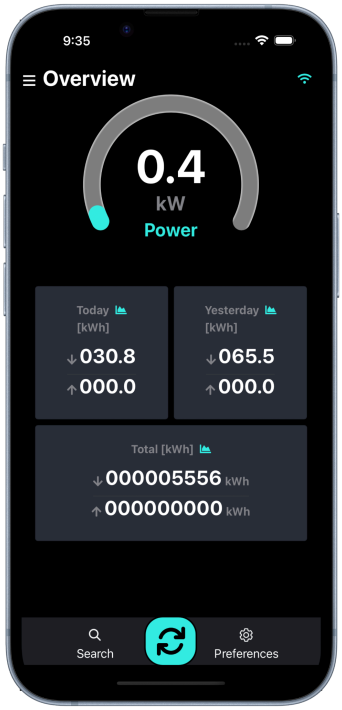
IoTMeter

(last document update: 25.9.2025)

Product description:

Smart Wi-Fi wattmeter controller for optimization of charging EV with dynamic load balancing and energy management of a building. Remote control and monitoring via mobile app IoTMeter.

- 65 A version up to 3 EVmate control
- 125 A version up to 10 EVmate control



Features:

- 3-phase 4-quadrant wattmeter with datalogger
- intelligent EV charging stations control
  - Dynamic load balancing of EV charging current - IoTMeter sets charging current based on the available unused building power capacity
  - charging preference from peak off (cheaper electricity) based on AC IN signal
  - charging preference from PV power plant overflows
  - Supports control up to 10 pcs of charging stations with power balancing
- **mobile application IoTMeter** - FREE download from Google Play and App Store here. remote monitoring and configuration
- Wi-Fi interface - the possibility of access point, or connect to a home network
- intelligent use of overflows from home power plants by switching heat loads
- isolated RS485 interface MODBUS RTU
- MODBUS TCP - open communication protocol API to implement own 3rd party control system (Computer, Raspberry Pi, Nodered - see programming examples below)
- compatibility with charging stations EVmate with RS485
- Measures RMS currents, RMS voltages, Active power, apparent power, power factors
- Energy consumed from grid / delivered to grid
- Logging of energy hour, day, month charts
- Logging of power last hour diagram, logging peak values

Applications:

- EV charger controller - dynamic load balancing
- Smart electricity meter
- Smart module for implementation to dual or single EV charger
- Power plant overflows optimiser


9:35
Overview
0.4
kW
Power
Today [kWh]
030.8
000.0
Yesterday [kWh]
065.5
000.0
Total [kWh]
000005556 kWh
000000000 kWh
Search
Preferences
3:46
ECO
FAST
EVSE 1
State UNPLUG
0 A
17 A
EVSE 2
State PLUG
17 A
17 A
Search
Preferences
9:36
Data
IoTMeter:88153
VOLTAGES [V]
L1 L2 L3
241 243 241
CURRENTS [A]
L1 L2 L3
1.1 0.0 0.7
POWERS [kW]
L1 L2 L3
0.22 0.00 0.12
POWER FACTOR [-]
L1 L2 L3
0.86 1.00 0.72
↓TODAY MAX [kW]
L1 L2 L3
3.8 3.6 3.5
↑TODAY MAX [kW]
L1 L2 L3
0.0 0.0 0.0
↓TODAY ENERGY [kWh]
L1 L2 L3
10.9 9.4 10.4
↑TODAY ENERGY [kWh]
L1 L2 L3
0.0 0.0 0.0
↓TOTAL ENERGY [kWh] [MWh]
↑TOTAL ENERGY [kWh] [kWh]
Search
Preferences
9:36
Power
Last hour
Power [W]
3000
2500
2000
1500
1000
500
0
8:46 am
8:51 am
8:56 am
9:01 am
9:06 am
9:11 am
9:16 am
9:21 am
9:26 am
9:31 am
9:36 am
Search
Preferences
9:36
Energy
Hourly Daily Monthly Yearly
4500
4000
3500
3000
2500
2000
1500
1000
500
0
22
23
↓ E [kWh]
↑ E [kWh]
Eavg. [kWh]
Search
Preferences
9:36
Energy
Hourly Daily Monthly Yearly
80
70
60
50
40
30
20
10
0
01/30/23
02/02/23
02/05/23
02/08/23
02/11/23
02/14/23
02/17/23
02/20/23
02/23/23
02/26/23
03/01/23
↓ E [kWh]
↑ E [kWh]
Eavg. [kWh]
Search
Preferences

Principle of operation

EVSE = charging station (electric vehicle supply equipment - EVmate)

Principle of operation - one EVmate:

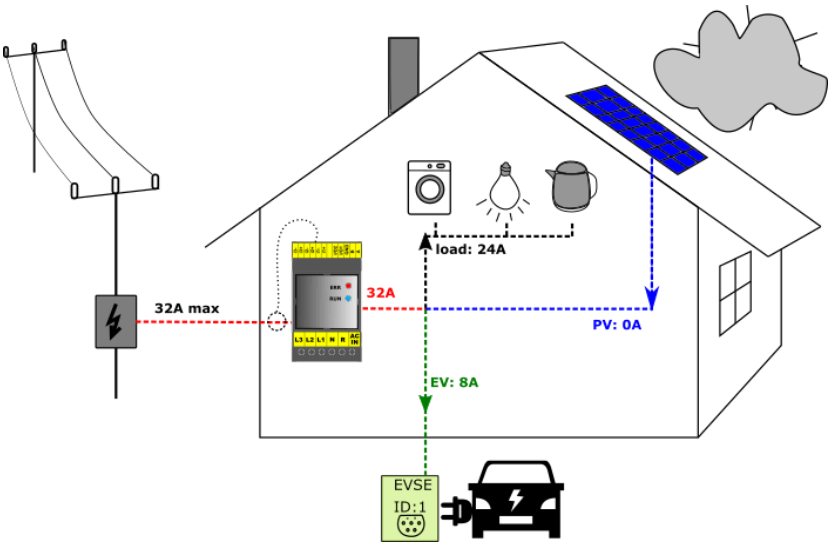
IoTMeter is placed in the main switchboard of the building and measures whole building consumption (building loads and EVmate charging current). The IoTMeter dynamically sets only available current to connected EVmate.

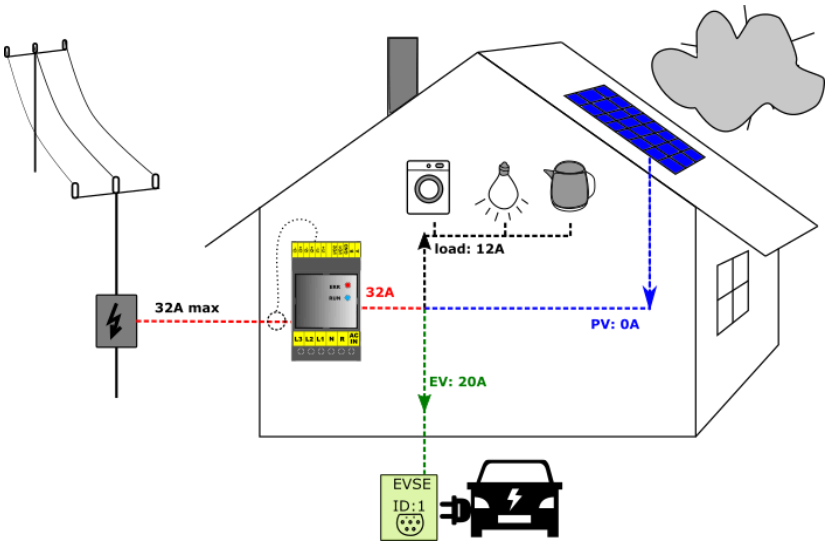
Example of operation in the picture: (breaker set to 32A)

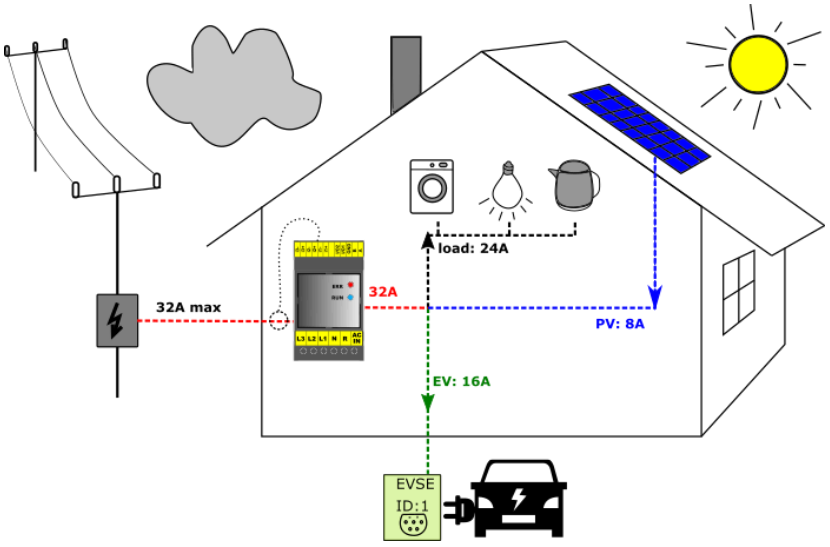
When building common loads consumption is 23A, the IoTMeter reduces EVmate current to 8A, so building(breaker) current is not exceeded 32A.

In the middle picture loads consumption fall to 12A so IoTMeter sets charging current to EVmate 20A. The current rating of building current is still 32A.

