Configuration by the Telnet Console

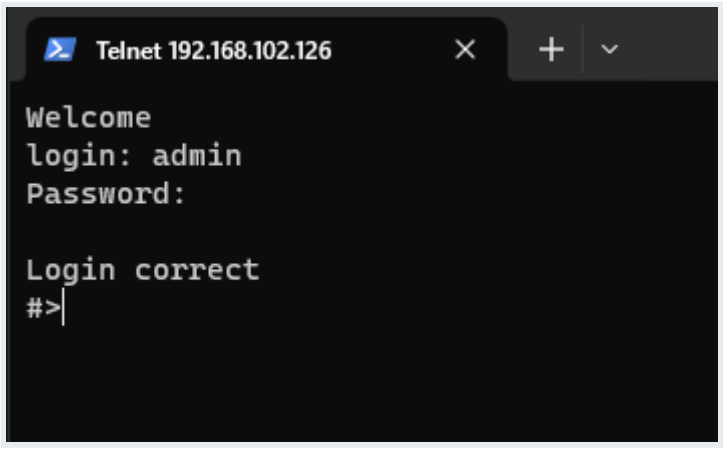
Modbus Ethernet Wi-Fi Gateways (G11 - G13)

The device can be also configured via the Telnet Console. Firstly, make sure that converter is connected to the power supply and to the LAN using a patch cord. Knowledge of the device’s IP address (default is **192.168.100.100**) and Telnet port number (default is **23**) is necessary to establish a connection.

Use command below in a terminal window to connect to the device:

telnet <ip_address> <port_number>

If the connection is successful there will be login prompt visible. Login using user's personal credentials or the default login details (login: **admin**, password: **admin123**). If login is successful, it will be possible to start typing configuration commands.



> The configuration is available only if devices are connected to the same Local Area Network as the computer used for it.

List of all commands

Command	Description
help	Print the help.
conn	Print active TCP connections.
net_stat	Print lwIP statistics.
eth_mac	Print or change MAC address.
wifi_mac	Print or change Wi-Fi MAC address
ipconfig	Print or change the network configuration.
http_port	Print or change default http port.
telnet_port	Print or change default telnet port.
modbus_tcp_port	Print or change modbus port.
ping	Check internet connection with the desired host.
defaults	Reset application variables to defaults
restart	Restart the system.
user	Print or change user configuration.
sys_heap_usage	Print current heap usage.
modbus	Print or changes modbus settings.
modbus_ports	Print or changes modbus ports settings.
modbus_routing	Print or change modbus routing settings.
wificonf	Wi-Fi interface configuration
exit	Exit console.

Modbus ports configuration commands

- **modbus**
  - **modbus help**
    Print command help.

  - **modbus int_addr VALUE**
    Shows or sets internal Modbus address.

    Example:
    modbus int_addr 5

- **modbus idlet VALUE**
  Show or set the idle TIME (in seconds) of the TCP connection after which the TCP connection is terminated by the converter and the TCP socket is released.

  Example:
  modbus idlet 720

  If a subcommand that normally sets a value is not given an argument, it will print the current value.

  Example:
  modbus idlet
  Set idle time is 5000

- **modbus_ports**
  - **modbus_ports help**
    Print command help, does not require com_number.

  - **modbus_ports PORT_NUMBER add_slaves [SLAVE_ADDR ;/- SLAVE_ADDR, *]**
    Set all addresses of slaves connected to com_port. A star in value means fill rest free slaves. It means all slaves that are not set to other ports will be set to this one.

    Example:
    modbus_ports 1 addslaves 124

    Example:
    modbus_ports 1 addslaves 12-124

    Example:
    modbus_ports 1 addslaves 12;14;18

    Example:
    modbus_ports 1 addslaves 12;14-17;150-200

    Example:
    modbus_ports 1 addslaves 12;14-17;150-200, *

  - **modbus_ports PORT_NUMBER show_slaves**
    Show addresses of slaves connected to com_port.

    Example:
    modbus_ports 1 showslaves

  - **modbus_ports PORT_NUMBER mode [ascii/rtu]**
    Set Modbus port mode to ASCII or RTU.

Example:
modbus_ports 2 mode ascii

- **modbus_ports PORT_NUMBER baud [RATE]**
  Set the baud rate to RATE. For a list of acceptable baud rates, please refer to the manual.

  Example:
  modbus_ports 1 baud 9600

- **modbus_ports PORT_NUMBER bits [CPS]**
  Set bit count to C, parity to P, and stop bits to S. Valid values are:
  C: 7, 8 or 9
  P: N, E or O (N- none, E- even, O- odd)
  S: 1 or 2

  Example:
  modbus_ports 1 bits 8N1

  Example:
  modbus_ports 2 bits 7O1

- **modbus_ports PORT_NUMBER state [GATEWAY/ROUTER/DISABLE]**
  Enable or disable uart functionality.

  Example:
  modbus_ports 1 state GATEWAY

  Example:
  modbus_ports 2 state DISABLE

- **modbus_ports PORT_NUMBER termination [on/off]**
  Enable or disable termination on RS485 port.

  Example:
  modbus_ports 1 termination on

- **modbus_ports PORT_NUMBER slave_response_timeout TIMEOUT**
  Set response timeout (serial slave) in ms. When this timeout expires, delayed frames are dropped.

  Example:
  modbus_ports 1 slave_response_timeout 2000

  If a subcommand that normally sets a value is not given an argument, it will print the current value.

Example:
modbus_ports 2 baud
Set baud rate is 115200

> PORT_NUMBER is a number of ports in modbus gateway and it is counted from 0.

