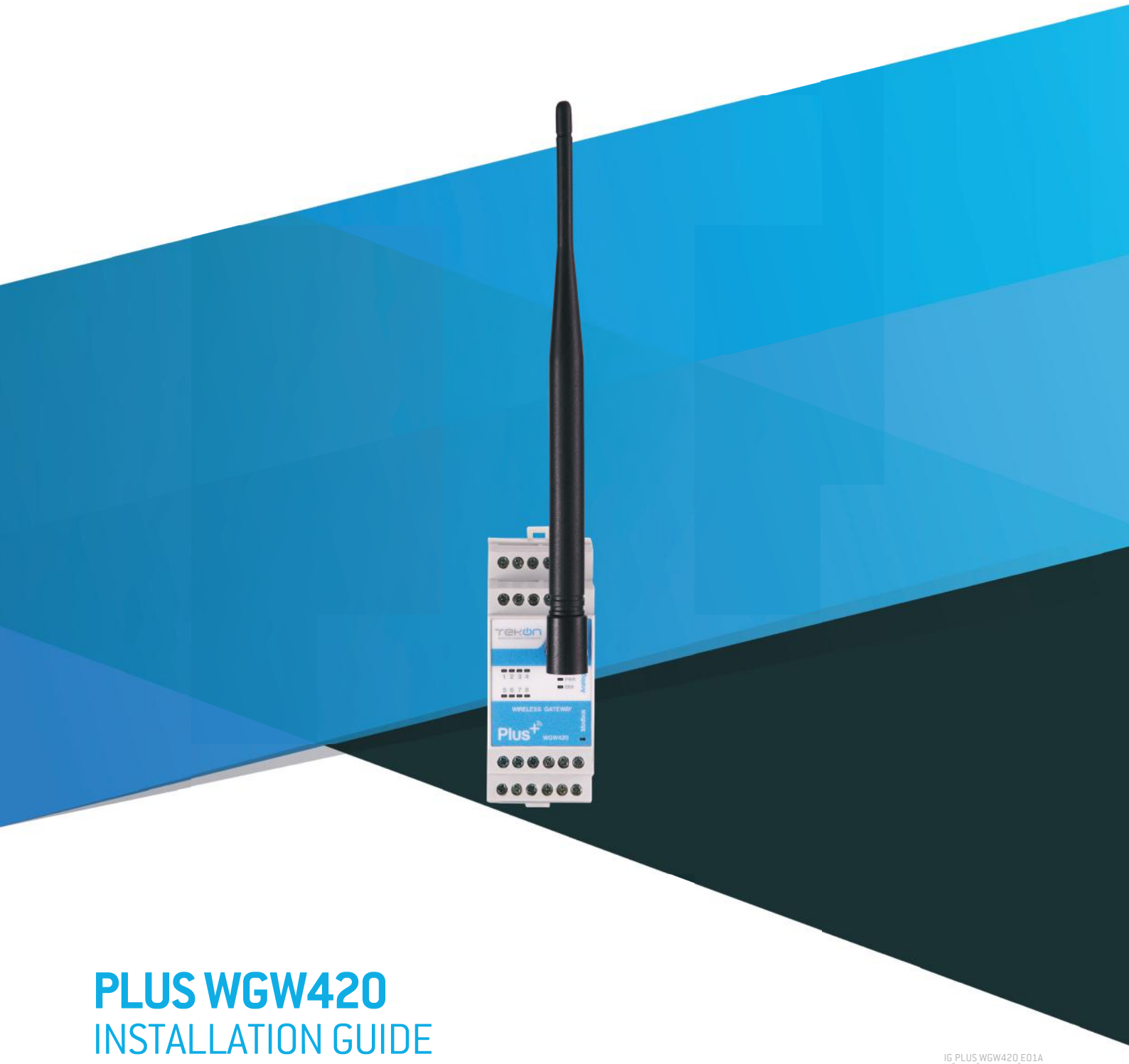
WIRELESS SENSORS TECHNOLOGY



PLUS WGW420
INSTALLATION GUIDE

IG_PLUS_WGW420_E01A

TEKON ELECTRONICS | AVEIRO, PORTUGAL
P.: +351 234 303 320 **M.:** +351 933 033 250 **E.:** sales@tekonelectronics.com

TEKONELECTRONICS.COM

PLUS WGW420 WIRELESS GATEWAY
INSTALLATION GUIDE

Table of contents

step

01

WGW420 PLUS WIRELESS GATEWAY CONFIGURATION

step
01
WGW420 PLUS WIRELESS GATEWAY CONFIGURATION

TEKON CONFIGURATOR SOFTWARE is only compatible with the Microsoft® Windows® Operating System.

