.

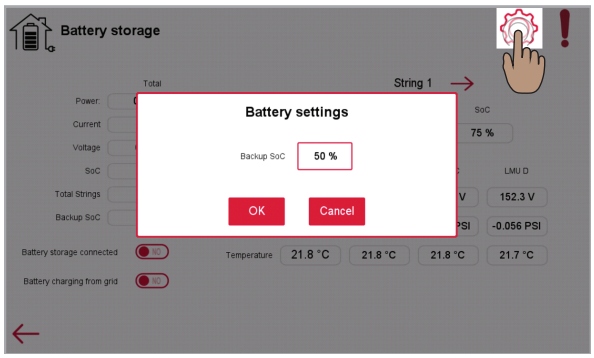


Voltage: Actual voltage.

Pressure: Actual pressure.

Temperature: Actual temperature.

2.3.2. Settings



Tap on ⚙ to set or update Backup SoC.

To change value tap on the *input box* and confirm the new settings by tapping OK.

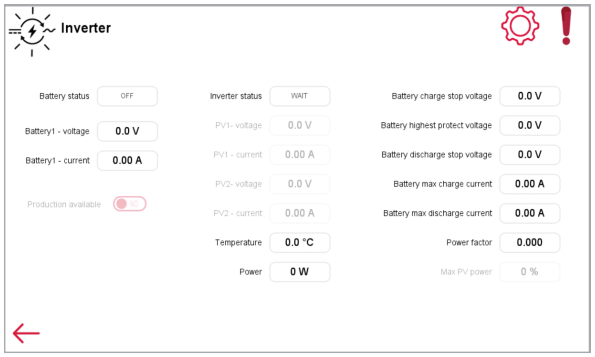
Default setting is 3%.

Recommended Reserve SOC for one string is 50%, and for more than one string it is recommended to lower the percentage.

⚠ NOTE! *These settings are only available if the QuiPower Storage is connected to a QuiPower Off-Grid.*

2.4. Inverter

2.4.1. Real Time Data



Following readings are from the Inverter inputs and terminals, some readings may differ between the Hybrid and Bidirectional model.

Battery status (BAT- and BAT+ terminal status):

- **Wait**, not ready
- **Charging**, battery storage charging
- **Discharging**, battery storage discharging

Battery1 voltage: Voltage at terminal BAT1.

Battery1 current: Current at terminal BAT1.

Battery2 voltage: Voltage at terminal BAT2

Battery2 current: Current at terminal BAT2.

Inverter status:

- **Wait,** not ready.
- **Start,** start-up inverter.
- **Normal.**
- **Off-Grid,** island mode.
- **Fault,** see *fault codes.*
- **Update,** updating.

Temperature: Actual inverter temperature .

Power: Actual inverter power.

- Negative power, battery charging.
- Positive power, battery discharging or power generation from PV inputs.

Battery charge stop voltage: Battery charging will be stopped at set voltage.

Battery highest protect voltage: Battery charging will be stopped at set voltage and alarm will occur.

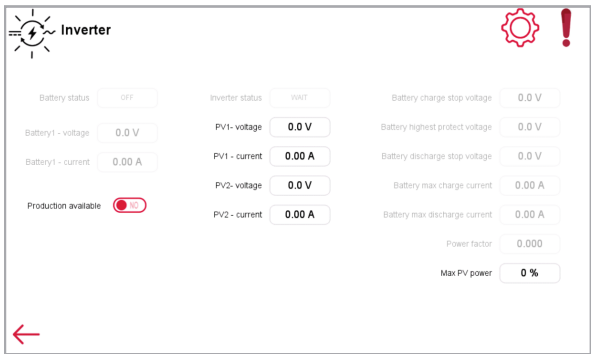
Battery discharge stop voltage: Battery discharging will be stopped at set voltage.

Battery max charge current: Battery charging current limit.

Battery max discharge current: Battery discharging current limit.

Power factor: Inverter power factor.

The following settings and values are only available in hybrid model.



Production available:

- YES Enable PV inputs
- NO Disable PV inputs

PV1 voltage: Actual voltage for PV1 input.

PV1 current: Actual current for PV1 input.

