WIRELESS SENSORS TECHNOLOGY


# PLUS WGW420
## INSTALLATION GUIDE

IG_PLUS_WGW420_E02A

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# PLUS WGW420 WIRELESS GATEWAY
## INSTALLATION GUIDE

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## 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)

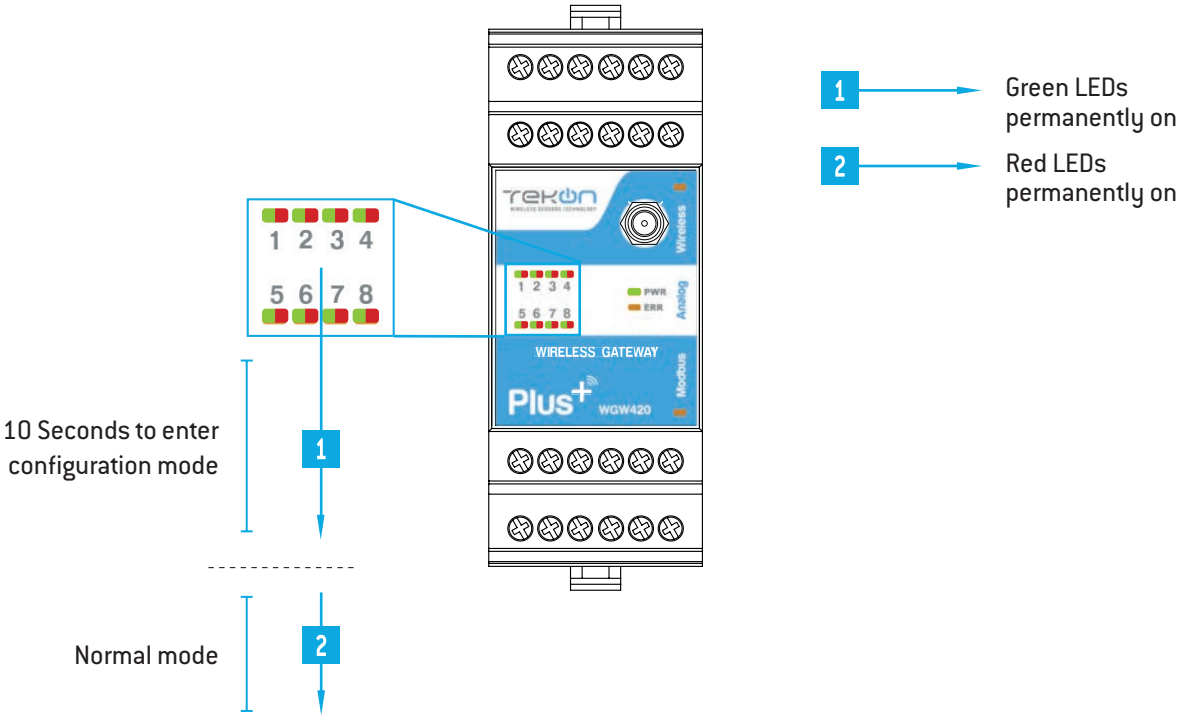
**03**

Power ON the device.