01

Connect the antenna to the *Gateway*.

02

Wiring

Connect the power supply and then the *RS485-USB* cable to the *Gateway*.

Wire Indication:
Blue - GND; Brown - +24 VDC; Orange - Data+ (A); Black - GND; Yellow - Data - (B)

03

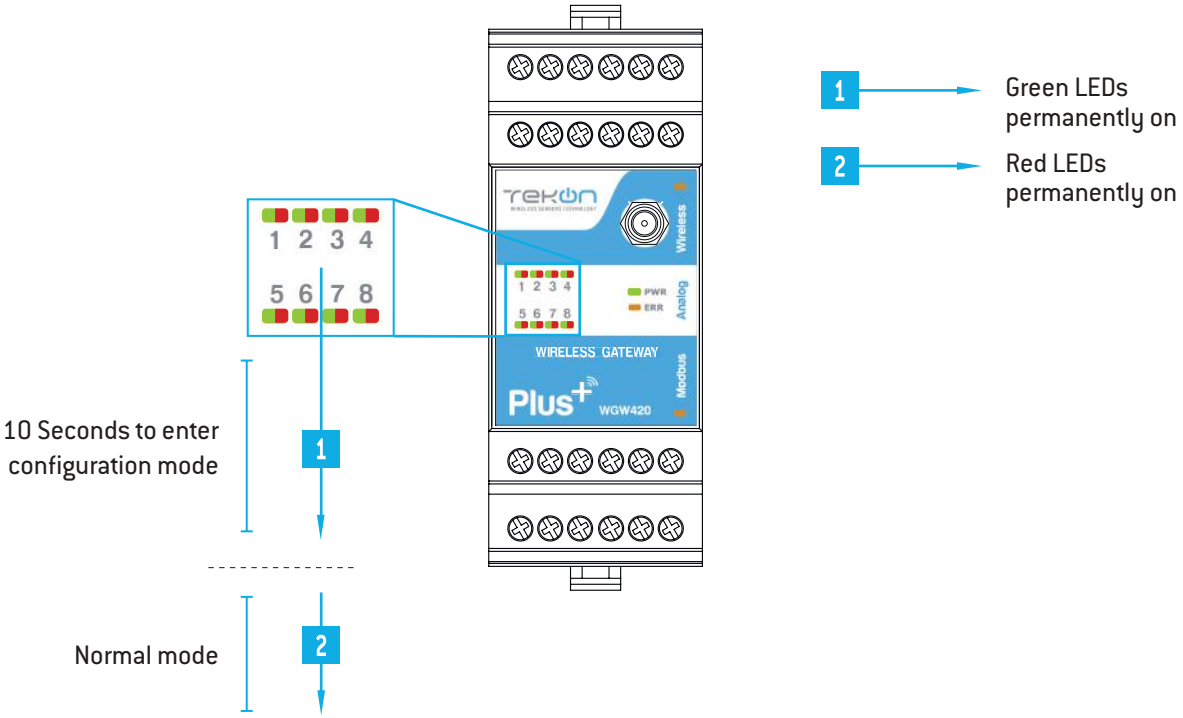
Power ON the device.

WGW420 PLUS WIRELESS GATEWAY CONFIGURATION

step **01**

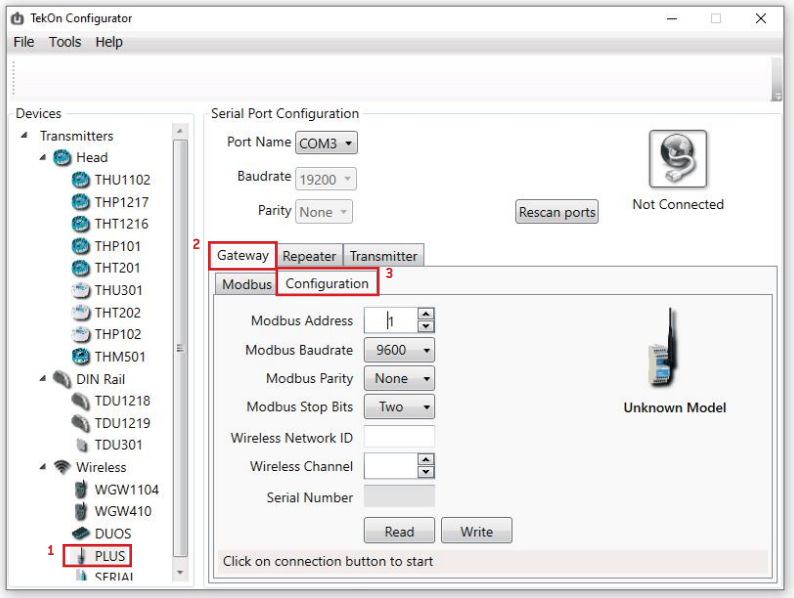
04

Check device connection state by LED indication.