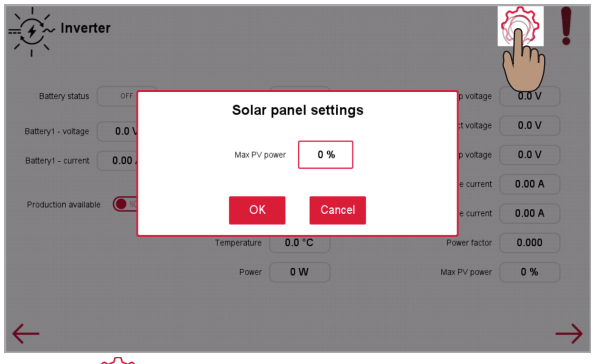
PV2 voltage: Actual voltage for PV2 input.

PV2 current: Actual current for PV2 input.

Max PV power: Power limit for solar panel inputs PV1 and PV2 . Before disconnecting solar panels, set this power limit to zero and wait until PV1 and PV2 current are equal with zero before you are switching off DC switch.

2.4.2. Settings

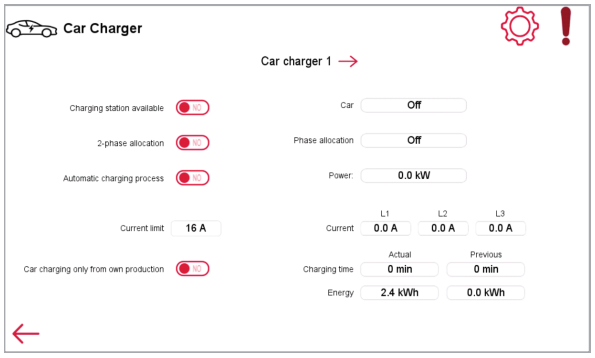
Available only in hybrid model.



Tap on ⚙ to set or update Max PV Power. To change value tap on the *input box* and confirm the new settings by tapping OK.

Default setting is 100%.

2.5. Car Charger



Charging station available:

- YES Car charging unit enabled
- NO Car charging unit disabled

2-phase allocation: two phases with lowest load will be connected to the car to prevent phase imbalance in the system. For 2-phase charged cars.

- YES Enable
- NO Disable

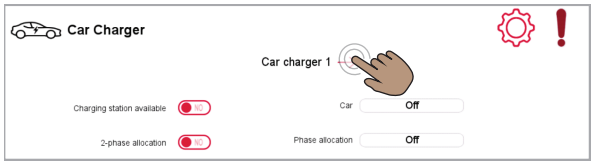
Automatic charging process: Activate immediate car charging.

- YES Enable
- NO Disable

Current limit: value to limit car charging current.

Car charging only from own production: The system saves storage battery energy for possible car charging and acts as fuse protection for the main fuses of the system.

- YES Allowed
- NO Prohibited



Tap the arrow beside Car Charger → to switch between available car charging unit.

2.5.1. Real Time Data

Car: Actual charging status.

Phase allocation: Actual status of phase shifting system. Phases with lowest load will be connected to the car to prevent phase imbalance in the system.

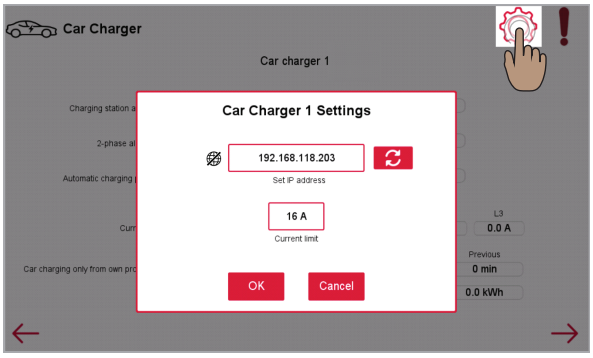
Power: Actual power to car.

Current: Actual current to car on lines L1, L2 and L3.

Charging time: Actual and previous car charging time.

Energy: Actual and previous energy consumption to the car charger.

2.5.2. Settings

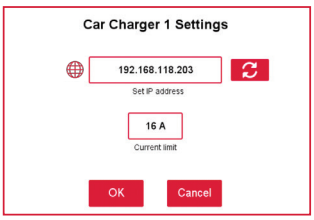


Tap on ⚙ to update Car charger unit IP address or the current limit.

