GB CE

22 016 001 - **1**

MODBUS meter MQ TT gateway over IP
ZGW16WL-IP / ZGW16NI-IP

Only skilled electricians may install this electrical equipment otherwise there is the risk of fire or electric shock!

Temperature at mounting location: -20°C up to +50°C.
Storage temperature: -25°C up to +70°C.
Relative humidity: annual average value <75%.

ZGW16WL-IP:
Modular device for DIN-EN 60715 TH35 rail mounting.
2 modules = 36 mm wide, 58 mm deep.
IP interface either via WLAN or LAN.
The WLAN connection uses the 2.4 GHz frequency band. The LAN connection is via RJ45 connector with 10/100Base-T.
Only 0.9 watt standby loss.

ZGW16NI-IP:
Modular device for DIN-EN 60715 TH35 rail mounting.
2 modules = 36 mm wide, 58 mm deep.
IP interface via WLAN.
The WLAN connection uses the 2.4 GHz frequency band. Only 0.8 watt standby loss.

ZGW16WL-IP and ZGW16NI-IP hereinafter called 'ZGW16-IP'.

Gateway with IP interface for ELTAKO Modbus electricity meters.

The IP connection is via LAN or WLAN. The gateway transmits data from any ELTAKO Modbus electricity meter via the MQTT protocol and REST API. The data is transferred from the ZGW16-IP to any external MQTT broker.
For more details about MQTT see: www.mqtt.org.

The current meter values and a history can be viewed via the ELTAKO Connect app and web interface. Initial commissioning and configuration is possible via the ELTAKO Connect app and web interface. Firmware updates are done via the web interface. A REST API is available via the device's online product page.

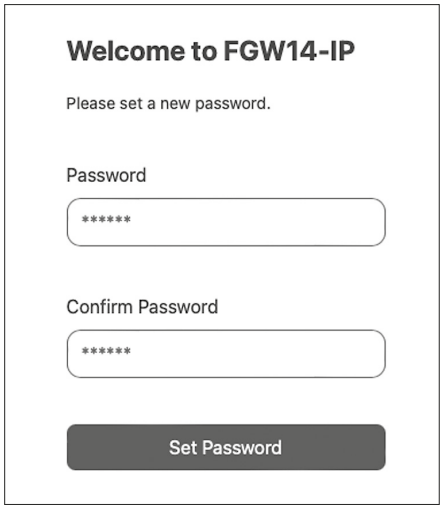
Controls
The ZGW16-IP has a rotary switch with positions 1-10 and integrated LED (green/red).
When delivered, the LED flashes green, although the rotary switch must not be in position 1 or 10.
Once the initial commissioning is complete, the LED goes out.

Factory reset
If the rotary switch is set to position 1 or 10, the LED lights up green continuously.
If the rotary switch is turned back and forth from position 1 5 times within 10 seconds, the ZGW16-IP is reset to factory settings and the delivery status is restored.

Error indication
If data transfer to the MQTT broker is not possible (e.g. MQTT not configured or data connection interrupted), the LED lights up permanently red. The next time data is transferred successfully, the LED goes out.
If the LED flashes red, approx. 5 times per second, there is a HW error and the device must be replaced.

Initial commissioning via ELTAKO Connect app
After the power supply to the ZGW16-IP has been established, a WLAN access point is provided.
SSID: Eltako-ZGW16-IP
Password: zgw16-ip
After connecting to the WLAN access point, the ELTAKO Connect app can be started.
The ZGW16-IP is automatically searched for and displayed in the ELTAKO Connect app.
When delivered, an access password must first be assigned.
The current meter values and a history can now be accessed under the menu item 'meters'.
You can find an explanation of the other configuration options later in the operating instructions.

Initial commissioning and device configuration via web interface
Via WLAN: After the power supply to the ZGW16-IP has been established, a WLAN access point is provided.
SSID: Eltako-ZGW16-IP
Password: zgw16-ip
The IP address of the device is **192.168.4.1 (WLAN) or 192.168.5.1 (LAN)**
Via LAN (ZGW16WL-IP only): when delivered, the LAN port has the IP address 192.168.5.1
To do this, enter http://192.168.5.1 (LAN) or http://192.168.4.1 (WLAN) in the address.
In the delivery state, an access password must be assigned first.