05

Open *Tekon Configurator Software*[1] and select *PLUS* >> *Gateway* >> *Configuration*



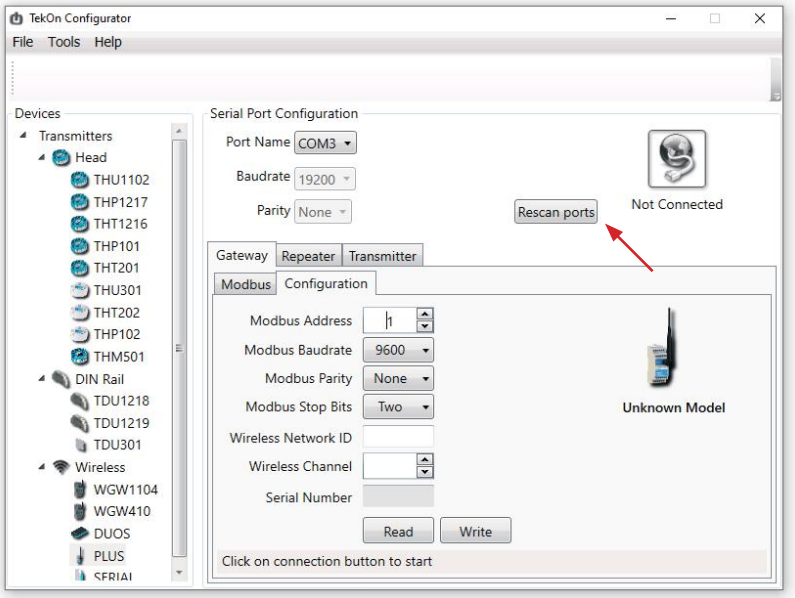
[1] Tekon Configurator software is free of charge and available at www.tekonelectronics.com

step
01
WGW420 PLUS WIRELESS GATEWAY CONFIGURATION

06

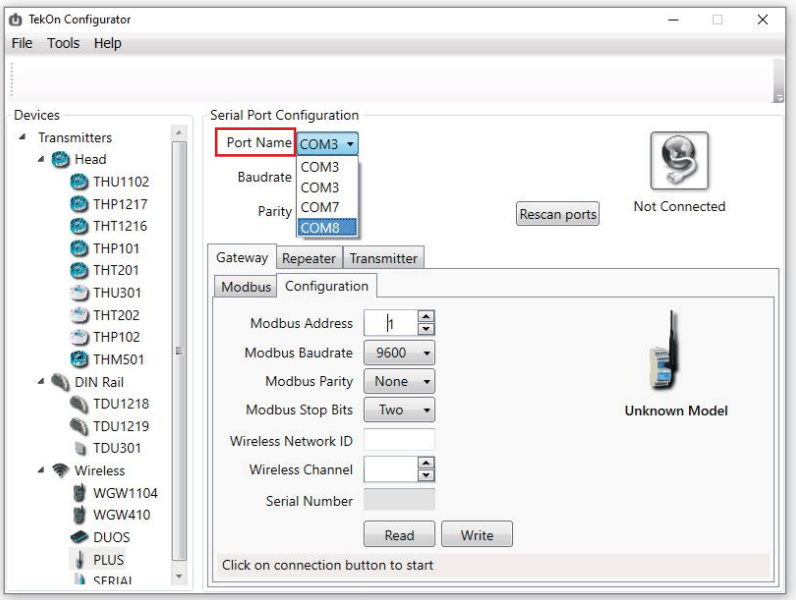
Select serial port corresponding to WGW420 PLUS Wireless Gateway

Click on the *Rescan Ports* button.



07

Select corresponding *Port name*[2].