To change value tap on the *input box* and confirm the new settings by tapping OK.

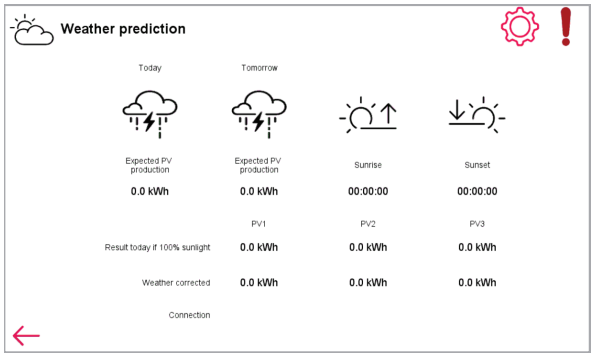
IP Address:

Tap the update button to apply the new IP address to the Car charger unit.

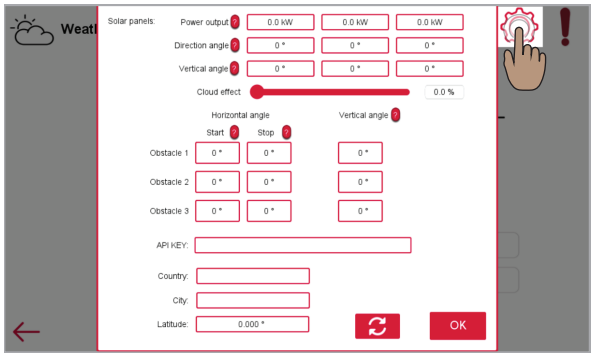


The new IP address is set when the Offline icon turns red 🌐.

2.6. Weather Forecast



Overview of calculated PV production according to system position, sunrise, sunset, weather forecast and system characteristics.



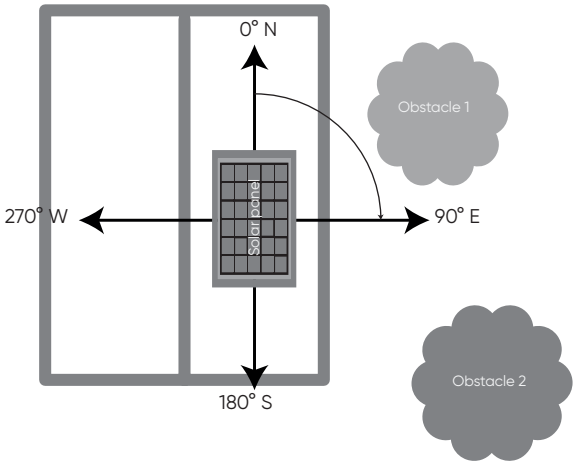
Tap on ⚙ to enter PV settings.

To change the values tap on the *input box* and confirm the new settings by tapping OK.

2.6.1. Solar Panels

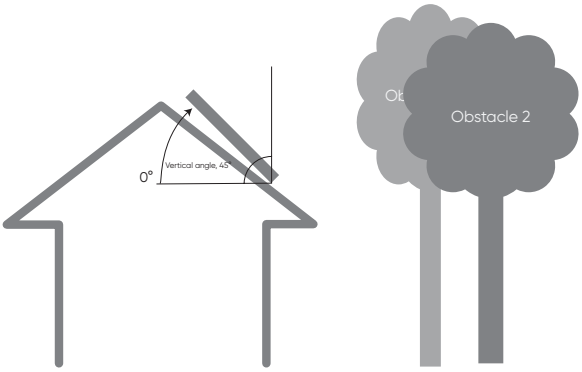
Power output: rated power output of the solar panels.

Direction angle: cardinal direction of solar panels.



In this example, the direction of the solar panel is 90°.

