## RS-485->Ethernet [TCP/IP] converter

CN-ETH-485

USER MANUAL
[device configuration for MeternetPRO]

version 190820PL

PURPOSE

The converter enables access to the RS-485 serial port from any computer in the local network, and when the IP is shared on the Internet also from any computer in the world connected to the Internet. It also acts as a serial port server. The communication is carried out via TCP, UDP, DHCP, and other protocols. The available software allows you to create a virtual serial port on your PC and access the serial interface of the ATC-1000 converter attached anywhere on the network just like the local COM port of that PC. This converter has a wide range of power supply options: 9-24 VDC.
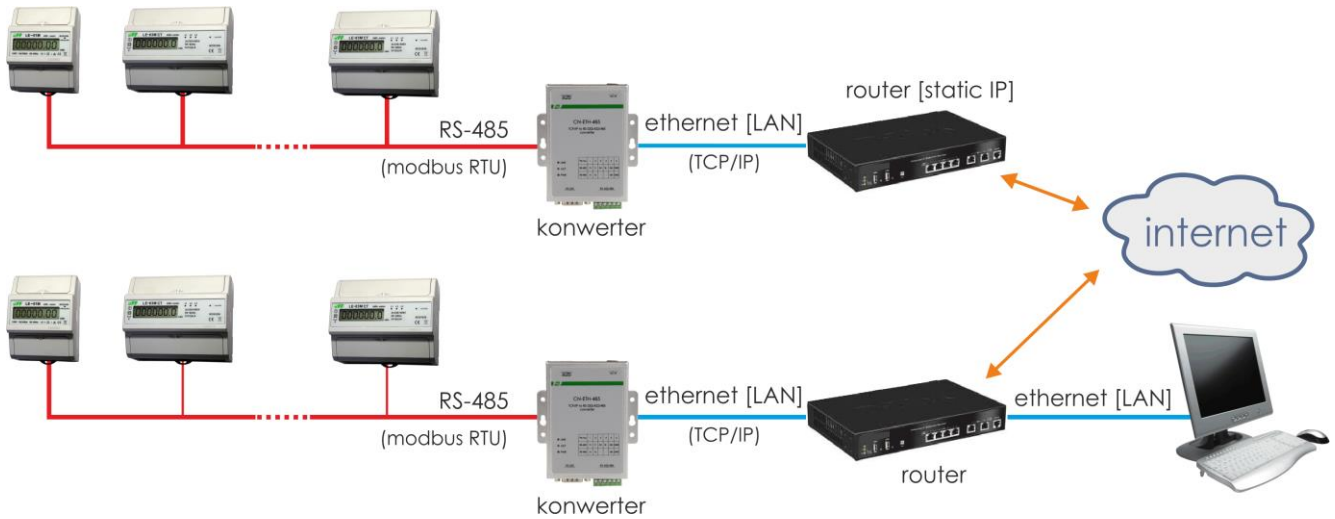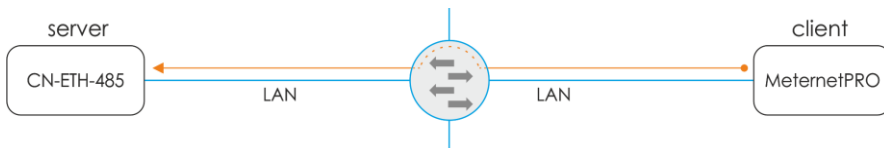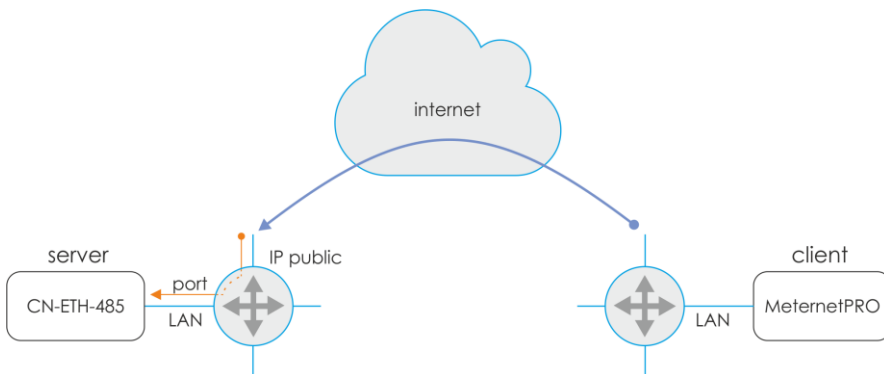

