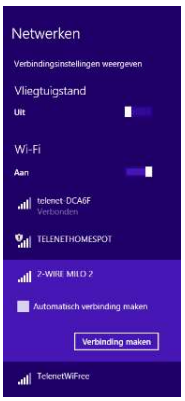
ML.016 MiLo Webserver

MiLo is a wireless energy consumption manager primarily intended for use in homes. From the web browser on your tablet or PC you surf to the website in the MiLo module and so you can view energy consumption and costs from anywhere in the world up to 1 year ago whether to operate individual consumers manually or via time clocks.
Total consumption is read out: via the P1 port to the digital meter or with the optional set P1 via the two pulsing inputs at the back of the MiLo module. Individual appliances are measured via switchable energy plugs while with the RF gateway Modbus energy meters are connected to measure large partial consumers directly in the fuse box. The ECF.08, on the other, is good for directly reading wired consumers via wireless CT coils.

1. Connect:

Connect the MILO with the supplied USB charger. The LED will first light up constantly, and after 3 seconds permanent flash with a 1 second interval. This means that the MILO is not yet linked to your WiFi network.



At the top is a 'reset button', press it for about 5 seconds until the LED is constantly lit. The MILO is now a 'WiFi access point', with the name '2-WIRE MILO'.

Choose 'WiFi networks' on your **laptop or tablet or smartphone** and if it works properly, the list should now contain: '2-WIRE MILO'. Select this network and connect to it. If you are asked for a key (password): '**adminMILO**'.

Automatically you will be connected to a REDIRECT **page** after 1-2 minutes (or surf yourself via **PC, tablet or smartphone** to the IP address 8.8.8.8)

Note: if it does not work immediately, try again with smartphone or tablet. If it still does not work, the Wi-Fi signal may be too weak,if necessary try to pair MiLo first near the WiFi router before you connect to P1.
Note: If you want to change an existing WiFi link, milo starts again and press the reset button within 3 seconds until the LED is continuously lit to enter the WiFi access point mode.

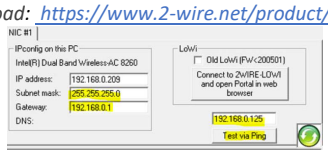
REDIRECT page:
Click on 'Configure WiFi' and a list of networks will appear in your perimeter. You can now select your WiFi network from the list (SSID), and also enter the password of this network.

Default settings:
1. IPadres: 192.168.0.124 (your MILO web page)
2. Gateway: 192.168.0.1 (needed for internet access!)
3. Subnet mask: 255.255.255.0
4. Port No: 8081 (needed for port forwarding in remote control)

These default IP addresses must be adjusted according to the settings of your own WiFi network, it is important that all are **in the same 'range'** as your PC.

Note: Optionally take over the IP address, subnet mask and gateway from your PC, or from the proposal from the IP server scanner tool, or you can temporarily set MiLo to DHCP to get a free and fixed IP address. See online manual.
Note: With the server scanner tool of 2-WIRE which you install on your PC you already get a proposal of the MiLO network settings for this WiFi network. You can also test whether the suggested IP address is still free with the 'Test via Ping' button.

Subnetmask and Gateway can be taken over from the PC setting, as port number you choose e.g. 8081
*Please note that setting MILO's*IP address is not possible from the IP server*scanner.*
Download: https://www.2-wire.net/product/ip-serverscanner/



And if not familiar with networking, better ask for help from a network specialist!

After entering **SSID, password** and **IP address, SUBNETMASK, Gateway** and port number,press SAVE and you will get the confirmation of the set fixed MiLo IP address.

The laptop should now be brought back to the existing WiFi network. To do this, go to WiFi networks and select your default WiFi network again if this has not been done automatically.
Switching networks can sometimes take about 10 seconds.

Once on your standard WiFi network, surf to the set FIXED IP address and port number (enter in the address bar of your browser, e.g. 192.168.0.226:8082) **The port number must** follow with a **':' decimal sign after the IPadres!**
And that's how you get to the home page of your MiLo web server.

Note: In your browser you may have to check whether 'SETTINGS - JAVASCRIPT' is on !
Note: It is best to make a shortcut on your PC, tablet or smartphone so that you have an immediate connection to consume you.

Link with the P1 port:

With the included RJ11 4P/4C cross-cable you can connect the MiLo to the P1 port on the Dutch or Flemish digital meter.
And with the optional set P1 you can use the 2 impulse inputs of the MiLo web server in addition to the P1

2. Configuration from tablet or PC:

Once on the MiLo webpage you will enter the **MILO** button at the top of the setup screen:

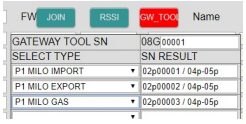
The configuration is done on the basis of entering the correct serial numbers which

1. or on the module FIX printed are: type EP.16A
2. or described in the module manual: type BC.002, ECF.08
3. Either be generated in the **GW_TOOL button** of the web server: type RG.016 and ML.016

GW_TOOL BUTTON:
Example: Serial numbers P1 port measurements via MiLo:
Select the type of measurement on the left (e.g. P1 MiLo IMPORT), on the right you get an internal serial number (02p0001).

