IoT meter



Intelligent WiFi power meter for managing building power consumption and optimizing electric vehicle charging with dynamic load balancing, remote control and monitoring via mobile app or PC

IoT meter used to intelligently manage charging stations for electric vehicles. It dynamically balances the electric vehicle charging load - adjusting the charging current based on the available unused power of the entire facility. It allows - depending on the settings - to prioritize charging during low tariff times and charging from the PV plant's overflow.

It works directly with EVmate charging stations and is able to control and balance the power of up to 10 charging stations.

The IoT meter is placed in the main switchboard on a DIN rail. The current is measured indirectly using split-core metering transformers. It communicates with the charging station via RS485 bus.

Features:

- 3-phase wattmeter with data logging
- compatible with EVmate charging stations
- Intelligent control of EVmate charging stations for electric vehicles
- Dynamic load balancing of EV charging according to the set value of the object's reserved power
- allows charging to be prioritised at times of low electricity supply tariff (based on the AC IN signal)
- allows to prioritise charging from PV plant overflows
- supports control of up to 10 charging stations with power balancing
- remote monitoring and configuration
- isolated RS485 MODBUS RTU interface
- Wi-Fi interface possibility of access point or connection to home network.
- MODBUS TCP open communication protocol for implementing your own third party control system (PC, Raspberry Pi, Nodered.....)
- IoTMeter mobile app free download from Google Play and App Store
- Web browser interface
- measures rms currents, rms voltages
- active power, apparent power, power factors
- energy consumed from the grid / delivered to the grid
- records hourly, daily and monthly energy graphs
- record power graph for last hour, record peak values





Technical specifications:

General data		
Length x width x depth [mm]	90 x 53 x65	
Degree of protection	IP20	
DIN rail mounting	IEC 60715	
Ambient temperature during operation	-10+40 °C	
Air humidity	595%	
Power supply		
Input supply voltage	L1, N	
Voltage range [V]	230 ± 10 %	
Power frequency range [Hz]	4565	
Power consumption [VA]	<5	
Power dissipation factor [W]	3,6	
Measuring inputs		
Measurement voltage inputs	L1, L2, L3	
Measuring range of the effective voltage value	10 - 250 AC	
Accuracy of the effective voltage value	±2 % of measuring range	
frequency range of voltage	45 - 65 Hz	
connection voltage inputs	0.52.5mm2	
Measuring current inputs	i1+, i1- , i2+, i2- , i3+ , i3-	
RMS current measurement range (standard version)	±0,1 ±50 A	
RMS current measurement range (extended version)	±0,2±120 A	
RMS current measurement accuracy	±2 % of the measuring range	
frequency range of current	45 - 65 Hz	
internal diameter of the measuring transformer	10 mm (16 mm version)	
connection current inputs	0.251.5mm2	
Switched output		
Relay output	R - switching L1	
max. load of relay output	1 A	
relay output voltage	same as on input L1	



connection of current inputs	0,52,5mm2	
Communication		
RS485	galvanically isolated 2.5kV RMS	
	half duplex	
RS485 connection	0.251.5mm2	
Wi-Fi	IEEE 802.11 b/g/n	
I/O1 connection	0.251.5mm2	
I/O2 connection	0.251.5mm2	

Dimensions:



Vodiče: UL1007, 22#, kroucený pár

ΪĬ



Wiring

diagram:



min. UTP

datová komunikace