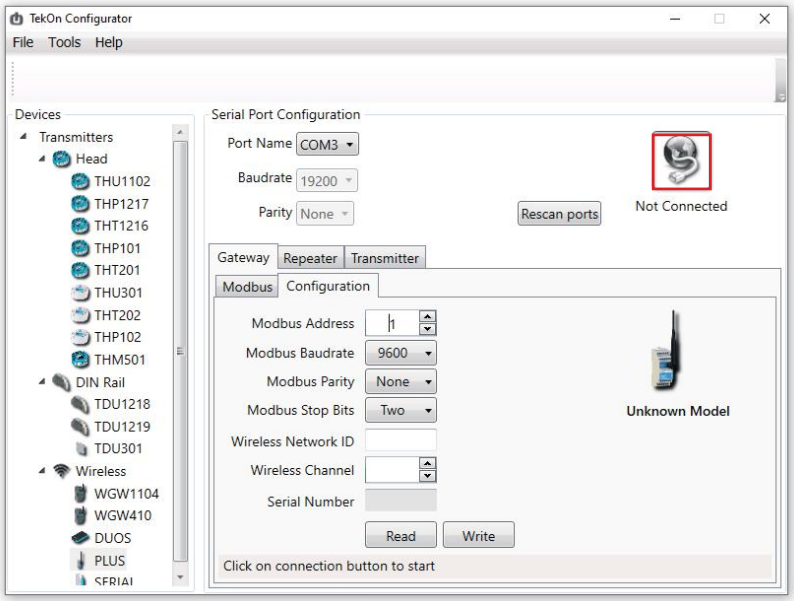


[2] You can check device's serial port name in "Device Manager" on Microsoft ® Windows® operating system.

08 Perform a power cycle on the *Gateway*.

NOTE:
After power up, you have 10 seconds to enter configuration mode by clicking on Connect button [ ] (while green LEDs are permanently on).
In this mode, you can manage device parameters: *Modbus Address*, *Modbus Baudrate*, *Modbus Parity*, *Wireless Network ID* and *Wireless Channel*.

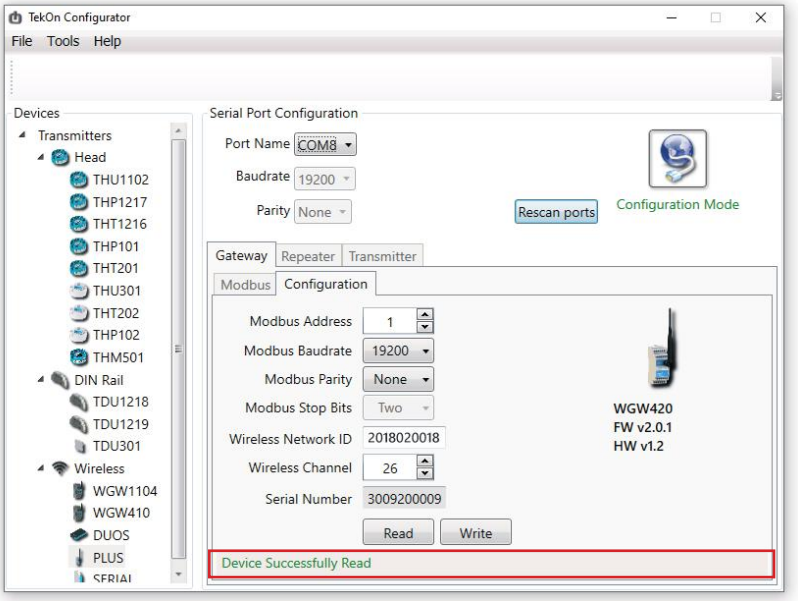
09 Click on *Connect* [ ] button to enter configuration mode.



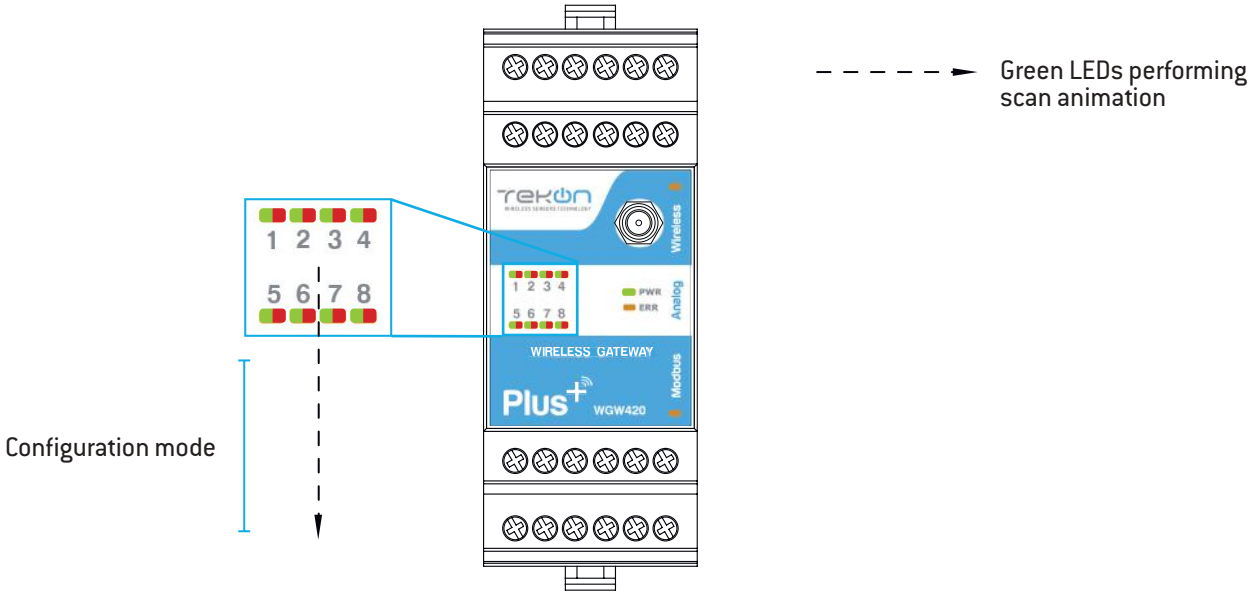
step
01
WGW420 PLUS WIRELESS GATEWAY CONFIGURATION