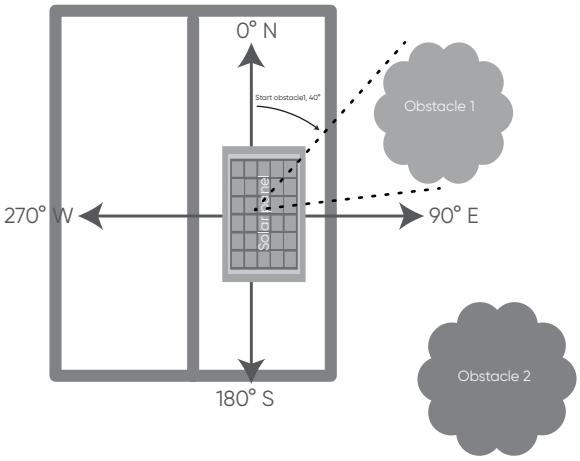
Vertical angle: vertical angle between solar panel and horizontal plane.



In this example, the vertical angle of the solar panel is 45°.

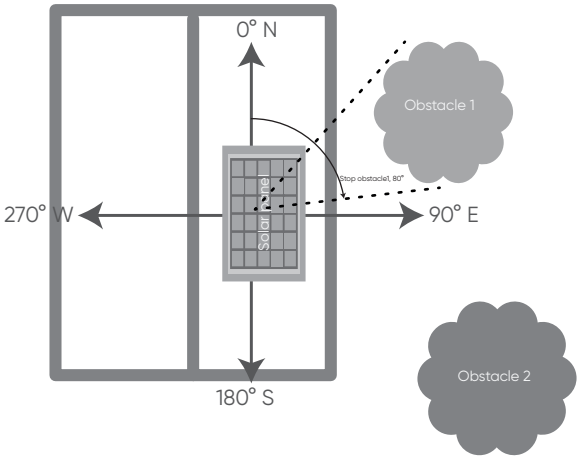
Horizontal angle obstacles:

Start: Direction angle (cardinal direction) when obstacle starts to interfere between solar panels and the sun.



In this example, the horizontal Start angle of obstacle1 is 40°.

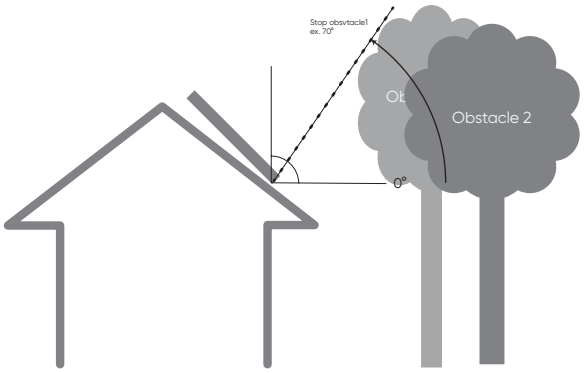
Stop: direction angle (cardinal direction) when obstacle stops to interfere between solar panels and the sun.



In this example, the horizontal STOP angle of obstacle1 is 80°.

Vertical angle obstacles:

When obstacle stops to interfere between solar panels and the sun. Angle between obstacle and horizontal plane.



In this example, the vertical angle of obstacle1 is 70°.

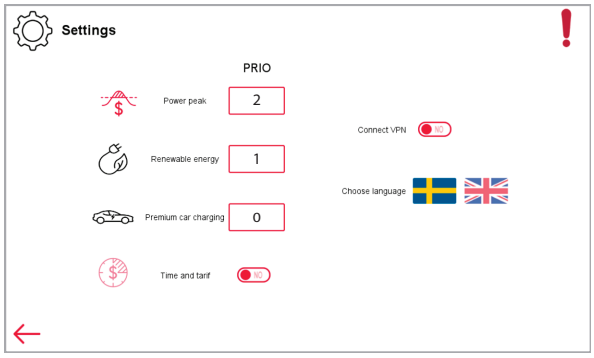
API KEY: API key for connection to weather server.

Country: National area where system is installed.

City: Municipality where system is installed.

Latitude: Coordinates at the location where the system is installed.

2.7. System Settings

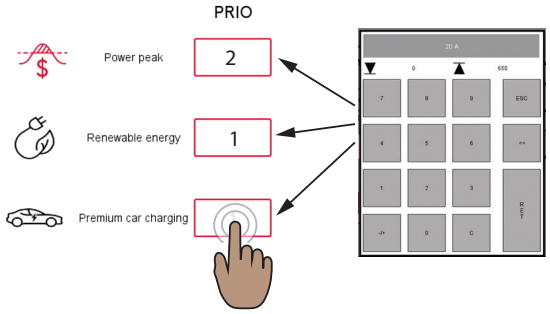


The system has three different energy saving modes, Power Peak, Renewable Energy and Premium Car Charging.