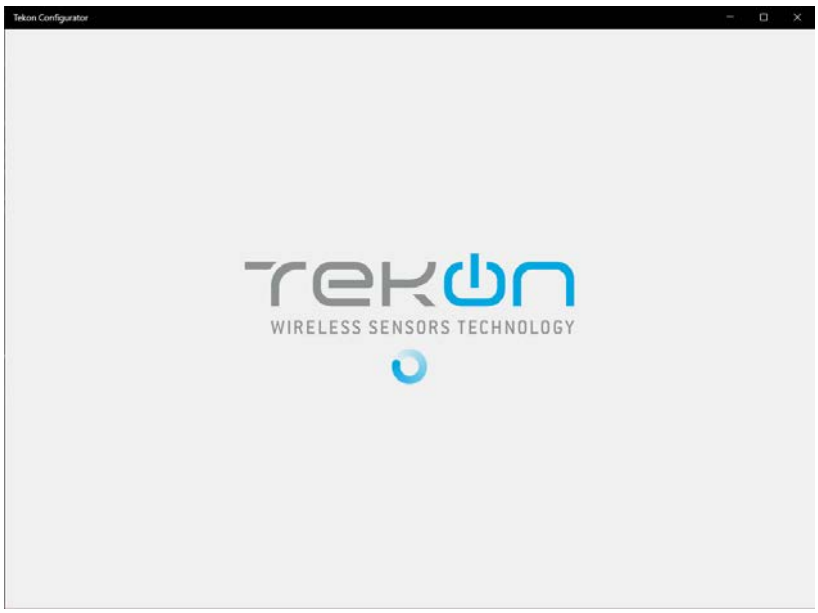
step **01**

## WGW420 PLUS WIRELESS GATEWAY CONFIGURATION

**04** Check device connection state by LED indication.




**05** Open *Tekon Configurator Software*



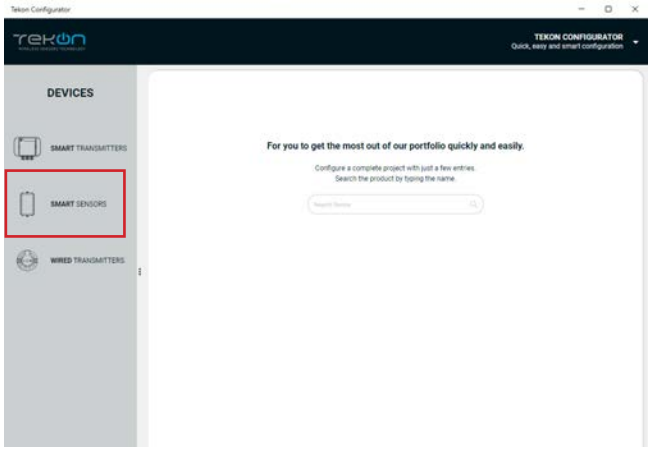
step
# 01
## WGW420 PLUS WIRELESS GATEWAY CONFIGURATION

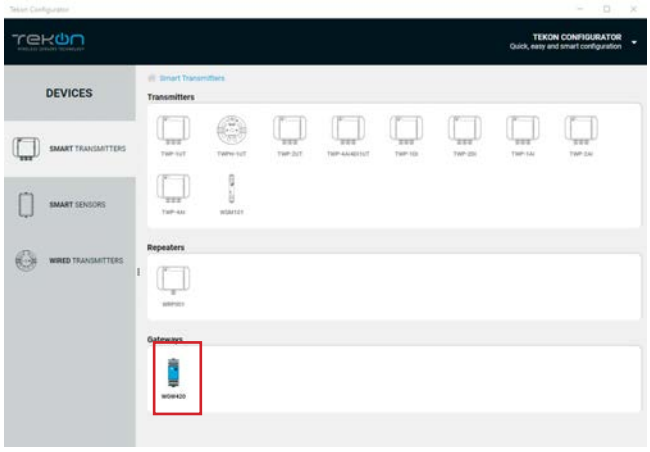
**06**

### Open the WGW420 PLUS Wireless Gateway device page.

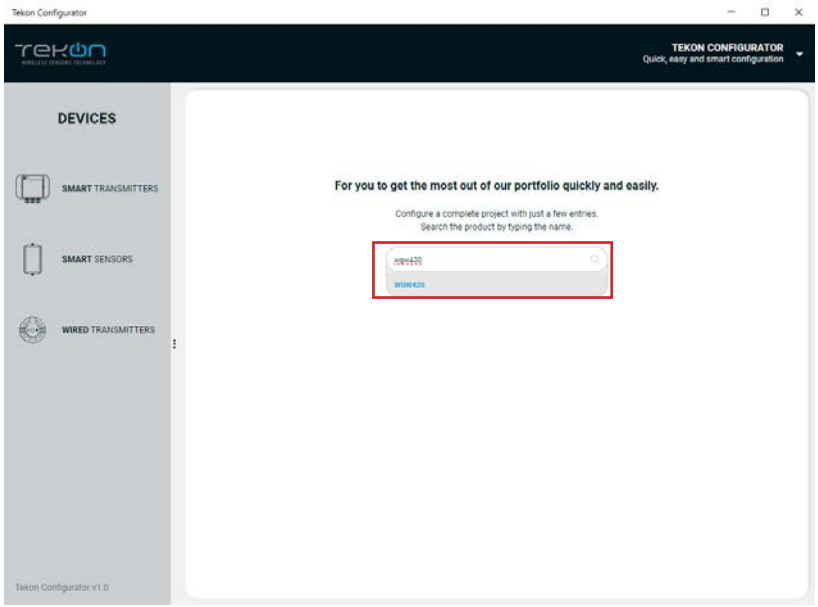
You can enter the device's page in the following ways:

1st option: Click on *"SMART TRANSMITTERS"* in the left menu and then click on the WGW420 device.

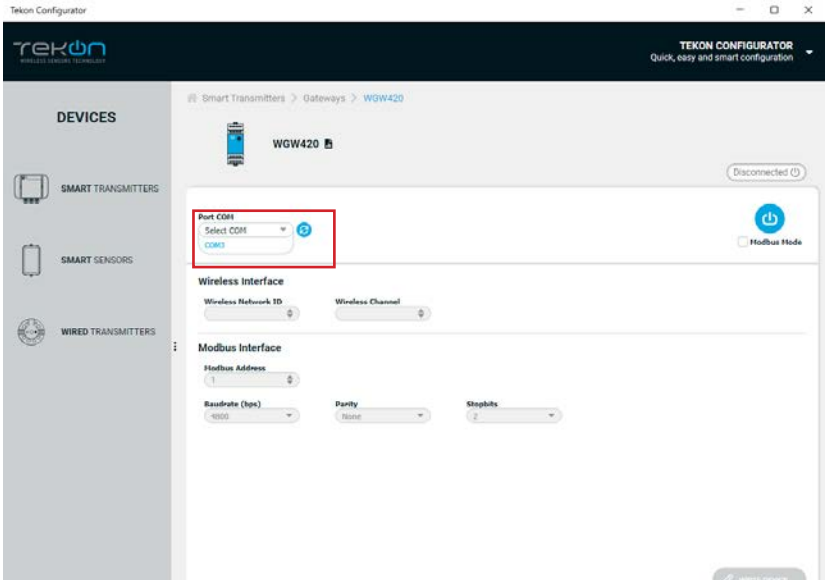



2nd option: Type the name of the device in the *"Search Device"* field on the home page and select.

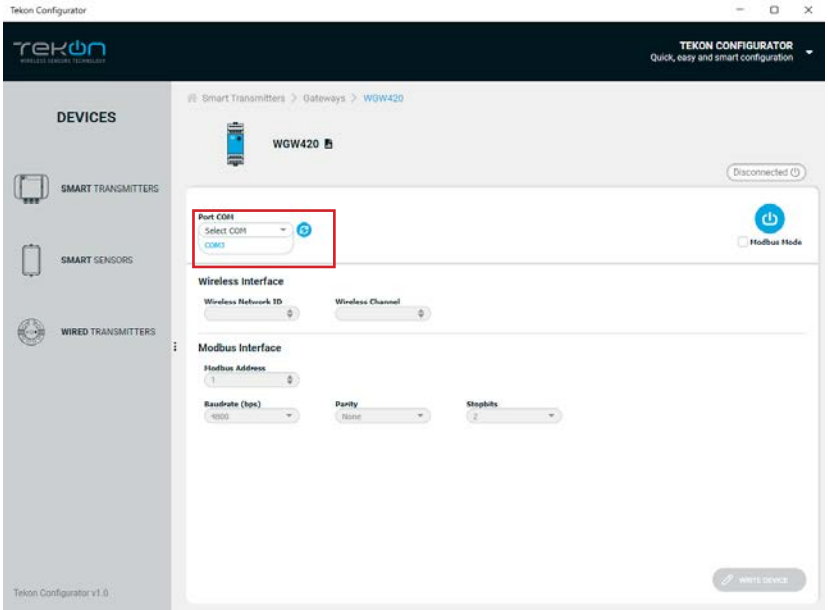


## 07 Load the "Port COM" corresponding to the WGW420 PLUS Wireless Gateway.




**NOTE:**
If the USB cable has already been connected before opening the device page, "Port COM" will appear in the list, otherwise you need to click on the "↻" button.