OPERATING MODES

- Server
- Client

Server:
a. LAN Local Area Network

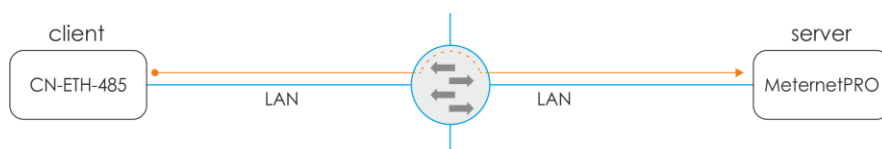The MeternetPRO server initiates a connection to the converter with a static IP address.

b. Remote communication over the Internet

The MeternetPRO server initiates a connection to the converter to a public IP address for a location with the converter. Forwarding the request on the router to the designated communication port of the converter.
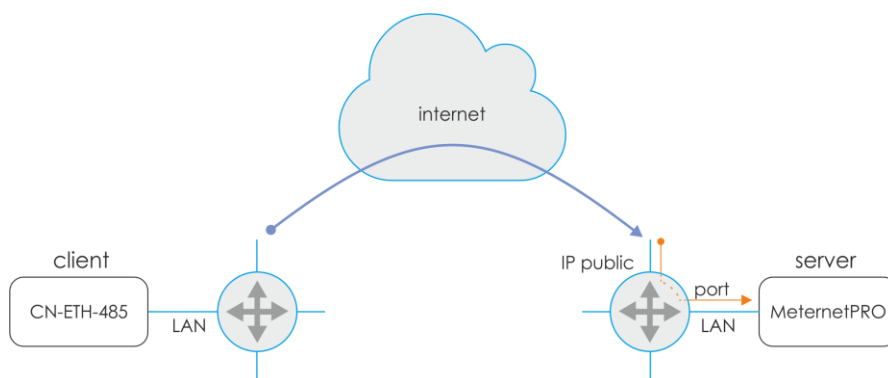
Client:
   a. LAN Local Area Network

The converter initiates a connection to the MeternetPRO server with a static IP address.

   b. Remote communication over the Internet

The converter initiates a connection to the MeternetPRO server to a public IP address for a location with the server. Forwarding the request on the router to the designated communication port of the MeternetPRO server.

FEATURES

- DB-9 socket, male from the RS-232 side
- 6-clamp terminal for RS-422/485 and power supply
- RJ-45 Ethernet socket
- 10/100TX network interface
- support for TCP/IP, UDP, DHCP protocols
- 9-24 V DC power supply (socket power supply included)

TECHNICAL DATA

Converter:
   RS-232/422/485 -> TCP/IP
Terminals:
   RS-232   DB9 male
   RS-422/485   1.0mm^2 screw terminals
   Ethernet   RJ45
LED indicators::
   Link   Ethernet connection indication [green LED]
   ACT   data exchange indication
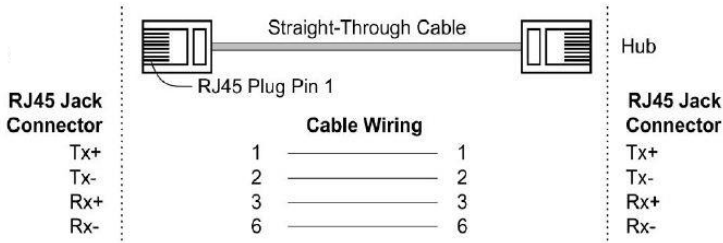   PWR   9-24 V DC [500-1000 mA] power supply
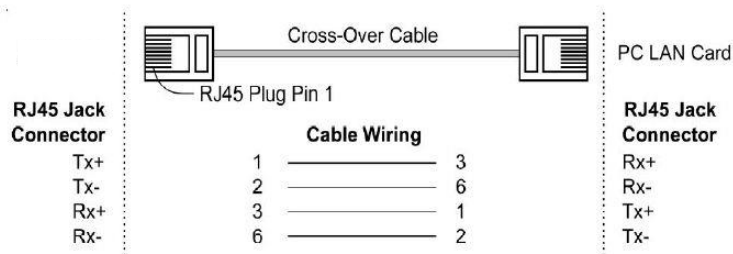Dimensions:
   WxHxD [mm] 84x105x26