Connect VPN: Enables the QuiPower Storage to connect to Enequi VPN for remote support.

Choose language: Select the system language.

2.7.1. PRIO



Choose which energy saving mode to prioritize. Tap the input button to open numeric keyboard. Enter order of priority (0-2), Press RET to confirm, ESC to escape or << to delete.

1 - Highest priority
2 - Lowest priority
0 - Disable.

2.7.2. Power Peak

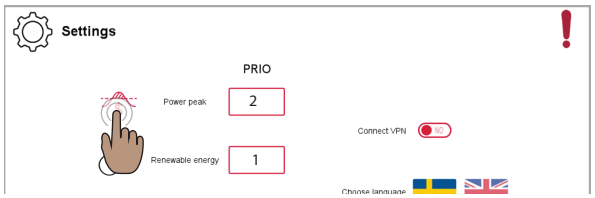
The system should keep the power peak below the forecast value for each hour and act as fuse protection for the main fuses of the installation. At least one of the Time and tariff or Production available (Inverter) functions must be enabled for Power peak mode to be possible.

- If Time and tariff and Battery charging from grid (Battery storage) functions are enabled, the battery will be charged from the grid.

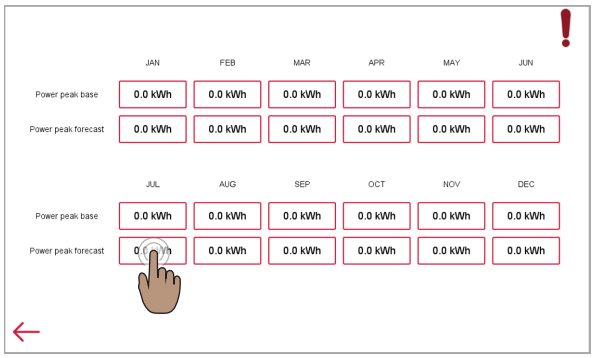
- If Production available (Inverter) function is enabled, the battery is charged when there is overproduction in the system.

- Car charging is controlled to a minimum or switched off to keep the power peak below the forecast value.

2.7.3. Power Peak Settings



Tap the Power peak icon to enter Power peak settings.



To change the values tap on the *input box* and confirm the new settings by tapping OK.

Power peak base: initial power peak value at system startup.

Power peak forecast: expected power peak.

2.7.4. Renewable Energy

The system will keep energy consumption from grid close to zero while the own electricity production is low and act as a fuse protection for the main fuses of the installation.

- Production available (Inverter) must be enabled, the battery will be charged only when there is overproduction in the system.

- If Time and tariff and Battery charging from grid (Battery storage) functions are enabled, the battery will be charged from the grid only if needed.

- Car charging is kept to a minimum (6A) if Car charging only from own production (Car Charger) option is disabled. Otherwise, car charging is controlled against overproduction or switched off to keep energy consumption close to zero.

2.7.5. Premium Car Charging

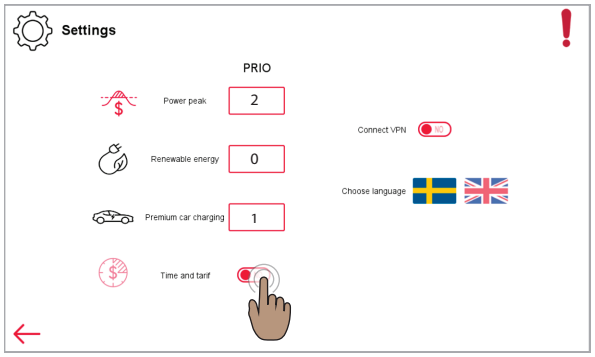
The system saves stored energy for possible car charging and acts as fuse protection for the main fuses of the system.

- If Time and tariff and Battery charging from grid (Battery storage) functions are enabled, the battery will be charged from the grid.

- If Production available (Inverter) function is enabled, the battery is charged when there is overproduction in the system.