## 08 Select corresponding *Port COM*[2].




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

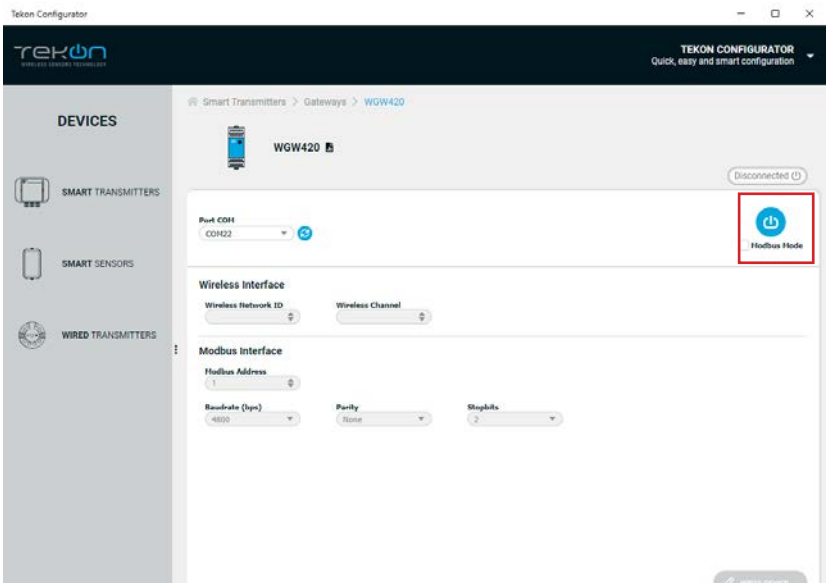
step
# 01
## WGW420 PLUS WIRELESS GATEWAY CONFIGURATION

Perform a power cycle on the *Gateway*.

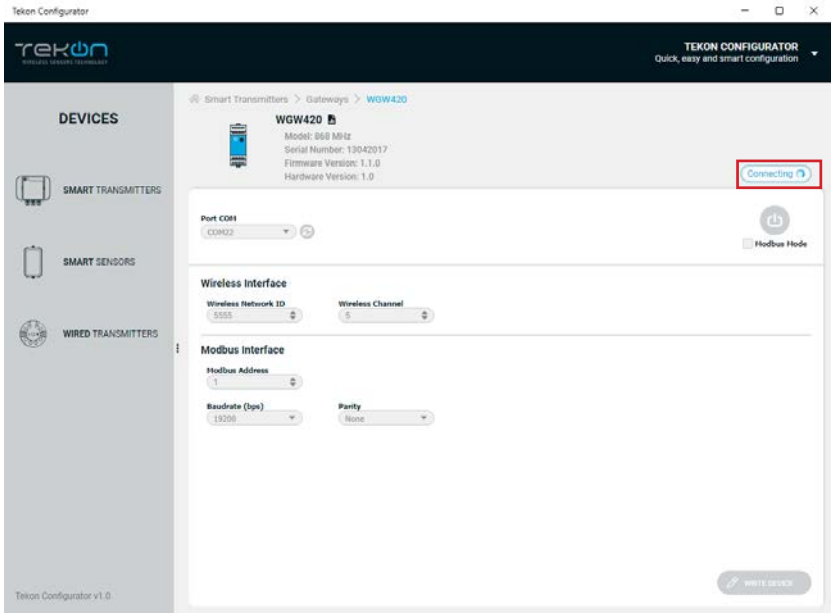
**NOTE:**
After power up, you have 10 seconds to enter configuration mode by clicking on Connect button [ ⏻ ] (while green LEDs are permanently on).
In this mode, you can manage device parameters: *Modbus Address*, *Modbus Baudrate*, *Modbus Parity*, *Wireless Network ID* and *Wireless Channel*.

**10**

Click on *Connect* [ ⏻ ] button.