CONNECTION

Configuration 1 (Straight)
Connection to the local network via the switch.
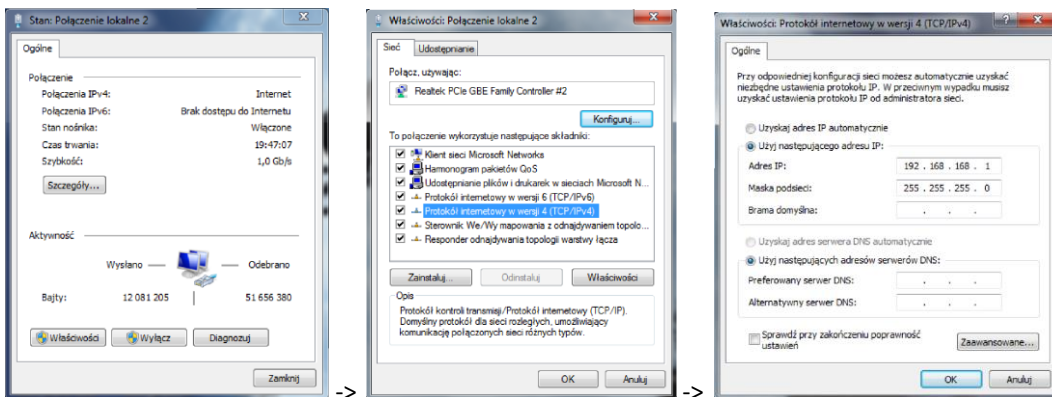

Configuration 2 (Cross-Over)
Direct connection to PC.

COMMUNICATION

1. Select the method of converter connection - configuration 1 or 2.
2. Configure network connection on PC.
    Control panel -> Network and sharing center -> Local connection ->