In the bottom picture sun is shining, solar power plant producing 8A, IoTMeter rise EVmate current to 16A, summary of building is still 32A, charging current is most optimised in any time

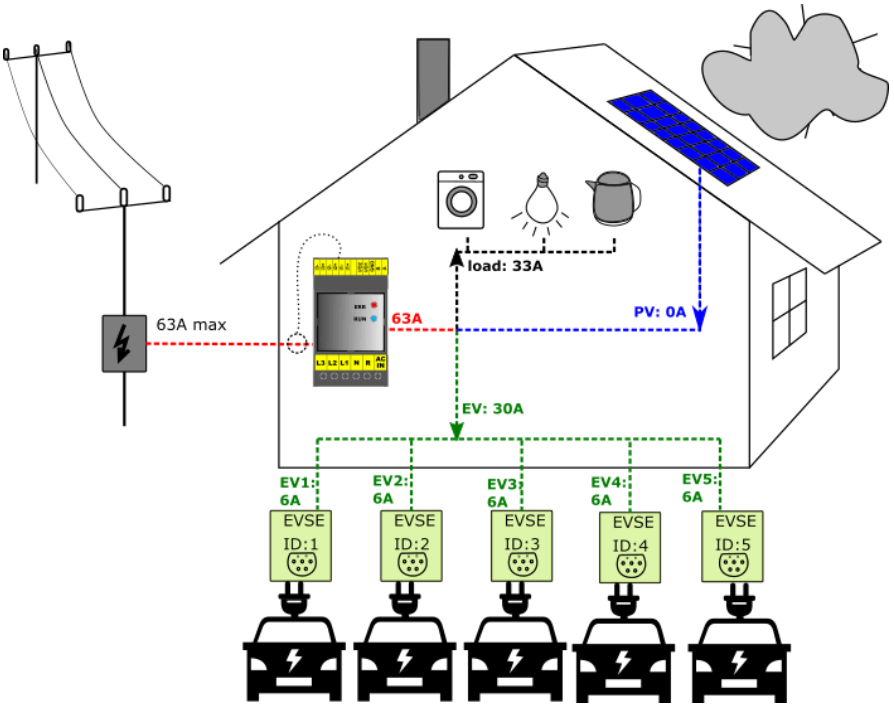






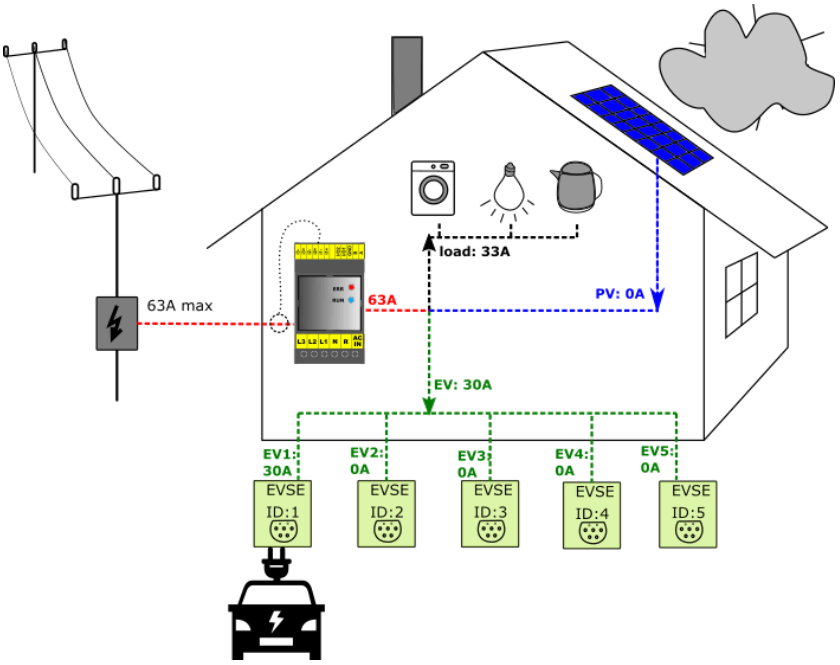
Principle of operation - multiple EVmate

IoTMeter is placed in the main switchboard of the building and measures whole building consumption (building loads and EVmate charging current). The IoTMeter dynamically sets only available current to all connected (charging) EVmate.



Example of operation in the picture: (breaker 63A)

When building common loads consumption is 33A, five EV is charging, the IoTMeter reduces all EVmate current to 6A, so building(breaker) current is not exceeded 63A.



Technical specifications:

General data	
Length x width x depth	90 x 53 x65
Degree of protection	IP20
DIN rail mounting	IEC 60715
Ambient temperature during operation	-10..+40°C
humidity	5..95%
Supply voltage input	L1, N
voltage range	230 ± 10 %
frequency range	45...65 Hz
power consumption	<5 VA
Measuring voltage inputs	L1, L2, L3
voltage RMS measuring range	10 - 250 AC
voltage RMS accuracy	±2 % from measuring range
frequency range voltage	45 - 65 Hz
connection voltage inputs	0,5..2,5mm^2
Measuring current inputs	i1+, i1- , i2+, i2- , i3+ , i3-
measuring range current RMS	±0,1.. ±65 A standard version
measuring range current RMS extended	±0,2..±125 A extended version
current RMS accuracy	±2 % from measuring range
frequency range current	45 - 65 Hz
included transformer ratio	split core, ratio 1:3000
included transformer inner diameter	10mm (16mm extended version)
connection current inputs	0,25..1,5mm^2
Relay output	R - switching L1
relay output max load	1 A
relay output voltage	same as L1 input
connection current inputs	0,5..2,5mm^2
Calculated values	
Active power	±32768 W ±2 % from measuring range
Apparent power	±32768 VA ±2 % from measuring range
Power factor	0...1.00 ±0,02

Energy	±2 %
Communication	
RS485	galvanically isolated 2,5kV RMS, Half duplex
RS485 connection	0,25..1,5mm^2
Wi-Fi	IEEE 802.11 b/g/n
GPIO	I/O1, I/O2
I/O1 connection	0,25..1,5mm^2
I/O2 connection	0,25..1,5mm^2

Installation guide

Caution! Installation should only be performed by a qualified person!
If the device is used in a manner not specified by the manufacturer, the protection provided by the device may be impaired.

Basic wiring:

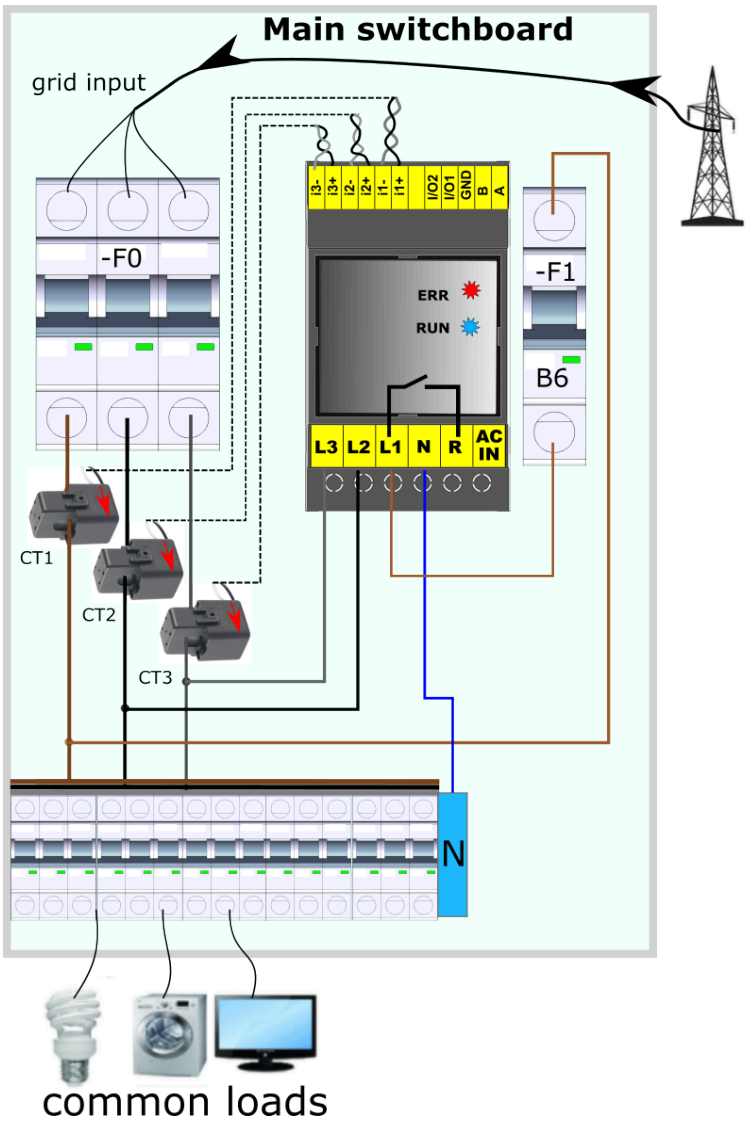
The IoTMeter should be installed in the main switchboard (electricity panel) . **Overcurrent protection nominal 2 to 6 Amp is required for phase L1**, fuse for phase L2 and L3 is recommended. The maximum distance from the measured lines, should not exceed 1,5 meter.
In the case of an electromagnetic noisy environment, the length of the twisted wires of the current transformers should be reduced or shielded.

IoTMeter is installed on a DIN rail, the width is 3 modules (53mm) plus the recommended circuit breaker.

Basic connection diagram is shown in the picture, see the picture and follow this steps:

1. In the first step, **turn off the power supply - main breaker -F0**
2. Open the split cores of current transformers.
3. **Attention**! **Correct transformer CT1,CT2,CT3 orientation is required**! The arrow on the transformer must be
   oriented in the direction of consumption of the object. Close core of current transformers on the supply phases “L1-L3” as the picture shows. Connect the transformers to the IoTMeter spring terminal. It is important to respect the order of the phases. L1 phase measuring transformer **black wire must be connected to terminal “i1(+)”, white wire to terminal “i1(-)”,** etc..
4. Connect the voltage inputs as shown in the connection diagram. Phase L1 must have overcurrent protection e.g. breaker or fuse
   Attention! Correct phase order is required! To input L1 must be connected to the same phase L1(same voltage potential) as measured by the current transformer L1, connected to i1(+)(-) current input, etc..