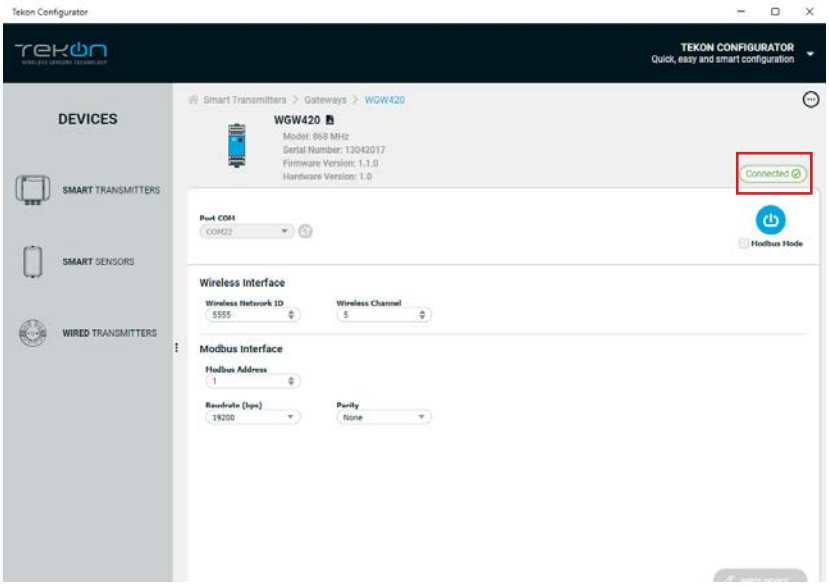
**11** The software will connect to the device.



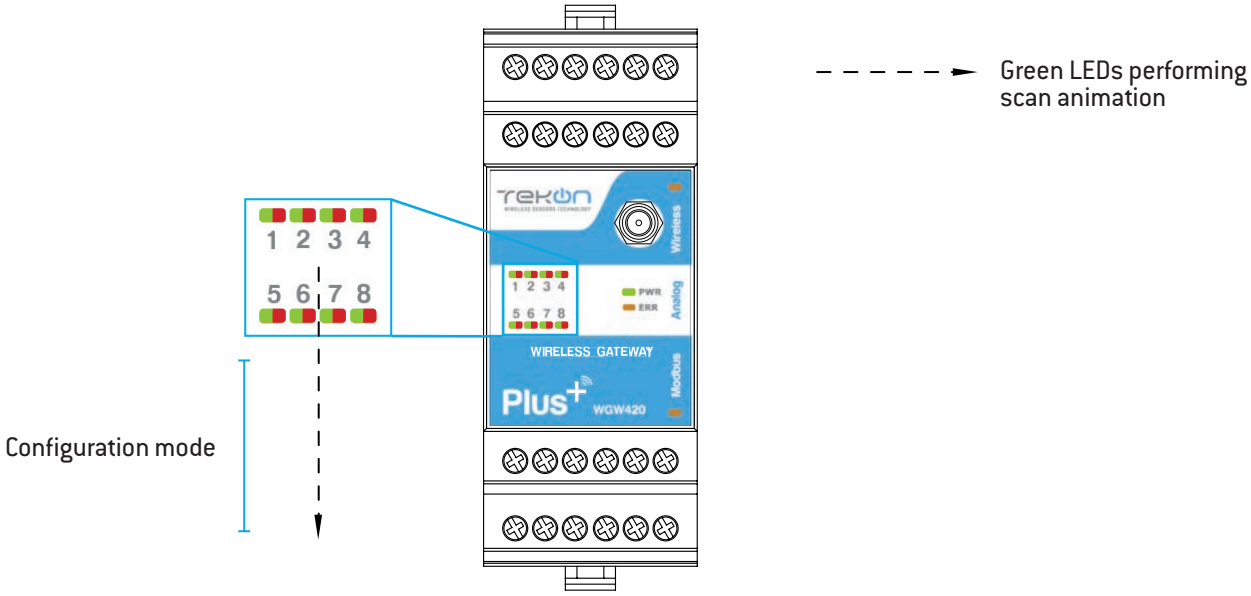

**NOTE:**
If the software is unable to connect to the device, the Connection Failed status is displayed. If it hasn't connected, go back to the previous steps and check the port COM.