PC settings:
IP address: 192.168.2.2 to 254
Subnet mask: 255.255.255.0
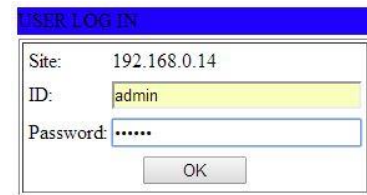IP address of the converter: 192.168.2.1
3. Open your web browser and enter the converter address
   http://192.168.2.1   Accept with ENTER.
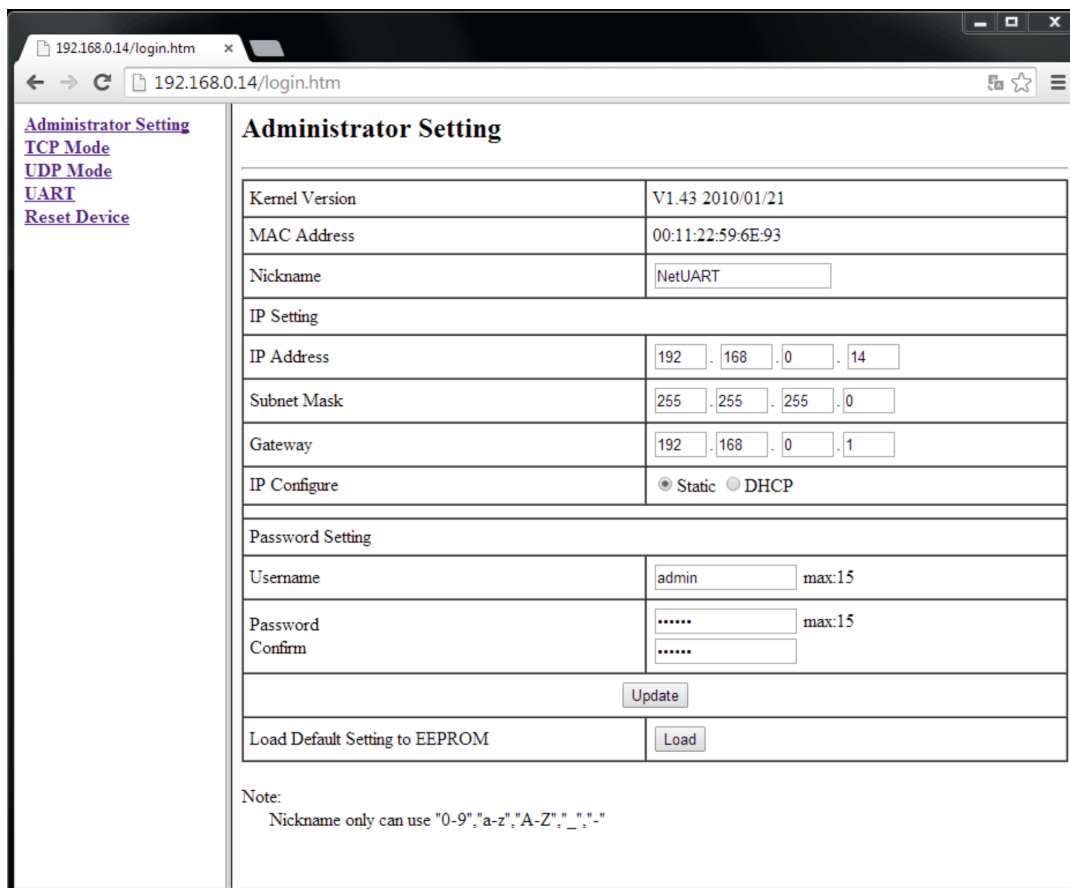4. The login window will open. Enter the default user name and password.
   User: admin   Password: system
5. The converter configuration interface will open in the browser window.

CONFIGURATION
(for operation with MeternetPRO system)

Administration Setting – setting of network parameters


Nickname: - name of the device.
IP address |- setting the IP address of the local network for the converter and the parameters of the
                         |network in which the converter will operate.
Subnet mask Gateway | After setting a new address and saving the changes, the connection to the converter will be
                             terminated. New connection according to new network settings.
IP Configure   - network connection mode. Select Static.
Username   - user name.
Password   - access password.
Update   - confirmation of the changes made to the configuration.
Load Default…   - return to factory settings – press Load.