Connection diagram - basic wiring:



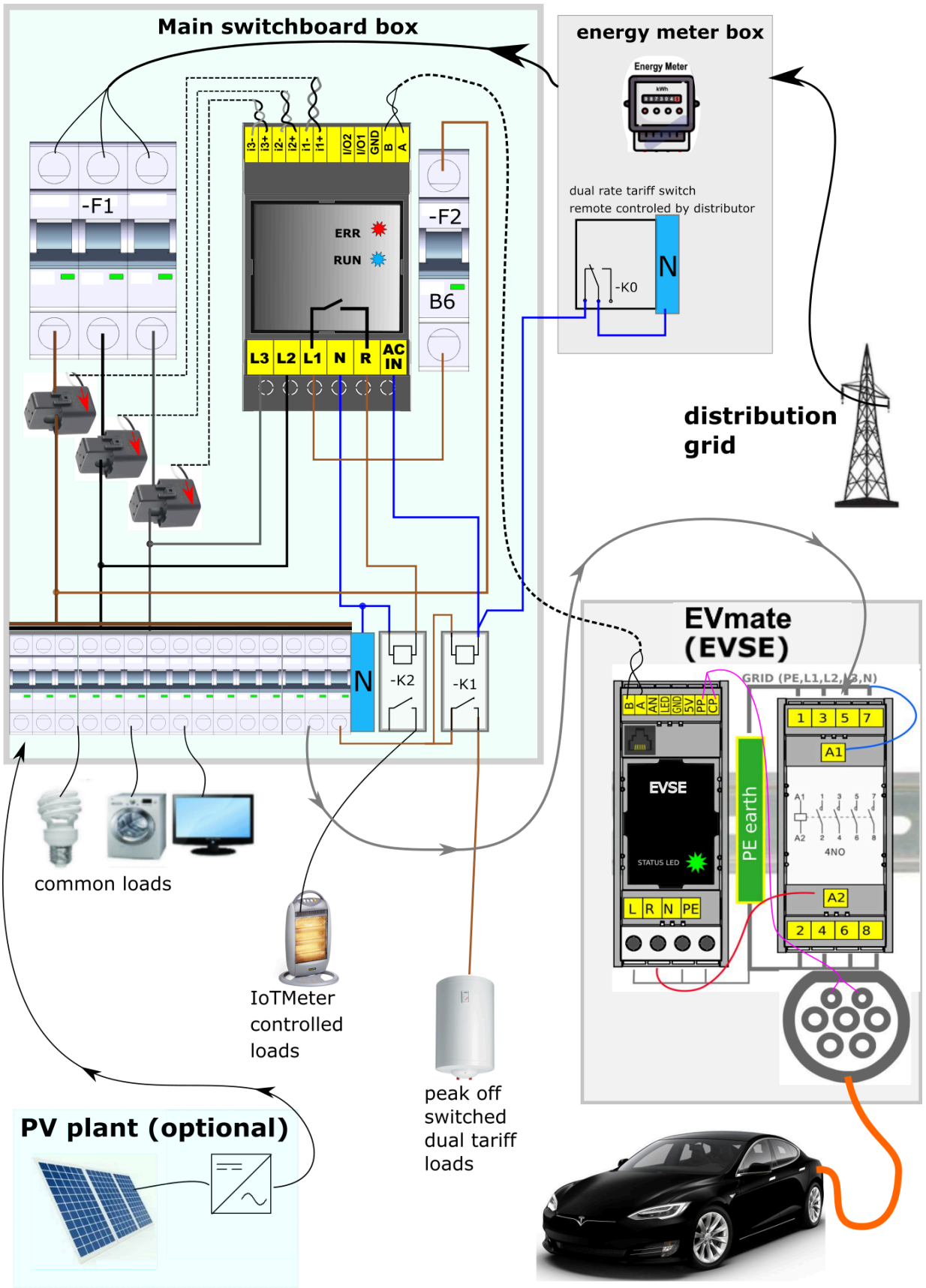
Extended wiring one EVmate:

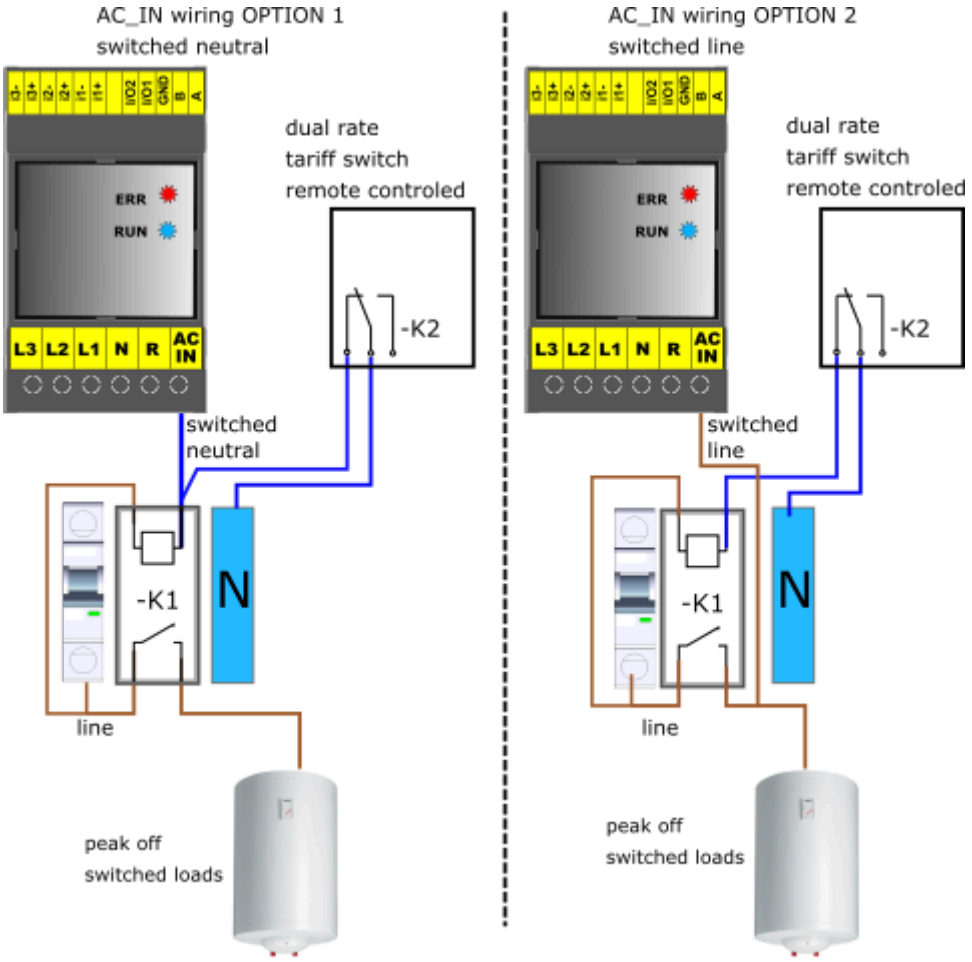
Attention! For the extended wiring you have to make basic wiring at first! Now do these steps and see extended picture below

1. “A” and “B” is a communication interface with EVmate wallbox charger. The cable should be UTP (twisted pair) connection shows the extended diagram
2. Relay output “R” (optional) To relay output could be a connected relay or contactor with coil with nominal AC voltage 230 V as shown in the diagram. R output only switches L1 input to R output so the second terminal of the contactor coil should be connected to the Neutral terminal. **Attention! Maximum output current is 1A, for higher current you have to use external contactor/relay**
3. “AC_IN” (optional) input is a universal input to detect the state of relay of a ripple control device to switch heat loads low/high(peak off/peak) tarif. Nominal input voltage is 230V AC. see wiring diagram OPTION1 and OPTION2. When wiring OPTION1 is used parameter AC IN ACTIVE: HIGH has to be configured to Off! If OPTION2 is used then the parameter has to be configured to On!

Attention! A and B is RS485 communication interface, when you have a long cable connection, you should terminate the RS485 bus with 120 Ohm resistor.
The IoTMeter side is internally terminated with 120 Ohm, the second side of the bus should have a maximum one more terminator. When you connect two more terminators, the bus will not work.

Connection diagram: Extended wiring one EVmate

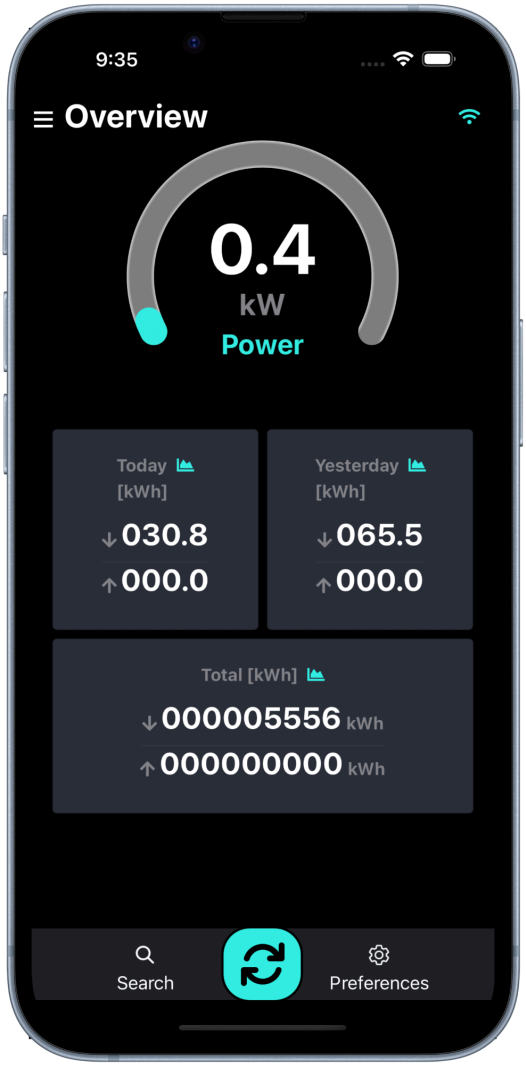




LED status indication:

STATE			ON [ms]	OFF [ms]	REPETITION	DURATION [ms]
AP	x		100	200	1	2000
WIFI CONNECTED	x		100	200	2	2000
EVmate/EVSE ERROR		x	100	200	1	4000
WATTMETER ERROR		x	100	200	2	4000
WEBSERVER ERROR		x	100	200	4	4000
WIFI ERROR		x	100	200	8	4000
TIME SYNC ERROR		x	100	200	16	4000

Mobile interface guide



Introduction mobile app

IoTMeter is self-designed application for installers and users to do in IoTMeter device:

- **Commissioning**
- **Local Monitoring**
- **Diagnosing**
- **Setting**

The application is available in Google Play and Apple Stores

Google play App store

Compatible with : iOs 5 and higher
Android API 15 and higher

Wi-Fi connection

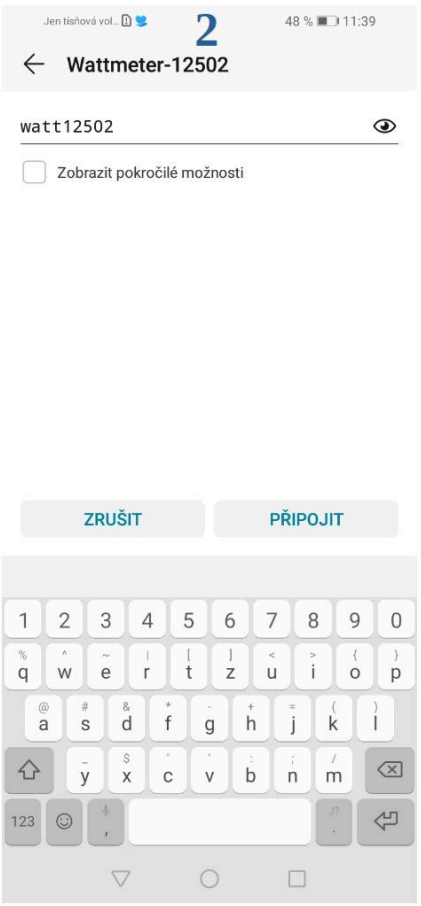
IoTMeter app is only usable, if your smartphone is connected to the IoTMeter device by Wi-Fi or connect smart phone(s) and device(s) in the same intranet system (Only when IoTMeter device was configured)

Direct connection to device Access point Wi-Fi:

If the Wi-Fi AP is setted to Off, it will stop broadcasting AP after 20 minutes from rebooting the IoTMeter. If the IoTMeter is not visible in the wi-fi list, reboot the device.

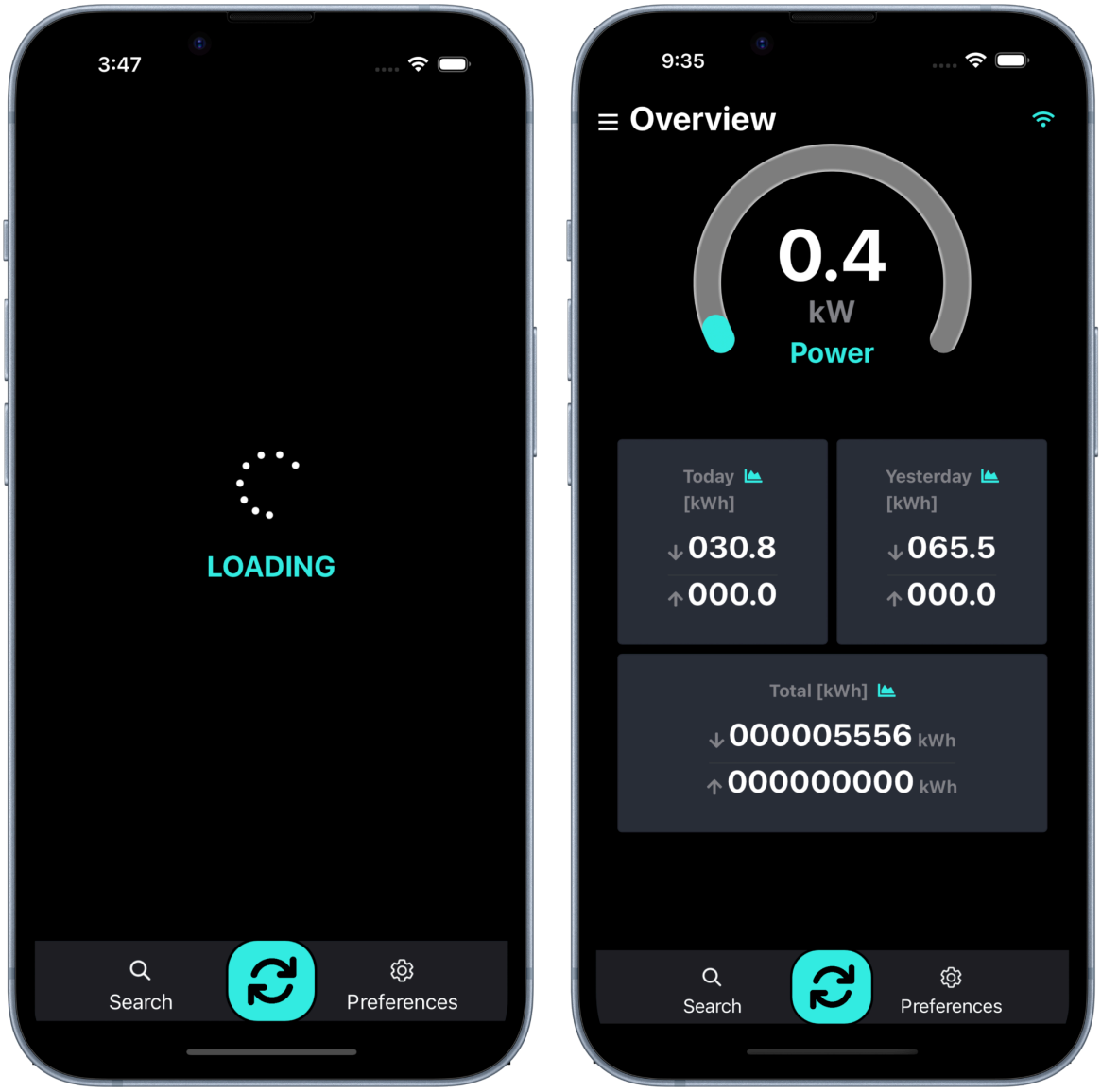
For first configuration open network-manager and follow these steps:

1. Chose Wattmeter-***** SSID
2. Fill password
3. Check connection, system Android is automatically logging off from wi-fi, which has not connection to internet



The password for authorization is derived from system ID. For example: If system ID is 12502, the password is **watt12502.**

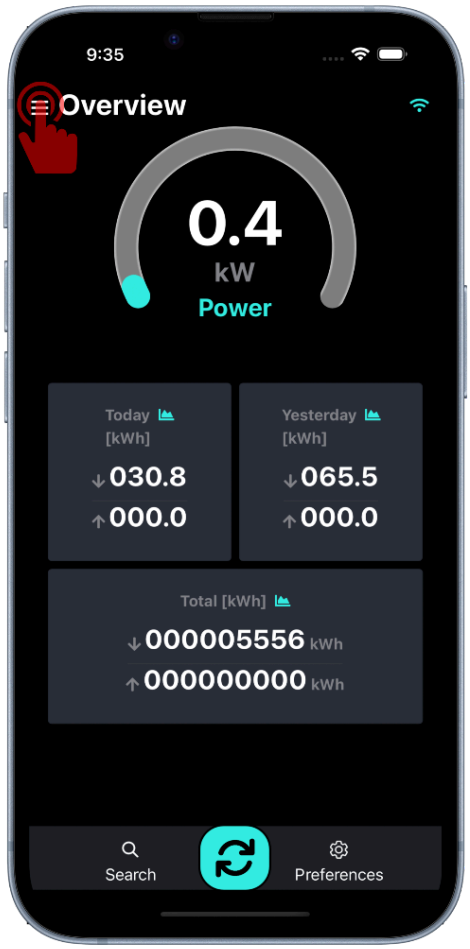
After successful connection to device, open IotmEter app. The app should automatically detect the IoTMeter SSID and load the webserver with an address: http://192.168.4.1:8000. If not, then tap on the REFRESH button and wait then the webserver loaded successfully.