- **modbus_routing**
  - **modbus_routing help**
    Print routing's help.

  - **modbus_routing show**
    Display all active routing table in system.
    [LP]: [SLAVES NUMBERS] [IP/HOSTNAME] [PORT] [TIMEOUT]

  - **modbus_routing add SLAVE_ADDR HOSTNAME PORT TIMEOUT**
    SLAVE_ADDR with HOSTNAME PORT is used by uarts working in Modbus router mode. TIMEOUT (in ms) is used to close the connection if a slave is not responding. The maximum records is 8. One record for one address/ip.

    Example:
    modbus_routing add 18 192.168.0.10 502 2000

    Example:
    modbus_routing add 18;25 192.168.0.10 502 2000

    Example:
    modbus_routing add 18-25 192.168.0.10 502 2000

    Example:
    modbus_routing add 18-25;* 192.168.0.10 502 2000

    Example:
    modbus_routing add 18-25 modbus.local 502 2000

  - **modbus_routing remove [HOSTNAME_NUMBER/all]**
    Remove Modbus Routing Table record. HOSTNAME_NUMBER is line number from /show/ command.

    Example:
    modbus_routing remove 2

    Example:
    modbus_routing remove all

Network settings

The following commands might be helpful to change network settings according to target LAN parameters,

- **ipconfig**
  - **ipconfig addr ADDRESS**
    Set IP address to ADDRESS.

    Example:
    ipconfig addr 192.168.0.10

  - **ipconfig mask NETMASK**
    Set subnet mask to NETMASK (in dot-decimal format).

    Example:
    ipconfig mask 255.255.255.0

  - **ipconfig mask BIT_COUNT**
    Set subnet mask to BIT_COUNT bits.

    Example:
    ipconfig mask 24

  - **ipconfig gateway GATEWAY_IP**
    Set network gateway to GATEWAY_IP.

    Example:
    ipconfig gateway 192.168.0.1

  - **ipconfig dhcp [enable/disable]**
    Enable or disable DHCP client.

    Example:
    ipconfig dhcp enable

  - **ipconfig dns1 ADDRESS**
    Set primary DNS to ADDRESS, disable getting DNS from DHCP if enabled.

    Example:
    ipconfig dns1 192.168.100.1

  - **ipconfig dns2 ADDRESS**
    Set secondary DNS to ADDRESS, disable getting DNS from DHCP if enabled.

    Example:
    ipconfig dns2 1.1.1.1

- **wificonf**
  - **wificonf stassid SSID**
    SSID of target AP (Access Point).
    Example:
    wificonf ssid SSID
  - **wificonf stapass PASSWORD**
    Password of target AP.
    Example:
    wificonf stapass PASSWORD

  - **wificonf connect**
    Try to connect to the configured AP

  - **wificonf disconnect**
    Disconnect from the AP.

  - **wificonf scan**
    Scan Wi-Fi networks

  - **wificonf restore**
    Restore factory Wi-Fi settings.

- **eth_mac**
  - **eth_mac help**
    Print the help message.

  - **eth_mac default**
    Set device’s MAC address to factory-default one.

  - **eth_mac set MAC_ADDR**
    Set device’s MAC address to MAC_ADDR. Accepts both dash and colon-separated formats.

    Example:
    eth_mac set 01-02-03-04-05-06

    Example:
    eth_mac set 01:02:03:04:05:06
- **wifi_mac**
  - **wifi_mac help**
    Print the help message.

    - **wifi_mac default**
      Set device’s MAC address to factory-default one.

- **wifi_mac set MAC_ADDR**
  Set device’s MAC address to MAC_ADDR. Accepts both dash and colon-separated formats.

  Example:
  eth_mac set 01-02-03-04-05-06

  Example:
  eth_mac set 01:02:03:04:05:06

- **http_port**
  - **http_port help**
    Print the help message.

  - **http_port PORT_NUMBER**
    Set http port to PORT_NUMBER. A PORT_NUMBER value must be in range: 1-65535.

    Example:
    http_port 80

  - **http_port status**
    Print current http port.

    Example:
    http_port status
    A current http port is 80

- **telnet_port**
  - **telnet_port help**
    Print the help message.

  - **telnet_port PORT_NUMBER**
    Set Telnet port to PORT_NUMBER. A PORT_NUMBER value must be in range: 1-65535.

    Example:
    telnet_port 23

  - **telnet_port status**
    Print current Telnet port.

    Example:
    telnet_port status
    A current telnet port is 23

- **modbus_tcp_port**

- **modbus_tcp_port help**
  Print the help message.

- **modbus_tcp_port PORT_NUMBER**
  Set http port to PORT_NUMBER. A PORT_NUMBER value must be in range: 1-65535.

  Example:
  modbus_tcp_port 502

- **modbus_tcp_port status**
  Print current Modbus port.

  Example:
  modbus_tcp_port status
  A current modbus port is 502

Changing username or password

To change username or password, use user command. Available commands:

- **user help**
  Print the help message.

- **user mod_name USER_NAME NEW_NAME**
  Change the user name to NEW_NAME. It fails if the name is used by another user.

  Example:
  user mod_name admin NEW_NAME

- **user passwd USER_NAME**
  Change USER_NAME's password.

  Example:
  user passwd admin
  ****** <- here is entered password, but '*' appears instead

  Note: Everyone can change the password for themselves.

Additional notes

After some time of inactivity, session will be disconnected automatically.

In order to avoid issues like connecting to host, type “help” to get more information.

To get more details about every particular command, append “help” after each commands (example: "ipconfig help").

Factory reset is not available from the Telnet Console level.

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