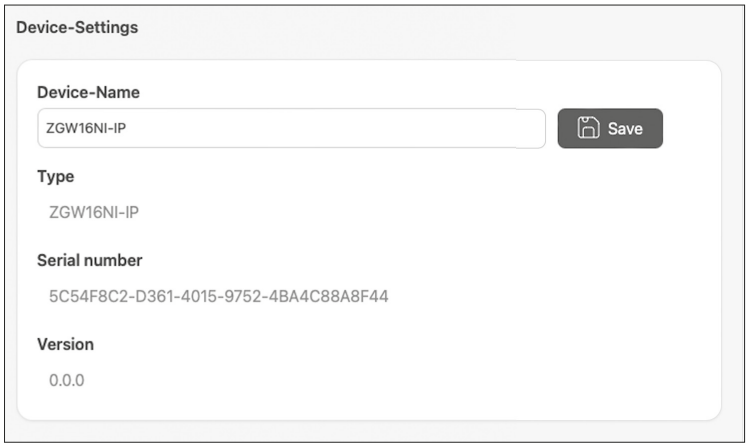


Connection to the WLAN access point
SSID: Eltako-ZGW16-IP
Password: zgw16-ip

After logging in, further configuration can be performed using the menus:
- system
- network
- MQTT
- devices
- Modbus

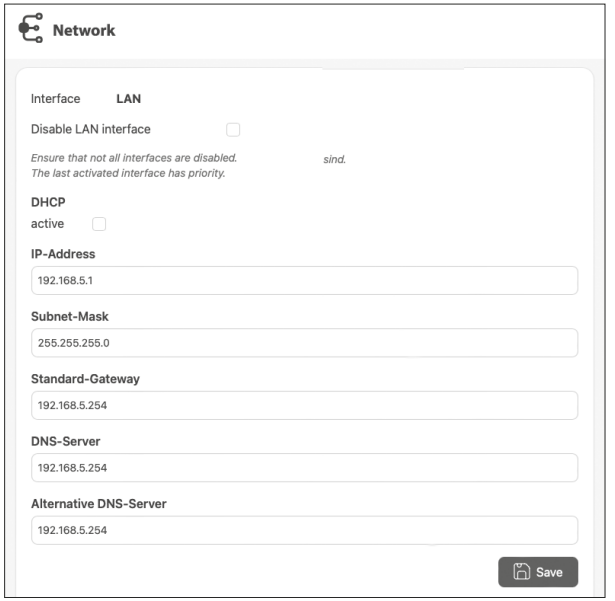
If there is no access to the website for 4 hours, the user is automatically logged out.

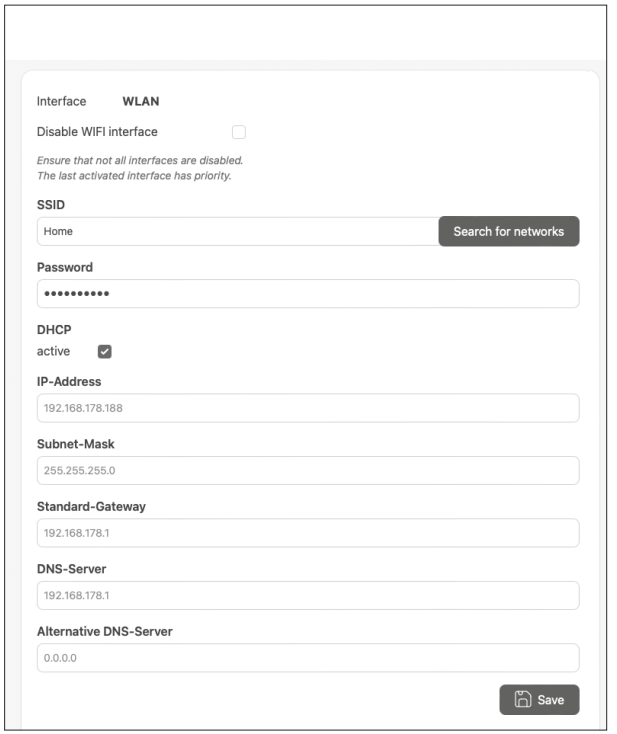
System
Here the ZGW16-IP can be assigned a suitable name with up to 16 characters.