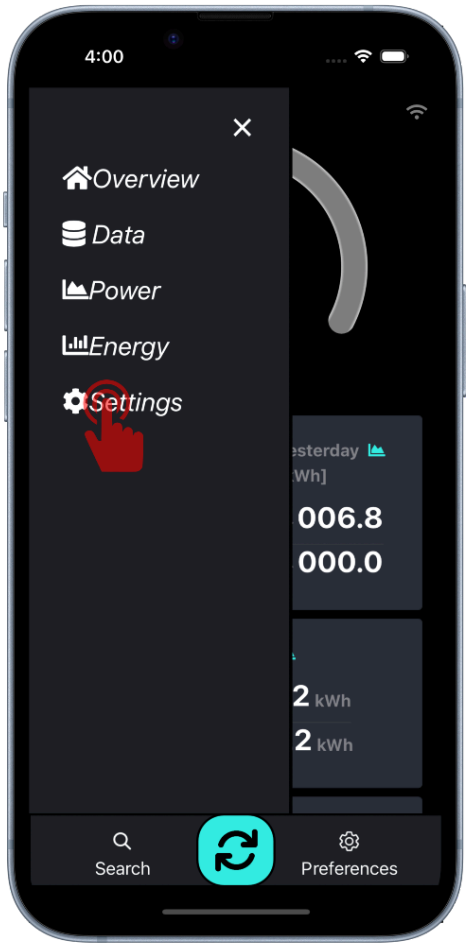


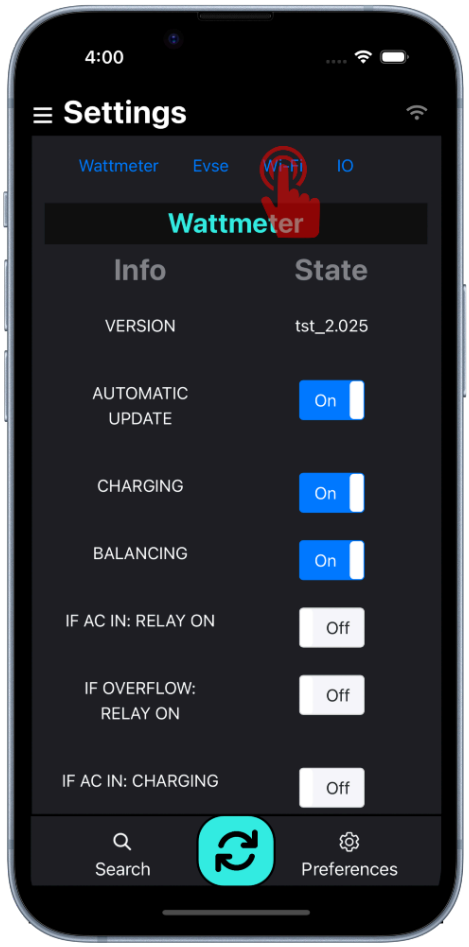
Connect to local Wi-Fi

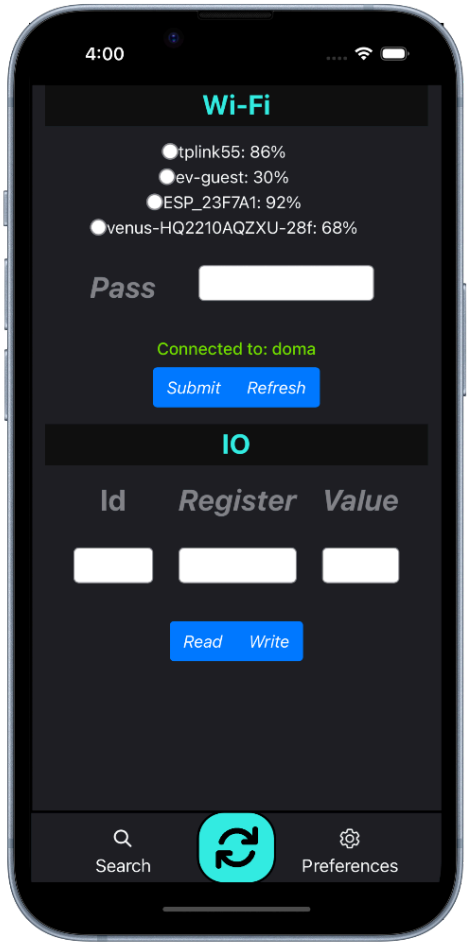
To connect the device to local WIFI network you need to do the following steps:

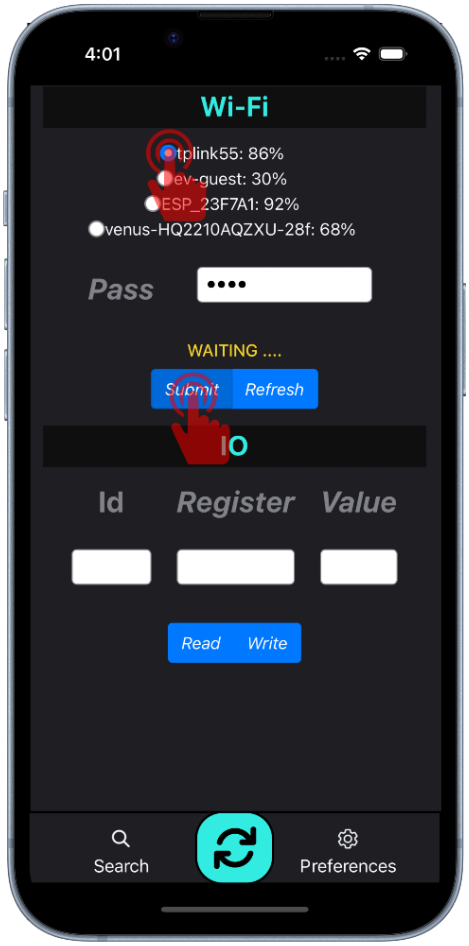
1. Open navigation view
2. Tap on the SETTINGS button.
3. In settings view, scroll down to Wi-Fi Client Setup.
4. Choose Wifi network, fill password and tap on the submit button
5. Waiting for connection...
6. Response - get connection status (If pass, text is green. If failed, text is red)

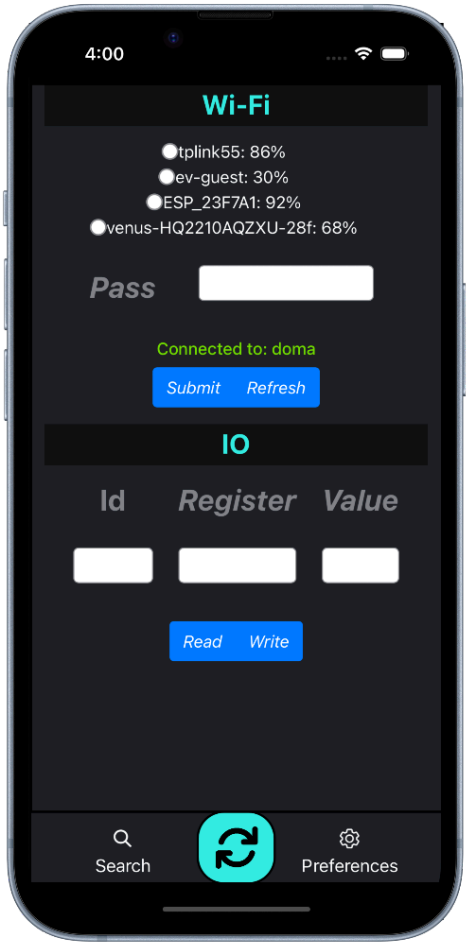

9:35
Overview
0.4
kW
Power
Today [kWh]
030.8
000.0
Yesterday [kWh]
065.5
000.0
Total [kWh]
000005556 kWh
000000000 kWh
Search
Preferences


4:00
Overview
Data
Power
Energy
Settings
Search
Preferences


4:00
Settings
Wattmeter
Evse
Wi-Fi
IO
Wattmeter
Info
State
VERSION
tst_2.025
AUTOMATIC UPDATE
On
CHARGING
On
BALANCING
On
IF AC IN: RELAY ON
Off
IF OVERFLOW: RELAY ON
Off
IF AC IN: CHARGING
Off
Search
Preferences


4:00
Wi-Fi
tplink55: 86%
ev-guest: 30%
ESP_23F7A1: 92%
venus-HQ2210AQZXU-28f: 68%
Pass
Connected to: doma
Submit
Refresh
IO
Id
Register
Value
Read
Write
Search
Preferences

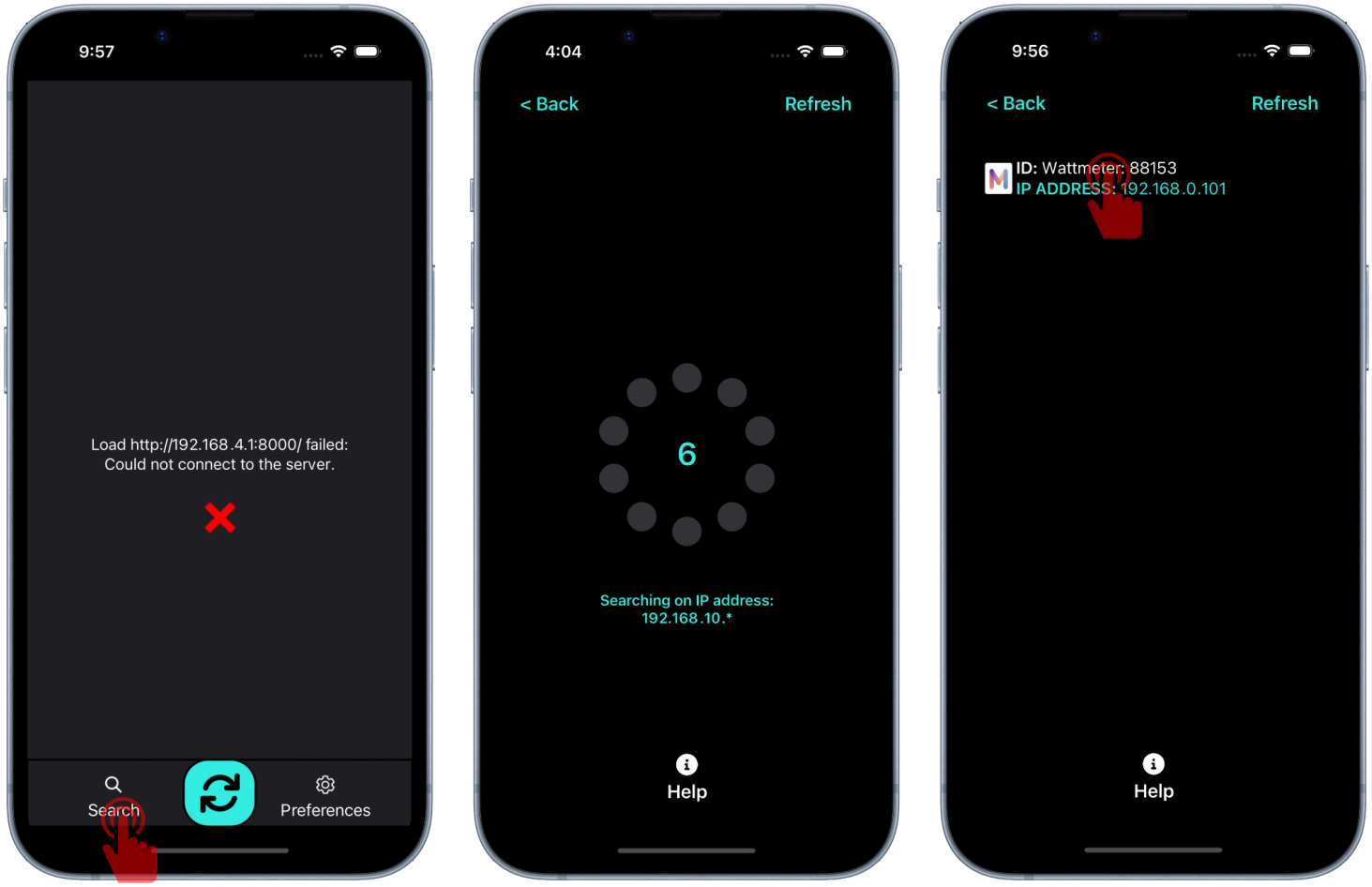

4:01
Wi-Fi
tplink55: 86%
ev-guest: 30%
ESP_23F7A1: 92%
venus-HQ2210AQZXU-28f: 68%
Pass
WAITING ....
Submit
Refresh
IO
Id
Register
Value
Read
Write
Search
Preferences