10

The status string at the bottom of the software window provides feedback on ongoing operations.



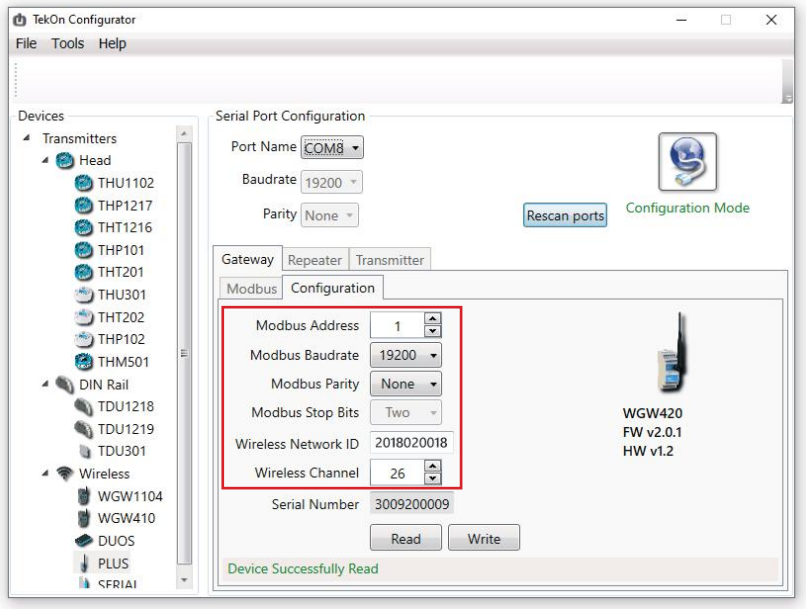
You can also verify configuration mode activation by checking LEDs on the gateway.



NOTE:
When the 10-second time frame to enter configuration mode is exceeded, the LEDs will turn permanently red and the gateway will enter normal operation mode.
To get back in configuration mode, you need to perform a power cycle - step 8.

11

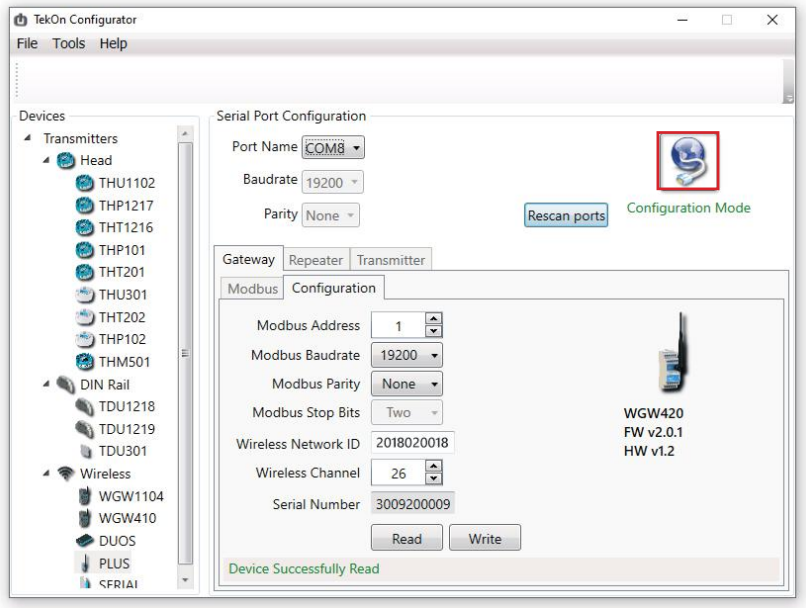
Take note of device configuration data available, namely: *Modbus Address*, *Modbus Baudrate*, *Modbus Parity*, *Modbus Stop Bits*, *Wireless Network ID* and *Wireless Channel*.