TCP mode – TCP protocol settings
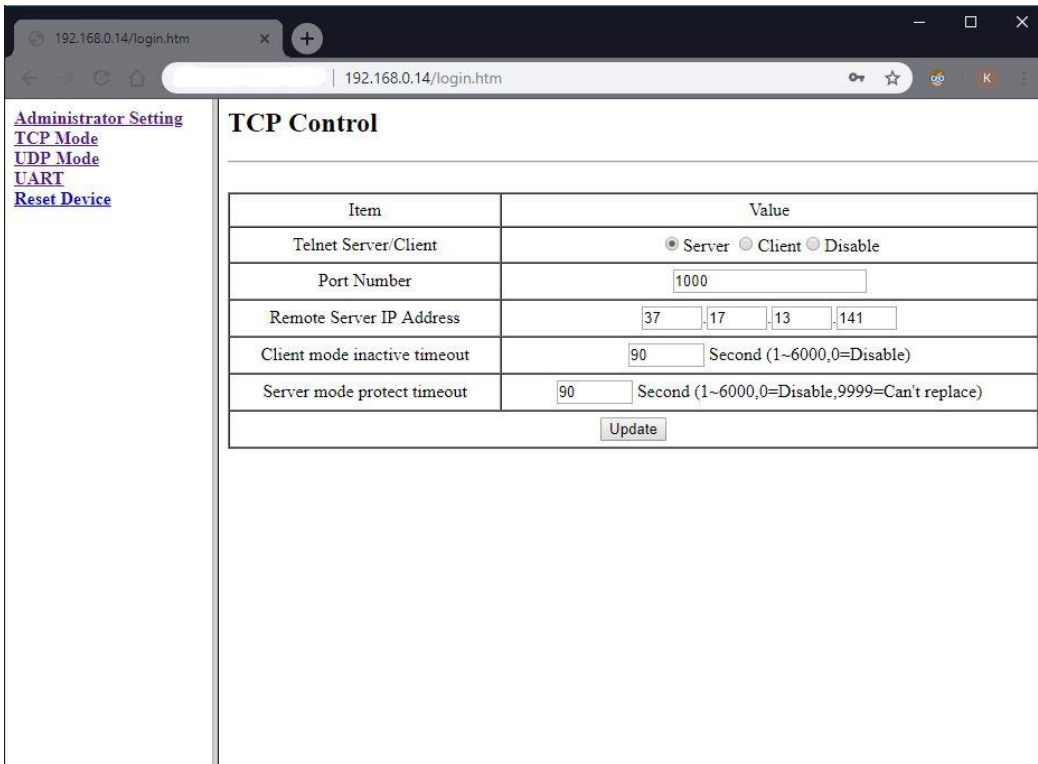
Telnet Server	- network connection mode. Select the appropriate communication option: SERVER or CLIENT.
Port Number	- converter network port number. Set an individual number in the given network.
Remote Server IP…	- for CLIENT operating mode: IP address of the master device with which the converter establishes communication.
Client mode…	- for the Client operating mode: setting the timeout interval [sec] for waiting for data, after which the connection to the Server device will be closed and a new connection to the Server device will be established. Set the timeout approximately 1.5 times greater than the query interval of the Slave devices by the MeternetPRO system, for example query interval = 60 sec x 1.5; timeout = 90sec.
Server mode…	- for the Server operating mode: setting the timeout interval [min] for waiting for data, after which the connection to the Client device will be closed and the waiting for a new request from the Client device will start. Set the timeout approximately 1.5 times greater than the query interval of the Slave devices by the MeternetPRO system, for example query interval = 60 sec x 1.5; timeout = 90sec.
Update	- confirmation of the changes made to the configuration

UDP mode – UDP protocol settings
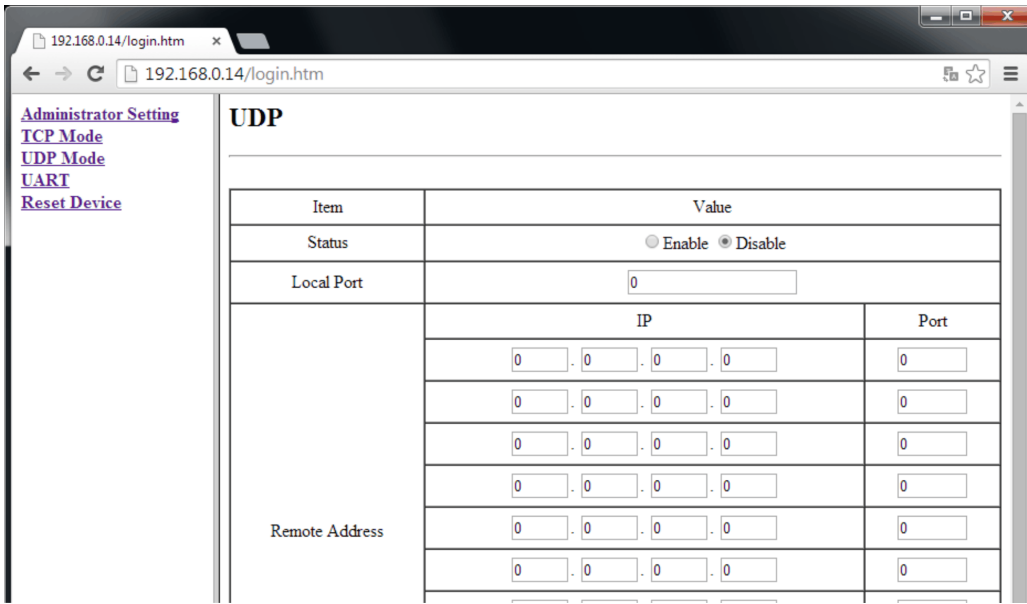
Status   - set Disable
Local Port   - no settings
Remote Address   - no settings
Update   - confirmation of the changes made to the configuration