4:00
Wi-Fi
tplink55: 86%
ev-guest: 30%
ESP_23F7A1: 92%
venus-HQ2210AQZXU-28f: 68%
Pass
Connected to: doma
Submit
Refresh
IO
Id
Register
Value
Read
Write
Search
Preferences

Search device in local Wi-Fi network

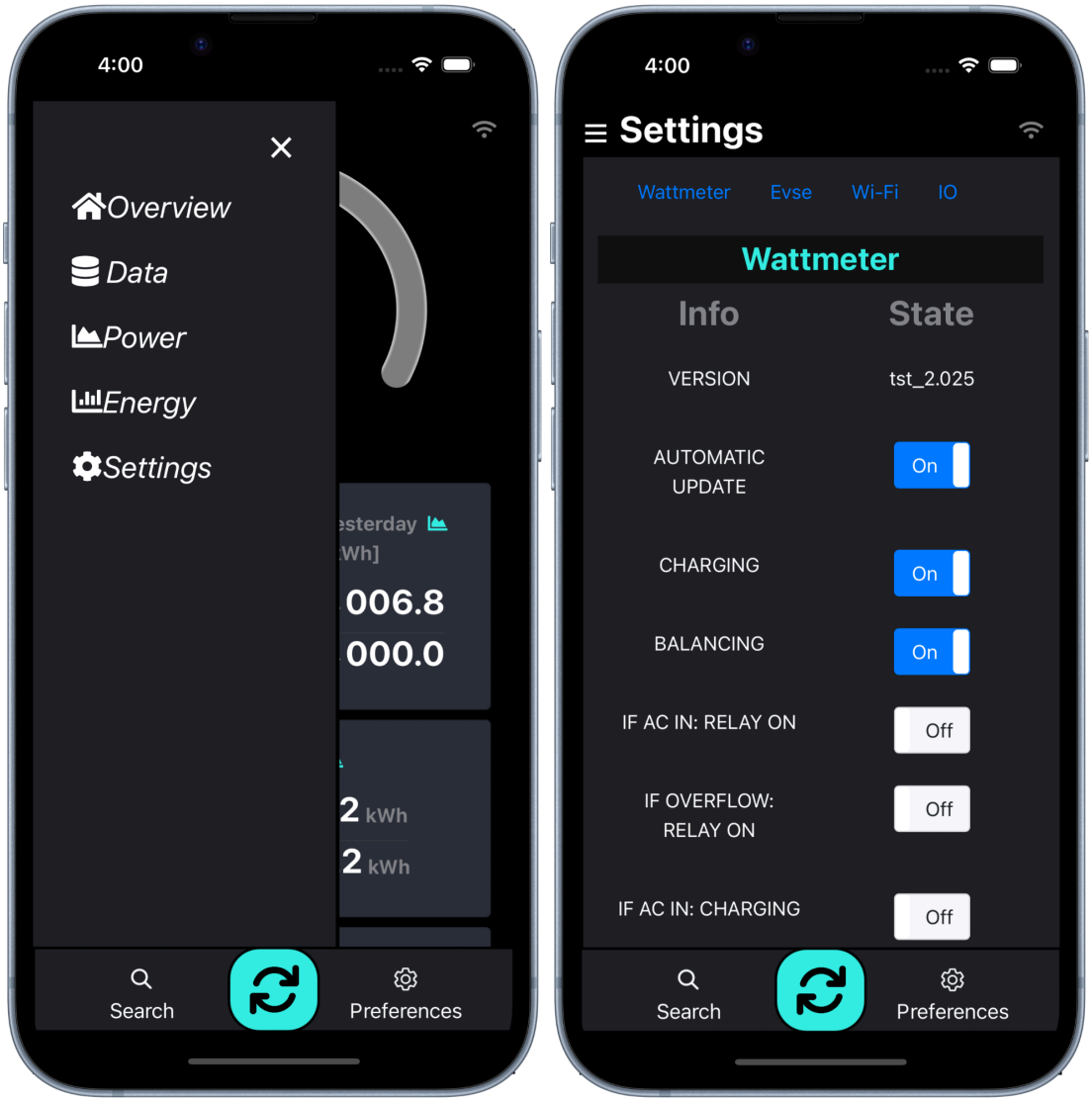
When the device is successfully connected to the local WIFI network, you can disconnect mobile from IotmEter network and connect mobile to local WIFI network. Then follow these steps:

1. Tap on the SEARCH button
2. Wait for the result …
3. Select the IoTMeter ID and confirm by clicking on it.

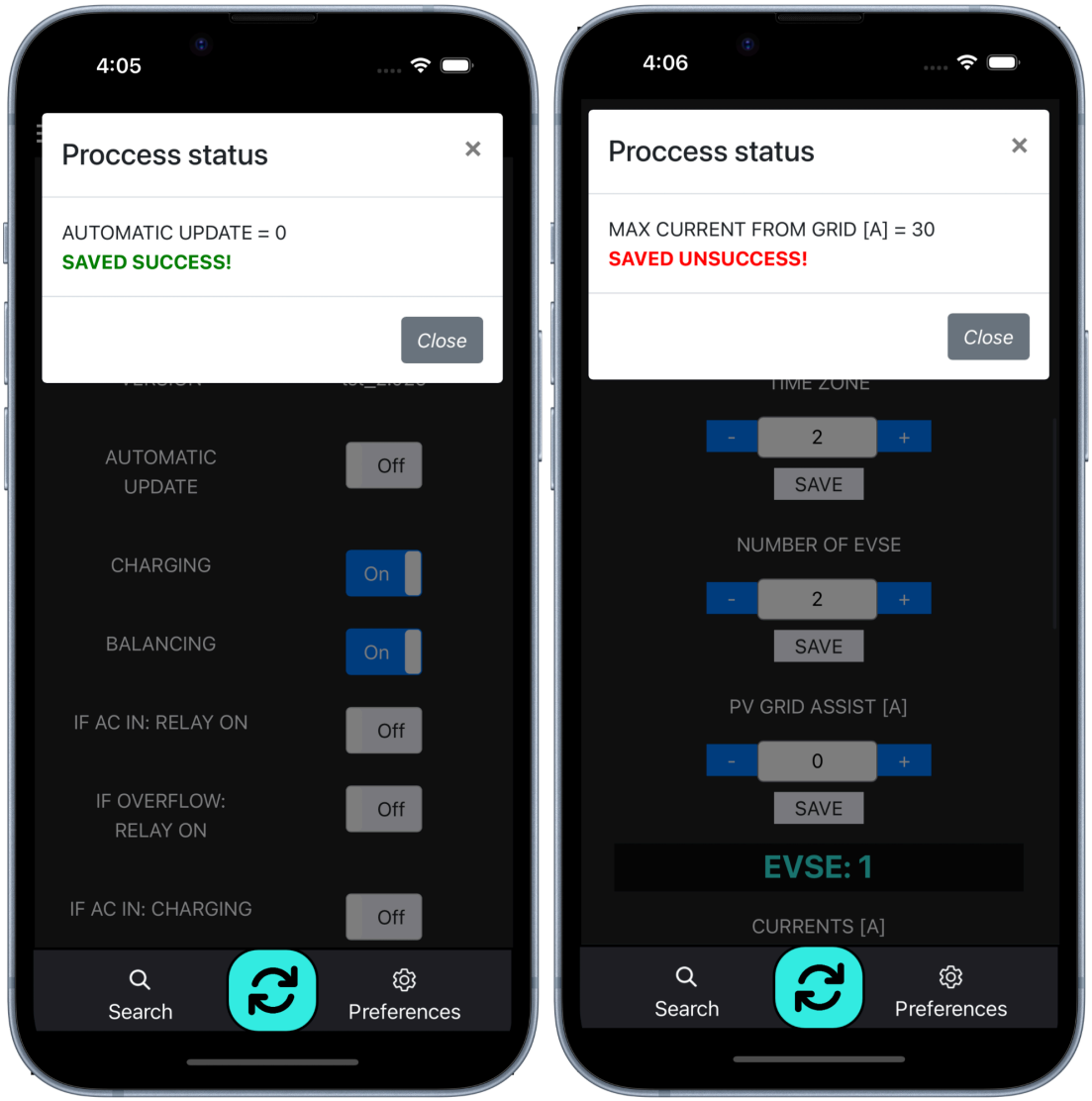


Setting IoTMeter

In side nav bar, tap on the Settings and wait for the setting view load. Then you can set the IoTMeter.



If the value is set successfully, the green alert will show and if not, red alert will show.



Parameters description

AUTOMATIC UPDATE

Value: On, Off
Description:

- On - the firmware updates after a restart (only if it has a good internet connection)
- Off - updates disabled

ENABLE CHARGING

Value: On, Off
Description:

- On - Charging enable. Attention Charging start should be affected via parameters: ENABLE BALANCING, WHEN AC IN: CHARGING, EVSE-CURRENT
- Off - Charging disable

Dependencies:

- EVSE-NUMBER
- EVSE-CURRENT

ENABLE BALANCING

Value: On, Off
Description:

- On - IoTMeter will dynamically set the charging current according to actual building consumption and available current of main BREAKER. e.g. When EV is charging and building current plus charging current exceeds BREAKER current, the IoTMeter immediately sends a message to EV charger to reduce charging current, so the main breaker should not trip due to EV charging.
- Off - The charging current will be set according to EVSE-CURRENT

Dependencies:

- EVSE-NUMBER
- EVSE-CURRENT
- ENABLE-CHARGING

WHEN AC IN: RELAY ON

Value: On, Off
Description:

- On - RELAY turned On if “AC IN” input is active. “AC IN” input can be activated with 230V or 0V signal presence, see AC IN ACTIVE: HIGH
- Off - Relay is permanently Off

WHEN OVERFLOW: RELAY ON

Value: On, Off
Description:

- On - If current < **0A** (current flows from power plant to the grid), then relay turn On
- Off - Relay is permanent Off

WHEN AC IN: CHARGING

Value: On, Off
Description:

- On - This feature is commonly used, when a building (object) has a dual tariff energy meter. Charging is turned On if “AC IN” input is active (“low tarif” is active) and electricity is cheaper. “AC IN” input can be activated with presence 230V or 0V signal, see AC IN ACTIVE: HIGH
- Off - charging is always enable, AC_IN input does not care

Dependencies:

ENABLE-CHARGING

- AC IN ACTIVE: HIGH

AC IN ACTIVE: HIGH

Value: On, Off
Description:

- On - set to On if you made wiring OPTION 2 of “AC IN” input. So WHEN AC IN: CHARGING parameter is turned On, charging starts when 230V ±10 % is present. WHEN AC IN: RELAY ON parameter is On, Relay switch On when 230V ±10 % is present.
- Off - set to Off if you made wiring OPTION 1 of “AC IN” input So WHEN AC IN: CHARGING parameter is turned On, charging starts when 0V is present. WHEN AC IN: RELAY ON parameter is On, Relay switch On when 0V is present.