NOTE:
The wireless network connection between devices is ensured by setting the same *Wireless Network ID* and *Wireless Channel* parameters.

12

Click on *Disconnect* [ ] button.

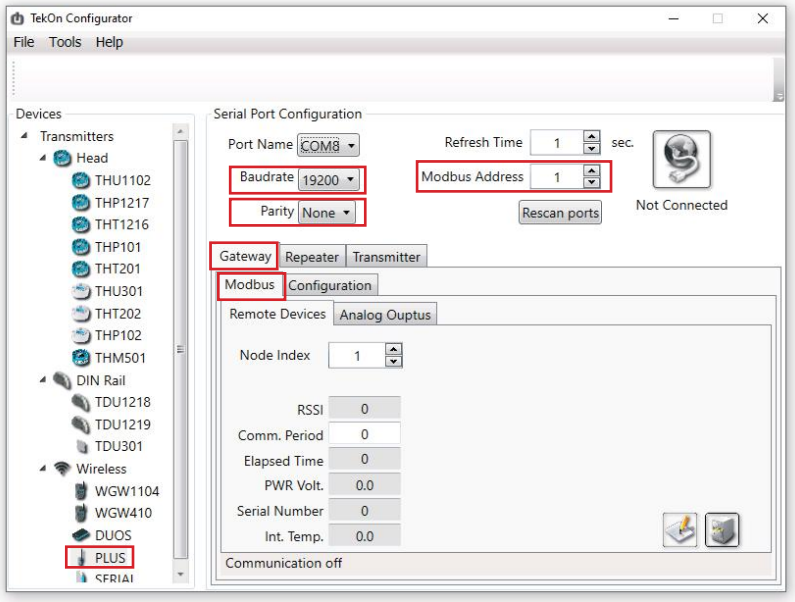


step
01
WGW420 PLUS WIRELESS GATEWAY CONFIGURATION

13

Modbus Communication

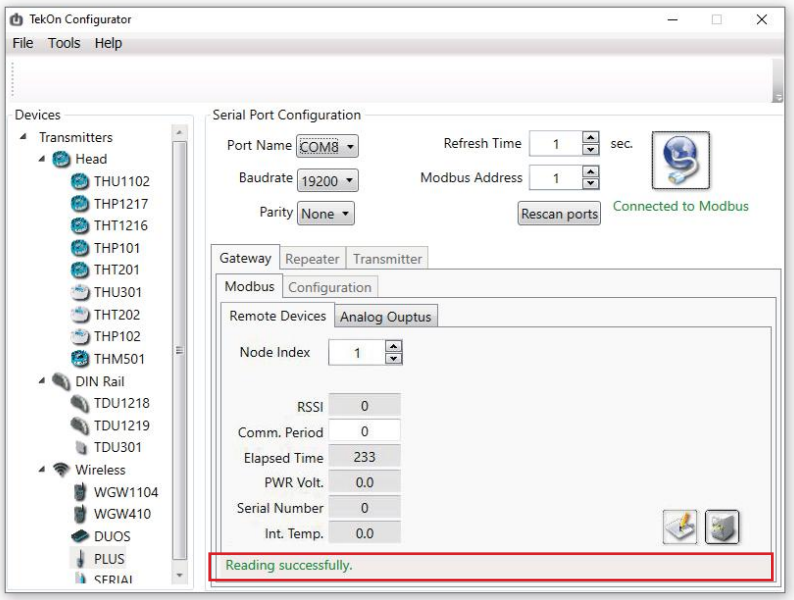
Select *Modbus* tab of the *Gateway* and set the previously saved configurations.



Ensure that *Port name*, *Baudrate*, *Parity* and *Modbus Address* fields are the same as those obtained in configuration mode.

14

Click on *Connect* [ ] button and check operation status at the bottom of the window.