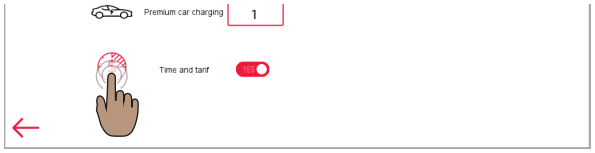
- Car charging is controlled to the maximum or switched off if necessary to protect the main fuses of the system.

2.7.6. Time and Tariff



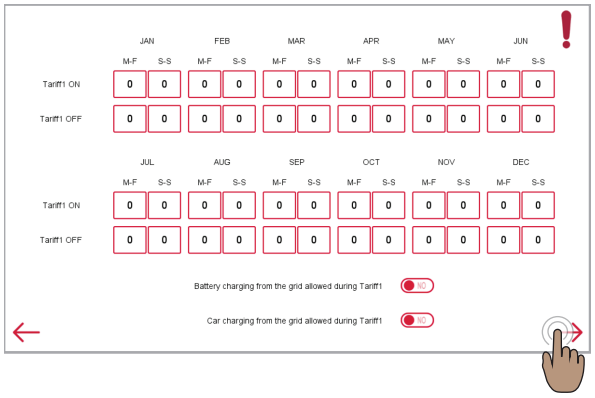
Tap the toggle button to enable/disable the Time and tariff function.

- YES Enable
- NO Disable



Tap on $ to enter *Time and tariff* settings.

2.7.7. Time and Tariff Settings



To change the values tap on the *input box* and confirm the new settings by tapping OK.

Tariff ON: Start time of tariff.

Tariff OFF: End time of tariff.

Battery charging from grid allowed:

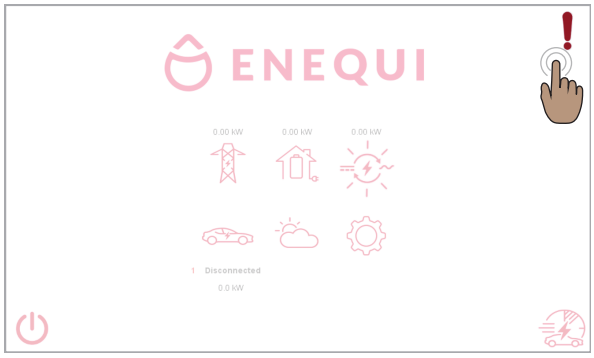
- YES Allowed
- NO Prohibited

Car charging from grid allowed:

- YES Allowed
- NO Prohibited

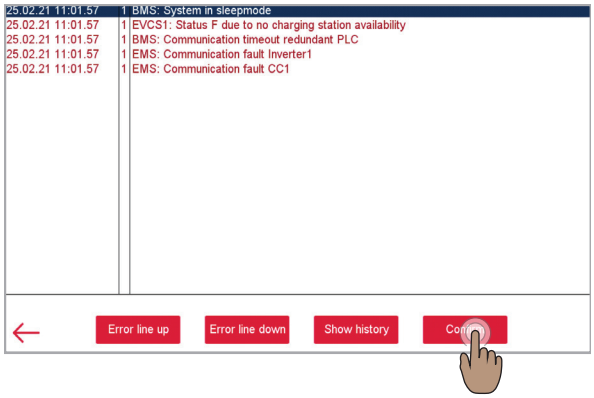
Switch between settings for tariff 1 and 2 by tapping the arrows at the bottom of the screen.

2.8. Fault Codes



When a fault is detected in the system, the Fault code icon ! starts flashing.

Tap the icon to enter the fault code screen.



Confirm the fault code by tapping confirm.

Most of the fault codes will be resolved by the system itself.

See also Troubleshooting.

*If a fault code persists, contact **Enequi Support** for additional assistance.*

Support numbers are available at:
www.enequi.com

3. Troubleshooting

⚠ **WARNING! High electric voltage!**
Risk of death or personal injury by electric shock! Never work with live wires! It is prior to all connection and maintenance work.