It is also possible to carry out a FW update, change the access password and reset the device to the delivery status.
The system time can be set via NTP (only with an existing Internet connection) or manually.

network
The LAN configuration is only possible with the model ZGW16WL-IP.
If WLAN is to be used, a connection to an existing WLAN (Station-Mode) can be configured. This deactivates the access point of the ZGW16.





The WLAN and the LAN interface can each be deactivated. Under no circumstances should both interfaces be deactivated, as access to the device from the network is no longer possible.

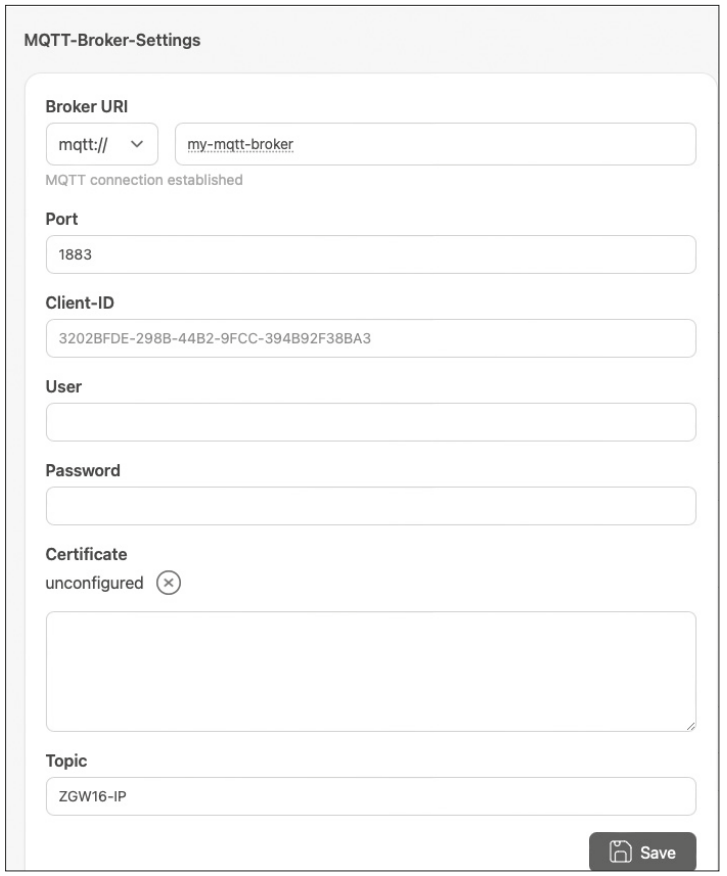
MQTT

Under 'MQTT', a specific MQTT broker can be defined as the target address for the electricity meter data.

mqtts:// or mqtt:// can be used. The port can be freely selected in the range 1 - 65535.

If provided by the broker, a certificate can optionally be stored.

The name for the MQTT topic (Default ZGW16-IP) can also be adjusted.



The maximum data rate depends on the network quality and the response time of the broker.