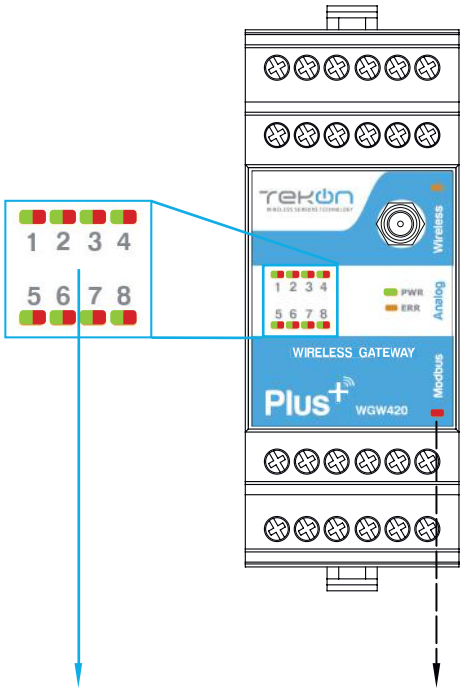


The messages *Connected to Modbus* and *Reading successfully* will appear if *Serial Port* configuration parameters are correct and the Modbus connection is established.

step 01

WGW420 PLUS WIRELESS GATEWAY CONFIGURATION

NOTE:
See WGW420 Datasheet to access LED indication information - page 4.



Red LEDs permanently on

LED flashes on each wireless communication

step

02

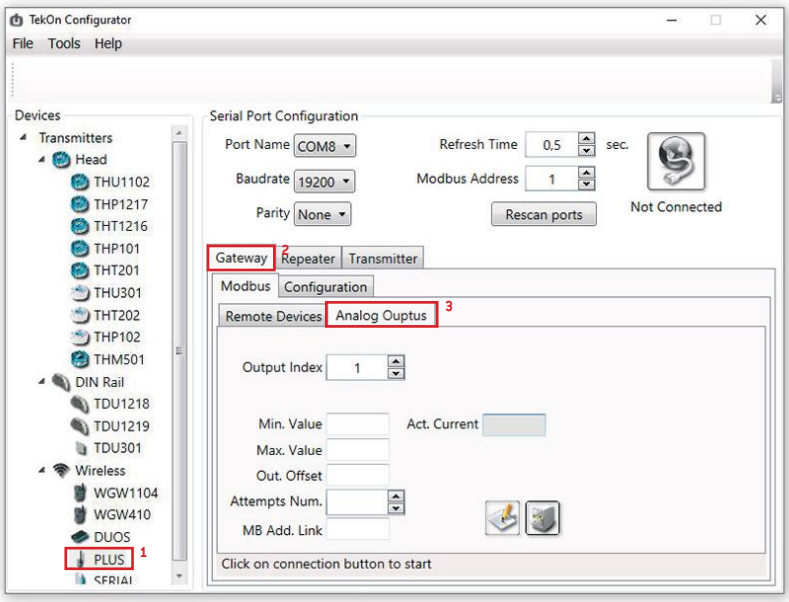
WGW420 GATEWAY ANALOG OUTPUTS CONFIGURATION