Wi-Fi AP

Value: On, Off
Description:

- On - IoTMeter broadcast wi-fi Access point all the time. Regarding security reasons it is not recommended, because the password is not changable.
- Off- (recomended) IoTMeter will stop broadcast access point after 20 minutes from last reboot. In thist time window is necessary to set up local wi-fi connection see Wi-Fi connection.

MODBUS-TCP

Value: On, Off
Description:

- On- IoTMeter is possible to connect to 3rd party control system via MODBUS-TCP
- Off- MODBUS-TCP is not available

P-E15 PROTECTION:

Value: On, Off
Description:

- On - the IoTMeter controls relay activation based on the parameters: maximum power supplied to the grid and the 15-minute maximum.
- Off - control is disabled.

PHOTOVOLTAIC:

Value: OFF - 1p - 3p
Description:

- For charging from photovoltaic overflow, set your photovoltaic system. 1p = 1-phase production,3p = 3-phase production

Dependencies:

ENABLE-CHARGING
ENABLE BALANCING
PV GRID ASSIST:

MAX CURRENT FROM GRID

Value: 0 - 125 A
Description:

- Set current according to the preferred maximum current consumption from the main grid. Typically you will set the nominal value of the main breaker. When you want to use only overflowed current from PV, you may set 1A.

Dependencies:

ENABLE-CHARGING

TIME-ZONE

Value: ±24 h
Description:

- Set your time zone. Time is automatically calibrated only if IoTMeter is connected to the internet via Wi-Fi. If you IoTMeter is not connected to the wi-fi, Go to “Data” and tap to time sync

EVSE-NUMBER

Value: 0 - 10
Description:

- Set number of connected charging station EVmate

RESET

Description:

- SW reset

CURRENT (EVSE setting: 1, EVSE setting: 2,..),

Value: 0 - 99 A
Description:

- Set maximum charging current

Dependencies:

ENABLE-CHARGING
ENABLE BALANCING

PV GRID ASSIST:

Value: 0 - 99 A
Description:

- According to standard IEC 61851-1 minimal charging current is 6A per phase.
- Set current according to the preferred maximum current consumption from the main grid (grid current assistance). When you want to use only overflowed current from PV you will set 0A. When you want to use mix of energy, for example 2A from grid and anything else from PV, you will set 2A.

Dependencies:

ENABLE-CHARGING
ENABLE BALANCING
PHOTOVOLTAIC:

MAXIMUM POWER SUPPLIED TO THE GRID [kW]:

Value: 0 - 125 kW
Description:

- If the meter detects that the supplied power exceeds the set maximum value, it automatically activates a protection mechanism that disconnects via the relay contact.

15-MINUTE MAXIMUM 0.1*[kWh]:

Value: 0 - 125 kWh
Description:

- If the energy delivered over 15 minutes exceeds the set value, the system automatically opens the relay contacts. This disconnection lasts until the start of the next 15-minute period, when the system resets and is again ready to deliver energy. This mechanism helps regulate and limit the maximum amount of energy supplied to the grid in 15-minute periods.

Dependencies:

MAXIMUM POWER SUPPLIED TO THE GRID [kW]:

MAXIMUM HDO CURRENT [A]

Value: 0-125A
Description:

- Sets the current to be used for charging if charging is allowed when HDO ACTIVE: CHARGE has priority over charging from the PV system.

Dependencies:

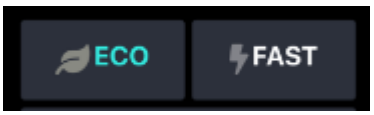
WHEN AC IN: CHARGING

Default config

ENABLE CHARGING:	On
ENABLE BALANCING	On
WHEN AC IN: RELAY ON	Off
WHEN OVERFLOW: RELAY ON	Off
WHEN AC IN: CHARGING	Off
AC IN ACTIVE: HIGH	Off
Wi-Fi AP	On
MODBUS-TCP	Off
MAX CURRENT FROM GRID	32
TIME-ZONE	2
EVSE-NUMBER	1
CURRENT (EVSE setting: 1, EVSE setting: 2,..),	16
PHOTOVOLTAIC:	Off
PV GRID ASSIST:	0
MAXIMUM POWER SUPPLIED TO THE GRID	40 kW
15-MINUTE MAXIMUM	10 kWh
MAXIMUM HDO CURRENT	12 A

Fast selection mode buttons

In the overview, there are two buttons for fast selection of charging modes “ECO” and “FAST”.



Mode ECO

IoTMeter controls EVmate charging as configured in the “settings” tab

Mode FAST

The fast mode is used when we need to charge EV as fast as possible.
Charging is limited only by the maximum current from the grid and the maximum EVmate current. In this mode, IoTMeter is not regulated according to the overflows from the photovoltaics or according to the AC IN input, even if they are configured in the settings.

Example of EVmate load balancing setting

This example give you detailed instruction how to set EVmate charging station to load balancing mode:

IoTMeter connected to only one EVmate:

1) Make sure you have done steps in Installation guide and Mobile interface guide
2) Make sure, the IoTMeter and the only 1 EVmate is connected together via RS485 (A,B) -> see Installation guide and Extended wiring:
3) Go to setting tab on the left bar
4) Set parameter ENABLE CHARGING to"On"
5) Set parameter ENABLE BALANCING to "On"
6) Set parameter EVSE-NUMBER to "1"
7) Set parameter CURRENT (EVSE setting: 1) to more than 6A, typically you set current corresponds to you onboard EV charger, eg. 16A or 32A
8) Set parameter BREAKER to the value corresponding with breaker where the IoTMeter is installed. Typically it is the main breaker off whole building, where building is connected to the main grid as you see in the pictureBasic wiring:

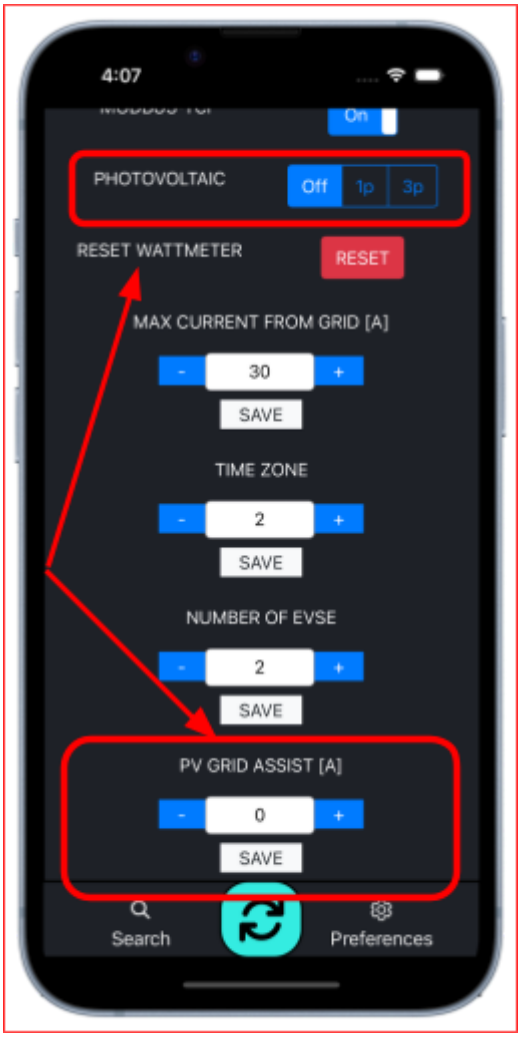
IoTMeter connected to multiple EVmate:

When you want to connect more than one EVmate to the IoTMeter, you have to set a different address ID for each EVmate.
At default each EVmate has address ID 1, when you want to add a second EVmate you have to set address ID to 2, for third EVmate ID has to be 3, etc..
To change address you have to connect IoTMeter to only one EVmate at same time or you can turn OFF all connected EVmate except the one, which you want to change address ID.

1) Make sure you have done steps in Installation guide and Mobile interface guide
2) Make sure, the only one EVmate (that which we want to change address ID) is turned ON and connected via RS485 (A,B). **Another EVmate connected to the IoTMeter via RS485 (A,B) has to be turned OFF during changing address ID!**
3) Go to setting tab on the left bar
4) Scroll down to “Modbus R/W interface”
5) To **ID** array write **1**, to **Register** array write “2001” and tap on **read** button
6) The response value should be “**1**” in the text box.
7) If the process is successful, change the value in register “2001”to **“2”** and tap on the **write** button.
8) Now address ID should be changed to “2” Try to read **ID “2” register** 1000, where the actual configured amps value is
9) If you want to connect more than 2 EVmate, **Turn OFF EVmate with new ID”2”** and turn ON another EVmate that we want to set ID”3” and go back to point 2) and repeat these steps.
10) If you set all EVmate, Turn it ON all of tham
11) Open mobile app Go to setting tab on the left bar
12) Set parameter ENABLE CHARGING to”On”
13) Set parameter ENABLE BALANCING to “On”
14) Set parameter EVSE-NUMBER to “2” or more depending how many EVmate you set ID.
15) Set parameter CURRENT (EVSE setting: 1 and CURRENT (EVSE setting: 2), etc.. to more than 6A, typically you set current corresponds to you onboard EV charger, eg. 16A or 32A
16) Set parameter BREAKER to the value corresponding with the breaker where the IoTMeter is installed. Typically it is the main breaker off whole building, where building is connected to the main grid as you see in the pictureBasic wiring:
17) Now go to Overview tab and scroll down where should be two (or more) battery gauge bar with set current, evse state and so on

Example of setting charging preference from PV power plant overflows

Make sure that the IoTMeter is correctly installed in the main switchboard, so the IoTMeter can measure the whole building current (building loads current, EVmate charging current, PV overflowed current). See Principle of operation and Connection diagram: Extended wiring one EVmate.
When you have only 1-phase PV production, you have to install IoTMeter L1 (i1) to phase, where the production is.
When you have 3 phase production you will set PHOTOVOLTAIC: to "**3p"**



Attention! According to standard IEC 61851-1 minimal charging current of onboard AC chargers is 6A per phase approx. 1,4kW per phase. So when you have low installed power (low Watt peak) PV production. It is better to start charging even if the overflow does not exceed 6A.