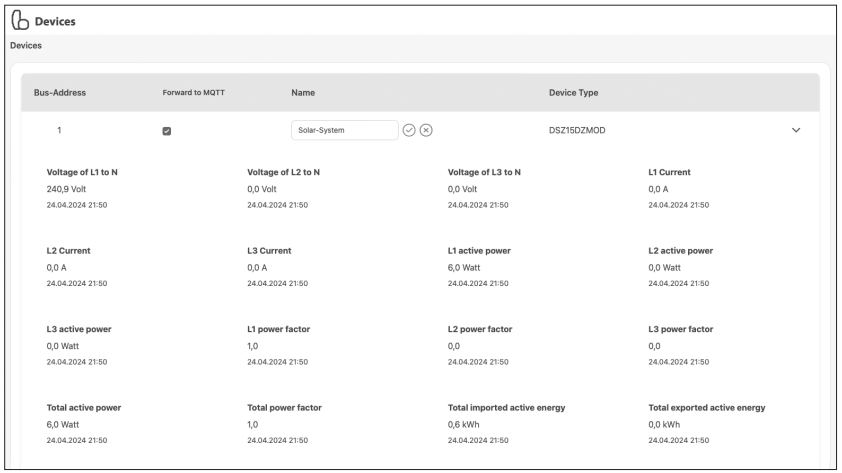
Devices

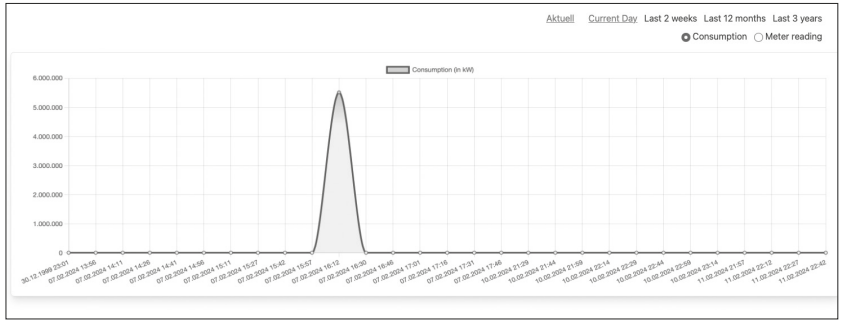
Under 'Devices' the detected ELTAKO Modbus electricity meter is displayed on the RS485 bus with the bus address and the meter type.

The bus address set on the ELTAKO Modbus meter must be 1, otherwise the ELTAKO Modbus meter will not be recognised. In addition, the forwarding of meter data via MQTT can be activated here.

The current meter values and the history are visible by opening the device display.

The historical data is stored locally on the ZGW16-IP.

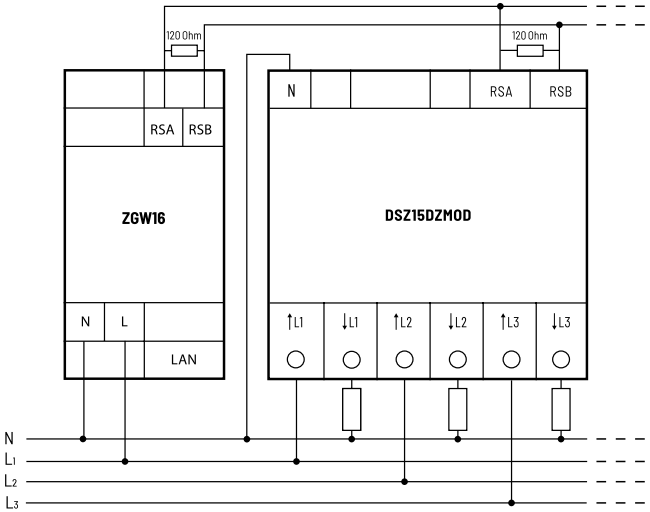




Technical data

WLAN	2,4 GHz
Transmission power	max. 100 mW
Standby loss (activ power):	0.9 W (ZGW16WL-IP) 0.8 W (ZGW16NI-IP)

Typical connection



Manuals and documents in further languages:

https://eltako.com/redirect/FGW14WL-IP_FGW14W-IP

Hereby, ELTAKO GmbH declares that the radio equipment type ZGW16WL-IP / ZGW16NI-IP is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity can be accessed via the QR code or the internet address under 'Documents'.

Must be kept for later use!
We recommend the housing for operating instructions GBA14.

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37/2024 Subject to change without notice.