step **02**

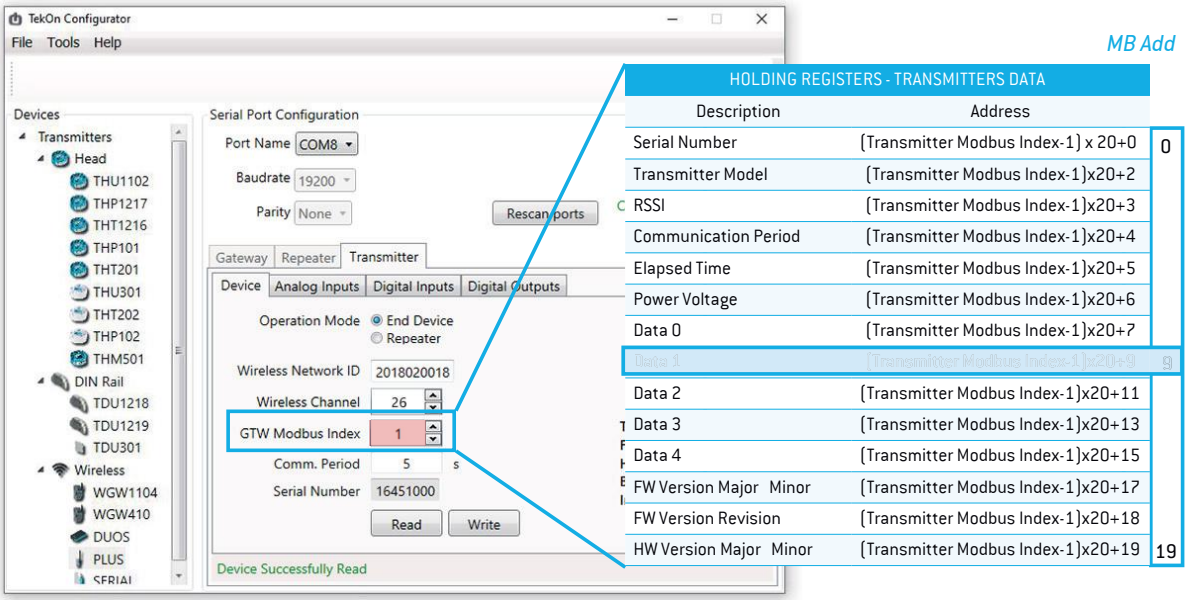
GATEWAY ANALOG OUTPUTS

01 Follow steps 06 and 07 of the PLUS Wireless *Gateway* Configuration.

02 In *Tekon Configurator Software* select *PLUS* >> *Gateway* >> *Analog Outputs* menu



03 Considering the transmitter configuration with GTW Modbus Index=1, there is a Gateway Modbus Address Window corresponding to Modbus address window [0-19].

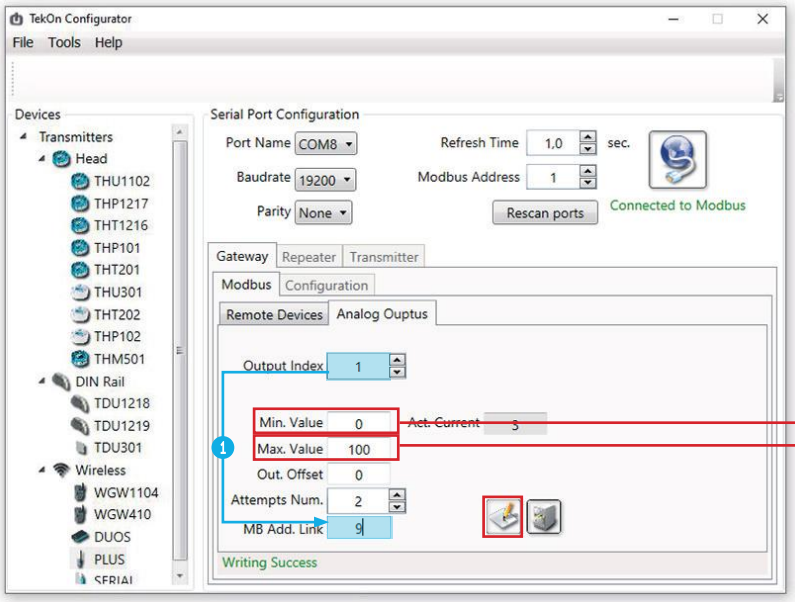


NOTE:
Transmitter analog input 1 data is received and stored at the Gateway Modbus address [9].

step
02 GATEWAY ANALOG OUTPUTS

04

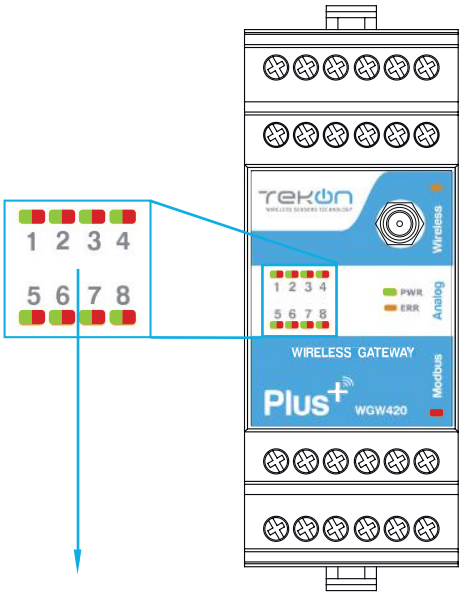
Link *Analog Output Index 1* (Gateway) to *Analog Input 1* (Transmitter) and configure MB Add Link according to the previous step. Set minimum and maximum values and click on *Write*



NOTE:

① Output index 1 is linked to modbus address [9], according to mapping table of step 03.

Modbus address double word (float 32) value is converted into 4..20 mA scale according to minimum and maximum defined values.



1 → Green led permanently on during a closed current loop

2 → Red led permanently on during an open current loop

TEKON ELECTRONICS
a brand of Bresimar Automação S.A.

Avenida Europa, 460
Quinta do Simão
3800-230 Aveiro
PORTUGAL

Sales
P.: +351 234 303 320
M.: +351 933 033 250
E.: sales@tekonelectronics.com

Technical Support
E.: support@tekonelectronics.com