UART – Modbus communication settings
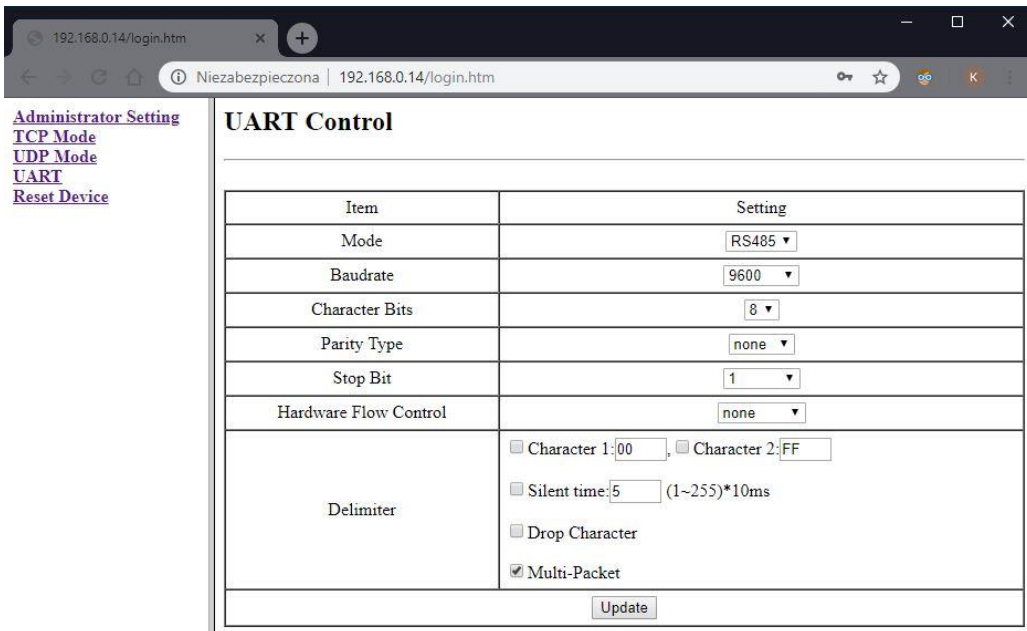
Mode   - Modbus communication network type. Select RS485.
Baudrate   - Modbus transmission rate. ->
Character bits   - data bits.   ->
Parity Type   - parity control.   ->
Stop bits   - stop bits.   ->
Hardware Flow…   - flow control.   ->
Delimiter   - select Multi-Packet. Other settings unchanged.
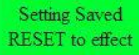Update   - confirmation of the changes made to the configuration.

Set the transmission parameters according to the device parameters of the given Modbus branch and the communication interface of the MeternetPRO Data Inputs.

CHANGES

After entering the settings in a given tab, press the Update button.

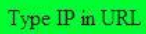Update

The following message will appear

Setting Saved
RESET to effect

Reset

Accept the changes by pressing the Reset button.
The following message will appear

Type IP in URL

ok

Press OK.
In case of changes outside the IP address, the login window will open again.
If you change the IP address of the converter, enter a new one in the browser and call the login window.

RS-485 NETWORK CONNECTION

Terminal 1:   A(+)
Terminal 2:   B(-)

RESET - RETURN TO FACTORY SETTINGS

* turn off the power supply
* unscrew the side screws and remove the housing
* press the button next to the RJ45 connector
* while holding the button, turn on the power supply and hold it above 5 seconds
* turn off the power, put the housing back on and turn on the power again
* the converter will be available at the default IP address