

WS.503 (MEMo3) webserver



The "MEMO3" web server forms the basis of every 2-Wire installation. All I/O modules are either connected to the RS485 bus or wirelessly connected via LoRa or FSK at 868MHz. From the Memo web server, these i/o modules are then powered, configured, read out, logged and logically switched. Configuration and readout is done via the web browser on your tablet or

PC without the need for software. The Web server also includes http client functionality so that data can be charged to a central server for central management or backup. With MQTT and its subscription, web servers can be interconnected.

1. Connecting:



Power supply MEMO:

At the top left of the module, 15 Volt DC via the included MeanWell power supply. Secure this power supply SEPARATELY 2P/6A

RS485 Modbus:

Data cable: type EIB bus cable (max. 100 m.), Modbus cable up to 1000 m.

Topology: only in line so **no** branches, close both bus ends between A and B clamp with supplied end resistance 120 Ohm.

MEMo3 doesn't necessarily have to be at an end point of the bus.

Connection: depending on the type of module only make the necessary connections: Ground(-),A,B,+ (+ is power supply to module RG.016, EC.441,REL.44)

network:

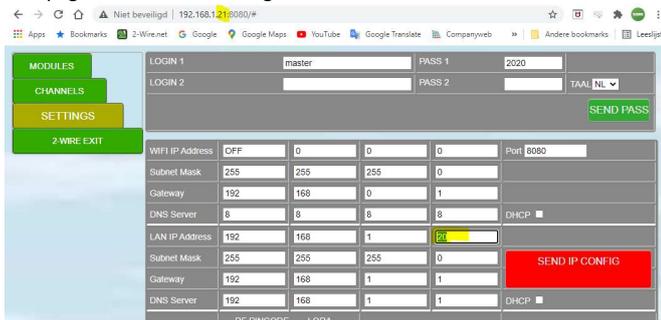
MEMo3 has both WiFi and LAN link. Default is WiFi disabled and LAN is set to DHCP. When you connect to a router, Memo gets an IP address and this is on the display.

Note: On the first connection, MEMo3 and PC must be connected to the Internet (loading charts into the PC's cache, upgrading, equalising clock,...)

2. Configuration via tablet of PC:

When switching on the power supply, the display lights up and after about 30 seconds you can read the LAN IP address and port number. After typing in the IP address+":"+ port number (e.g. 192.168.0.20:8080) in the web browser on PC or Tablet (e.g. Google Chrome, Edge, Safari,...) you will find the memo3 web server web page.

With CONFIGURATION/SETUP you can change this LAN IP address by typing it into the IP address fields or by briefly checking dhcp and then unchecking it so that a new IP address is given by the router. After modification, press "SEND IP CONFIG" and then press another 2 times after which the web server will reboot and after which you can load the web page with the new settings.



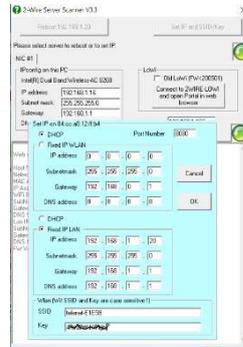
To read or change this LAN IP address and network settings or to make the WiFi link to your network, you can use the 2-Wire IP server scanner (from version 3.4): <https://www.2-wire.net/product/ip-server-scanner/>



From this Windows tool you can find all web servers within your network. Place the cursor on the **MEMo3 LAN IP address** and click on "Set IP and SSID/Key" to change LAN IP settings, or activate the WiFi link from here.

To activate WiFi via the 2-Wire IP server scanner:

Activate WLAN by entering SSID and KEY and then checking DHCP and pressing OK. Automatically, the MEMo3 now receives a free and **FIX** IP address which then appears on the MEMo3 display after the car reboot.



Then this WLAN IP address+":"+ port number (e.g. 192.168.0.21:8080) in the web browser on PC or Tablet and then you will arrive via WiFi on the MEMo3 web page.

To activate WiFi using the REDIRECT method:

By briefly pressing the RESET button of MEMo3, it will reboot. During this reboot, press the MENU button until 'Connect WiFi' and then 'Start WiFi portal' appears first. MEMo3 is now an 'access point', called '2WIRE-MEMO'. Choose 'networking' on your laptop and if it works correctly, it should now be in the list: '2WIRE-MEMO'. **Select this network.** If you are asked for a key (password):'adminMEMO'. Your web browser opens automatically and after a maximum of 1 minute you will be redirected to a REDIRECT screen where you can then enter the IP settings.



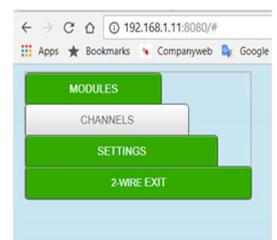
REDIRECT page:

Fill in SSID and password of your network and if you enter IP addresses yourself, they must be adjusted according to the settings of your own WiFi network. It is easier to enter '0.0.0.0' for the 4 IP addresses because in this way the web server itself ensures that a free and fix IP address is set. Now press "SAVE" and then go back to your default network.

Then the WLAN IP address+":"+ port number (e.g. 192.168.0.21:8080) in the web browser on PC or Tablet and this way you can access the MEMo3 web page via WiFi.

Via the "CONFIGURATION" button you will get to the web page below:

- **Settings:** Enter general settings
- **Modules:** enter all energy meters according to their serial number (more information about this can be seen in the datasheet of the relevant module)
- **Channels:** setting customer visualization: order channels, create directories, set EPC number parameters...