The (internal) serial number must always start with '**02p**', '04p' or '05p' or '06p' which determines the type of digital meter:
1. Nederland DSMR2.x:02p; DSMR 4.x :04p, of DSMR 5.x :05p,België DSMR 5.x :06p

The last character determines the type of measurement:



1 = import H+L /
2 = export H+L/
3 = gas/
4 = import H /
5 = importL /
6 = export H /
7 = exportL /

2. E.g. Digital meter with protocol DSMR4.0: 04p00001: import consumption H+L/ 04p00002: export H+L (solar panels)/ 04p00003: if gas meter is connected.

With **this TOOL** you can calculate the different serial numbers for the inputs on the **MiLo** module or on the **Gateway** module so that you can copy-fit them in the configuration column next to SNxx.

Note: The complete up-to-date manual can be found on the website at the product sheet of the MiLo server, or at the online tutorials.

3. General note:

- A MiLo server can log up to 16 energy channels and these consist of a combination of:
  1. The P1 port on the MiLo to the digital meter: P1 import, P1 export, P1 gas
  2. The 2 pulsening inputs on the MiLo module
  3. The P1 port connection to the RG.016 module
  4. The 4 pulsening inputs on the RG.016 module
  5. Modbus energy meters connected to an RG.016 module...
  6. The 2 pulsening inputs on the BC.002 module
  7. Smart plugs
  8. The 4 CT and the 4 pulsening inputs on the EQF.08 module
- With the GWTOOL you can calculate the serial numbers for the above inputs 1 to 5, the other serial numbers can be extracted from the datasheet of the relevant module.
- The MiLo website is 'responsive' which means that a smartphone, a tablet, Alexa and a PC each get their own layout.
- With the **FTP client** or the HTTP client function you can upload measurement data to a central platform for backup or for comparison with other installations, more info in the extensive manual on our website. FTP and HTTP generate the same format csv file.
- With the PRINT function at 'details' you can generate almost the same CSV file as with the FTP client.
- If the P1 port is not connected, it is advisable not to configure it because otherwise the MiLo server always tries to communicate without consequence, so that it will be in a 'loop'.
- Activate the Belgian digital meters in advance on the Fluvius website to open the power supply and data to P1. https://www.fluvius.be/nl/thema/meters-en-meterstanden/activeer-desactiveer-je-gebruikerspoorten
- The IP server scanner tool for Windows is a useful tool to find out the correct MiLo network settings. More info: https://www.2-wire.net/product/ip-serverscanner/
- A nice extension is the LeON (USB) stick. This module is connected to MiLo via WiFi and shows the current energy rate (RED = day rate, BLUE = night rate, GREEN = injection into the grid) on the basis of an RGB LED.
  LeON is centrally set up in the house and so you always know the right time to the dryer, dishwasher,... to boot.

4. Technical data:

General:

WiFi network 802.11 b/g/n/e/i (2.4 GHz), which needs internet access.
Tx power: 802.11 b: +20 dBm 802.11 g: +17 dBm 802.11 n: +14 dBm
Rx Sensitivity: 802.11 b: -91 dbm (11 Mbps) 802.11 g: -75 dbm (54 Mbps) 802.11 n: -72 dbm (MCS7)
Security: WPA/WPA2 ; Encryption: WEP/TKIP/AES
Network Protocols: IPv4, TCP/UDP/HTTP/FTP
Built-in antenna.
Built-in timer which is synchronized daily with a precise NTP clock.
Built-in RF transceiver 868 MHz which communicates with the modules. Interior, depending on the structure (wood, concrete) a range of 20 to 50 meters is possible. (power 10-20mW)

Business conditions:

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

Physical properties:

Housing: plastic, self-extinguishing scion. UL94-V0
Degree of protection: IP20, EN 60529
Mounting indoors or in waterproof housing
Dimensions (h x w x l): 105mm x105mm x 30mm, 105 grams

Connections:

1. Built-in galvanically isolated pulsening inputs for gas and water meter. potential-free !! max 5V/1mA (0-logic: < 0.7V) pulse duration: min. 10 ms, max 10 pulses/second
2. Built-in P1 port (galvanically isolated) for the new generation of digital meters: import-export consumption and current consumption are shown. (baud rate: 9600/115200)
3. Power supply: via USB charger 5V/0.5A. Average consumption: 5V/ 100mA

Labels:

RoHS: Non-toxic, vlg.. GUIDELINES WEEE/RoHS
CE: In accordance with EMC and low voltage directive: HBES – EN 50090-2-2 and EN60950 – 1: 2006.

9. Installation prescription

The installation must be carried out by an approved installer and in accordance with the applicable regulations.
During installation, (non-exhaustive list) must be taken into account:
- the laws, standards and regulations in force.
- the state of the art at the time of installation.
- this manual, which contains only general provisions and must be read in the context of each specific installation.
- the rules of good workmanship.

This manual must be attached to the file of the electrical installation. On the 2-Wire website you can always find the most recent manual of the product.

10. 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/

11. Warranty provisions

The warranty period is two years from the date of delivery. The delivery date is the invoice date of purchase of the product by the consumer. If no invoice is available, the production date applies. The consumer is obliged to inform Qonnex bvba in writing about the lack of conformity, and this at the latest within two months after determination. 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 a defect or damage as a result of incorrect installation, improper or negligent use, incorrect operation, transformation of the product, maintenance in violation of the maintenance instructions or an external cause such as moisture damage or damage due to overvoltage. The mandatory provisions in national law 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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