⚠ **WARNING!**

- Danger from residual voltage out of capacitors. Wait until the capacitors have fully discharged. Discharge takes about 15 minutes.
- Always contact Enequi or a qualified electrician in any case of suspected defect or fault of the product before taking any other action.
- Do not operate with suspected failures. If suspected damage to the product, have it inspected by qualified service personnel.
- Danger from inadequate grounding. An inadequate grounding conductor connection can cause serious injuries to persons and damage to properties.

3.1. Fault Codes List

Item	Fault description
BMS	Summary fault unit1
EMS	Communication fault BMS1
EMS	Communication fault EM1
EMS	Communication fault CC1
EMS	Communication fault CC2
EMS	Communication fault inverter1
EMS	Main fuse rating not correct
BMS	Summary warning unit1
EVCSX	Cable rejection 13A and 20A
EVCSX	Cable rejection 13 A
EVCSX	Invalid PP value
EVCSX	Invalid CP value
EVCSX	Status F due to no charging station availability
EVCSX	Locking
EVCSX	Unlocking
EVCSX	LD unavailable during locking
EVCSX	Over current shutdown
EVCSX	Communication problem between CC and EM
EVCSX	Status D, vehicle rejected
EVCSX	Contactor error detected
EVCSX	No diode in the Control Pilot circuit on the vehicle side
EVCSX	DC residual current detected
EVCSX	Spare 15
EVCSX	Spare 16
BMS	High-High Ambient Temperature
BMS	Inverter Fault
BMS	Isolation Alarm
BMS	Communication Fault EMS
BMS	Communication Fault Unit 1
BMS	Communication Fault Unit 2
BMS	Communication Fault Unit 3
BMS	Communication Fault Unit 4
BMS	High-High Ambient Temperature
BMS	Low Ambient Temperature
BMS	Isolation Warning
BMS	High Ambient Temperature
BMS	Low Ambient Temperature
BMS	Isolation Warning
BMS	Power Save Mode
BMS	Reduced C rate
BMS	Low battery temperature
BMS	Disabled string
BMS	Complete charge cycle completed
BMS	Charge cycle completed
BMS	Low SoC

Item	Fault description
BMS	Spare 1.2.8
BMS	Reduced C rate
BMS	Low battery temperature
BMS	Disabled string
BMS	Complete charge cycle completed
BMS	Charge cycle completed
BMS	Low Soc
BMS	Charging Complete
BMS	Charging Complete
BMS	Failed connector test negative
BMS	Low SoC
BMS	PLC backup battery fault
BMS	Pre-charge contactor error
BMS	Contactor Fault
BMS	Current Fault
BMS	Charging Complete
BMS	Low SoC
BMS	Communication Fault
BMS	High Pressure
BMS	High Voltage
BMS	Overheated
BMS	Pressure Differentiation
BMS	Temperature Differentiation
BMS	Voltage Differentiation
BMS	Sensor Fault
BMS	HW Fault
BMS	Battery Leakage
INV	ENS-Mess-Warning
INV	ENS-GFCI-Warning
INV	AC Sensor Warning
INV	Inverter-Curr-Warning
INV	GFCI-Warning
INV	GFCI-Device-Warning

Item	Fault description
INV	Zpv-PE-Warning
INV	Rly-Warning
INV	Vac-Warning
INV	Fac-Warning
INV	External-Comm-Warning
INV	No-Utility
INV	VdcMax-Warning
INV	Master-Slave-Warning
INV	Temperature-Warning
INV	ENS-Vac-Warning
INV	ENS-DCI-Warning
INV	(Reserved)
INV	Boost-Start-Warning
INV	BUS-Low-Warning
INV	BUS-High-Warning
INV	ENS-Fac-Warning
INV	Boost-Curr-Warning
INV	PV-Connect-Warning
INV	DC Over Power
INV	FanLock-Warning
INV	EEPROM-Warning
INV	GFCI-Device-Fail
INV	Curr-sensor-Fail
INV	Inverter-Curr-Fail
INV	PV-Connect-Fail
INV	Bus-low-Fail
INV	Bus-high-Fail
INV	ENS-Fail
INV	M-S
INV	Ias-DCI-Fail
INV	Relay-Fail

For further assistance, contact Enequi Support at the support phone.
Support numbers are available at: www.enequi.com.

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Enequi reserves the right to make changes that improve the function of the QuiPower Storage.

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