2.1. Firmware upgrade:

Go to "CONFIGURATION/SETTINGS" paragraph 5, click on the "FIRMWARE VERSIONS" button and if your web server has internet connection available version and installed version will be displayed. Press the "install" button and the web server will be upgraded.

IMPORTANT: During the upgrade procedure, do NOT INTERRUPT the voltage or internet connection otherwise you risk damaging the MEMO!!! Wait at least a few minutes until

the web server reboots itself and has returned to the login page. TIP: You can also upgrade via the display, see manual.

2.2. MODULES, adding energy meters

Using printed serial numbers on each EC.441, RG.016, EP.16A,... module or using **fictitious** serial numbers (EMM.xxx series, calorimeters,...) you can create up to 64 log channels for up to 32 connected energy meters. How this works is explained in the Quickstart manual for each type of module individually.

2.3. CHANNELS, setting up channels:

Once all modules have been entered, you can adjust (sort) the order of the energy channels and create groups in this section.

sort:



Go to CHANNELS and click SORT (1)

Click on the **name** of the consumer(2) you wish to move and then click on the new location **address**(3) and the two channels change places. Continue until the order is correct and press ZEND (4) to confirm the change.

Create groups



Enter a group name(1)

Press NEW(2), FORMAT(3) turns red and prompts you to reset groups, then press yes. In this way, create a maximum of 8 groups. Then, in the list of channels (right), click the last of the group each time so that the selected channels light up green (3 groups = 3x clicks on position 6,7,8) and press ZEND(4) to confirm the change.

3. General remarks:

- Look online for the latest version of this leaflet
- This document is just a shortened manual, more details can be found in the MEMO3 manual or in the YouTube tutorial on the 2-wire website.
- It is important to work with the latest firmware in the web server and so upgrade the 2-Wire modules! (see tutorial).
- MEMO3 is a data logger of the 3rd generation. MeMo3's SD card is NOT compatible with those of MEMO1 and MEMO2
- Remote access can be done via port-forward, see FAQ on our website.
- A web server that is not connected to the Internet can sometimes react slowly when calling up its web pages, this is because the server keeps searching for an NTP time server to synchronize and cannot do so without the Internet.
- The MEMO configuration, and 2 year logs are stored on the internal SD card. **If something goes wrong with this SD card, all data is lost.** The solution is that you subscribe to a cloud application provider
- We advise you to **take a print** of the configuration of the modules after each submission and keep them on your PC, if something goes wrong you may have lost the logs but you can easily replace the web server with a new and enter the same configuration.
- MEMO3 'MENU' button (top right): keep pressing until the menu appears on the display: FW CSS-JS / FW Memo / ERASE ALL/ EXIT Each time you briefly press the button, the menu 1 position will continue.
If you have the desired menu (CSS-JS or FW MEMO): press long until this menu becomes active. After loading the firmware, the WS.503 will automatically reboot. (internet necessary!).

4. Technical data

general:

Power Supply MeanWell: 230 Vac/50 Hz – secure with fuse 2P/6A
Power web server: 15 VDC/2 A, Own consumption: 2 VA
Internal SD card 4GB

Conditions:

Operating temperature: 10 °C to 50 °C; Storage temp.: -10 °C to 60 °C
Maximum humidity: 90 %, no moisture condensation
Max. mounting height : 2000m

Physical properties:

Housing: plastic, self-extinguishing acc. UL94-V0
Degree of protection: IP20, EN 60529
Mounting on DIN rail, width 2 modules
Dimensions (h x w x l): 62mm x 90mm x 36mm, Weight: approx. 65 grams

Connections:

Power supply: 15VDC/1A stabilized
Bus: RS485 Modbus RTU(-AB+) max 32 modules
RF LORA-FSK transceiver 868 MHz, 100mW
Ethernet connection with integrated transformer 10/100Mbit/sec
WiFi 2.4GHz 802.11 b/g/n, Tx power 19.5 dBm, Rx sensitivity -97dBm.

Labels:

RoHS: Non-toxic, acc. Guidelines WEEE/RoHSCE: In accordance with EMC and low voltage guideline: HBES – EN 50090-2-2 and EN60950 – 1: 2006.

5. Installation instructions

The installation must be carried out by an approved installer and in accordance with the rules in force.

- This device is only suitable for DIN rail assembly in accordance with EN 50022 and must be installed in a closed distribution board.
- Make sure that a safety interruption of the device is possible. Turn off the module before installing it.
- Do not open the device, the warranty expires when the device is opened.
- This manual must be attached to the file of the electrical installation. The 2-Wire website always has the latest manual of the product.

6. Support

Do you want to exchange the product in case of a possible defect? Please contact your wholesaler or the 2-wire support service. The contact details can be found on our website www.2-wire.net/contact/

7. Guarantee conditions

The warranty period is two years from delivery date. The date of delivery is the invoice date of purchase of the product by the consumer. If there is no invoice available, the production date applies. The consumer is obliged to inform Qonnex bvba in writing of the lack of conformity, and this at the latest within two months of adoption. In the event of a lack of conformity, the consumer is only entitled to a free repair or replacement of the product, which is determined by Qonnex. Qonnex is not responsible for any defect or damage caused by improper installation, improper or negligent use, improper operation, product transformation, maintenance in violation of maintenance regulations or an external cause such as moisture damage or damage from span. The mandatory provisions in national legislation on the sale of consumer goods and the protection of consumers in countries where Qonnex sells directly or through distributors, agents or permanent representatives take precedence over the above provisions.

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