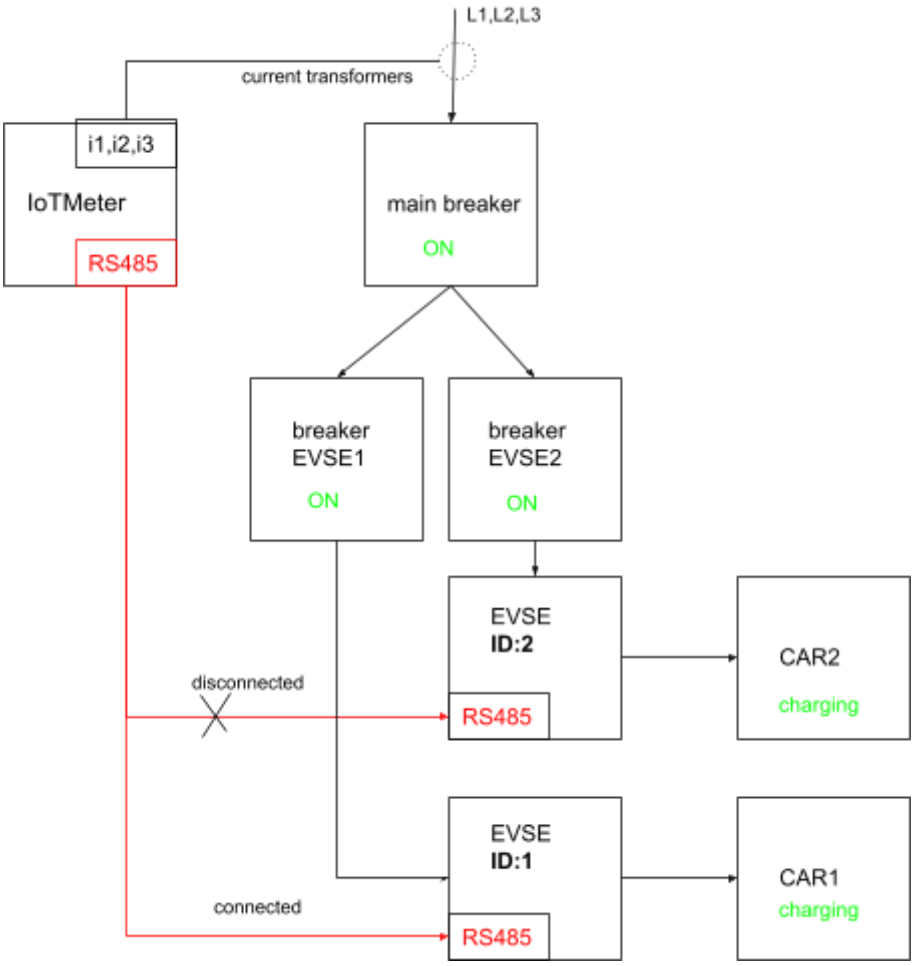
For this issue IoTMeter has a parameter PV GRID ASSIST: so you can set maximum current consumption from the main grid for start charging. When you want to use a mix of energy, for example all generate energy from PV plus maximum 2A from grid and anything else from PV, you will set "2A". It's caused when the PV producing (overflowing) 4A to grid, IoTMeter will start charging with 6A. So the charger uses 2A from the grid and 4A from PV.

When you want to use only overflowed current from PV you will set PV GRID ASSIST: to 0A.

if you want to charge even without PV production set PHOTOVOLTAIC: to "**Off"**

Troubleshooting

- step 1) is connect only 1 EVmate to IoMeter via RS 485
- Make sure you have made all steps in Example of EVmate load balancing setting
- disconnect all EVmate from RS485, keep only one connected. See picture below.

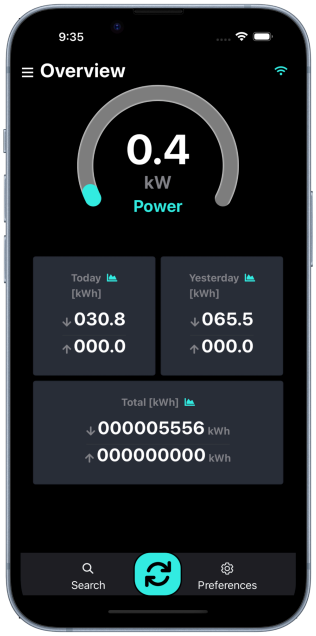


- turn ON EVmate and IoTMeter
- go to the app Overview and you will see

EVSE Comm error:

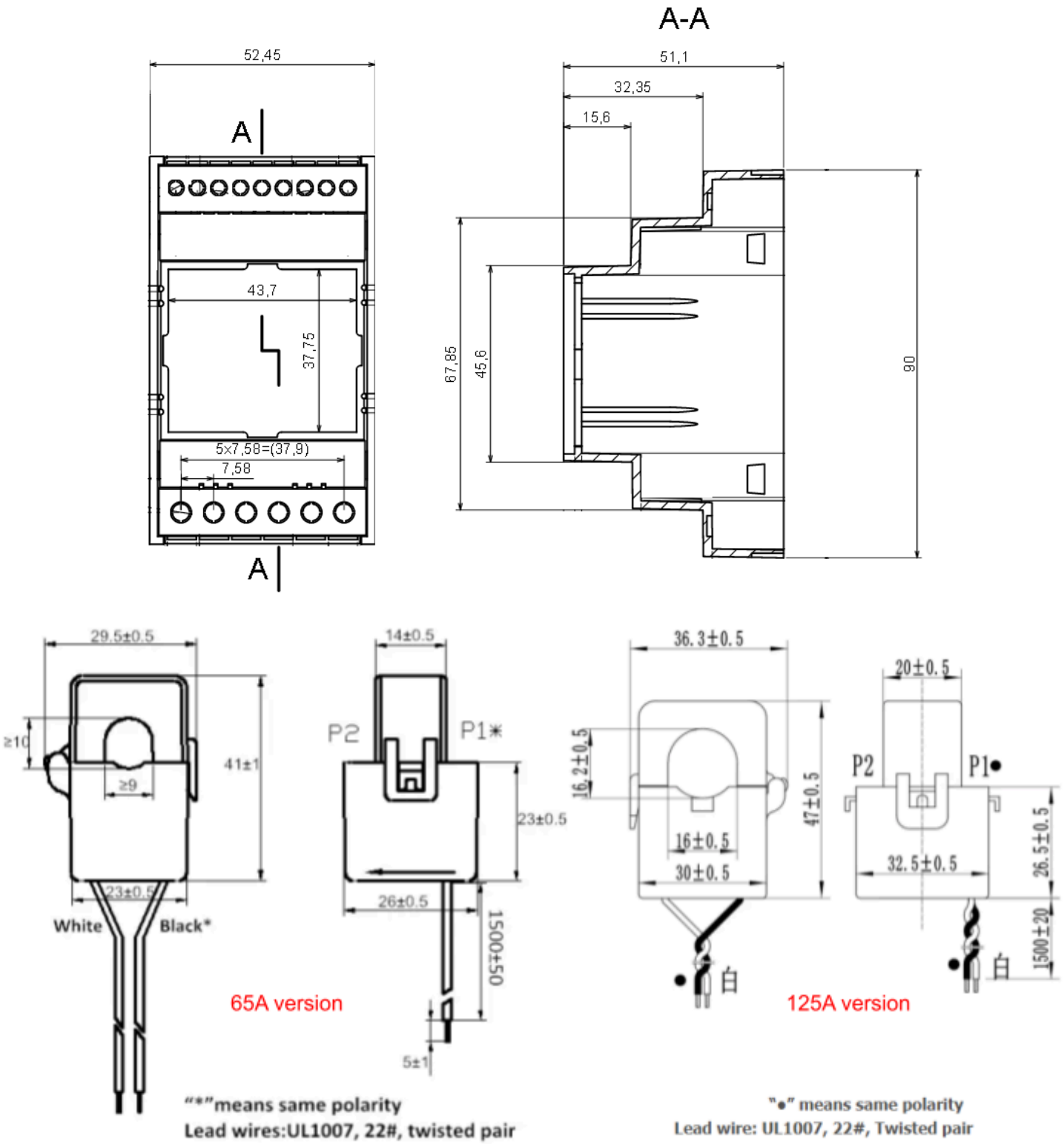
- make sure that RS485 is correctly connected A to A, B to B. The cable should be UTP, STP, FTP, length should not exceed 100m.
- Make sure that RS485 is correctly terminated see Extended wiring one EVmate:

Current is not dynamically changed:



- Go to Data tab and see
- make sure, Voltages shows about 230V and it is changing
- make sure, Currents shows real data
- make sure that Power shows correct value P = U * I * PF
- Make sure, parameter ENABLE BALANCING is “On”

Drawings


A-A
52,45
A
43,7
37,75
5x7,58=(37,9)
7,58
A
51,1
32,35
15,6
67,85
45,6
90
29,5±0.5
≥10
≥9
41±1
23±0.5
White
Black*
14±0.5
P2
P1*
23±0.5
26±0.5
1500±50
5±1
65A version
"*"means same polarity
Lead wires:UL1007, 22#, twisted pair
36.3±0.5
16.2±0.5
47±0.5
16±0.5
30±0.5
20±0.5
P2
P1•
32.5±0.5
26.5±0.5
1500±20
白
白
125A version
"•" means same polarity
Lead wire: UL1007, 22#, Twisted pair