step
# 01
## WGW420 PLUS WIRELESS GATEWAY CONFIGURATION

**12** When the software connects to the device, the "*Connected*" message will be displayed.



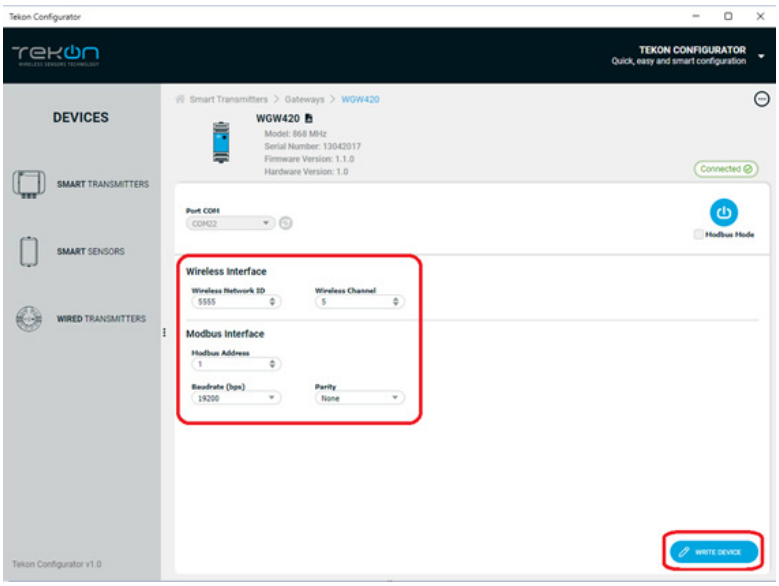

You can also verify configuration mode activation by checking LEDs on the gateway.




**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.

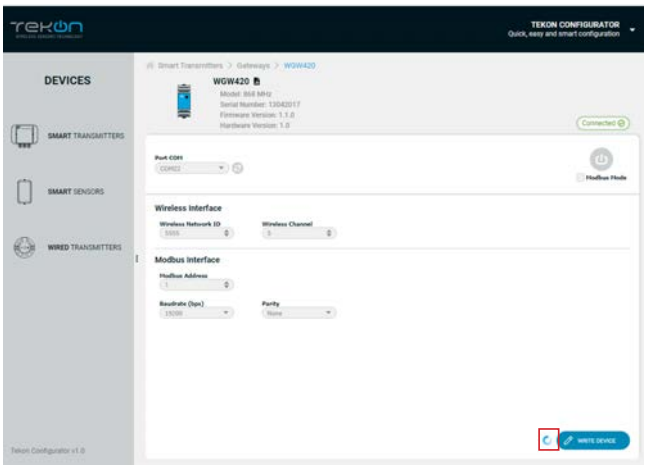
**13**

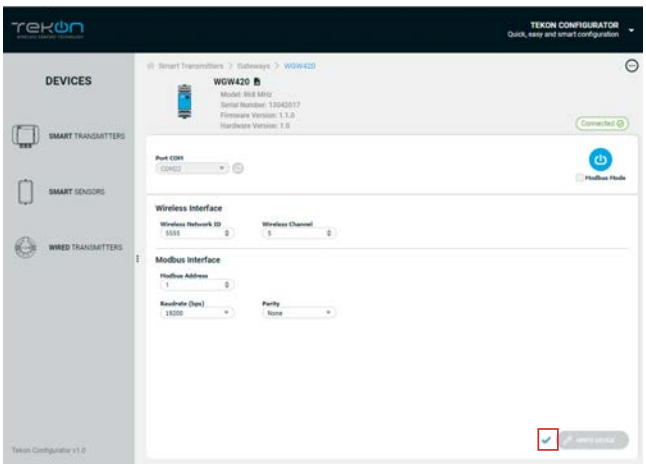
Configure the device fields and write by clicking on the *"WRITE DEVICE"* button.




**NOTE:**
The "WRITE DEVICE" button will only be active when there is a change to one of the editable fields, if there is no change it will be disabled.

While the settings are being written, the following icon will be displayed next to the "*WRITE DEVICE*" button [ ]




If the changes to the device have been written, the following symbol will appear [ ]

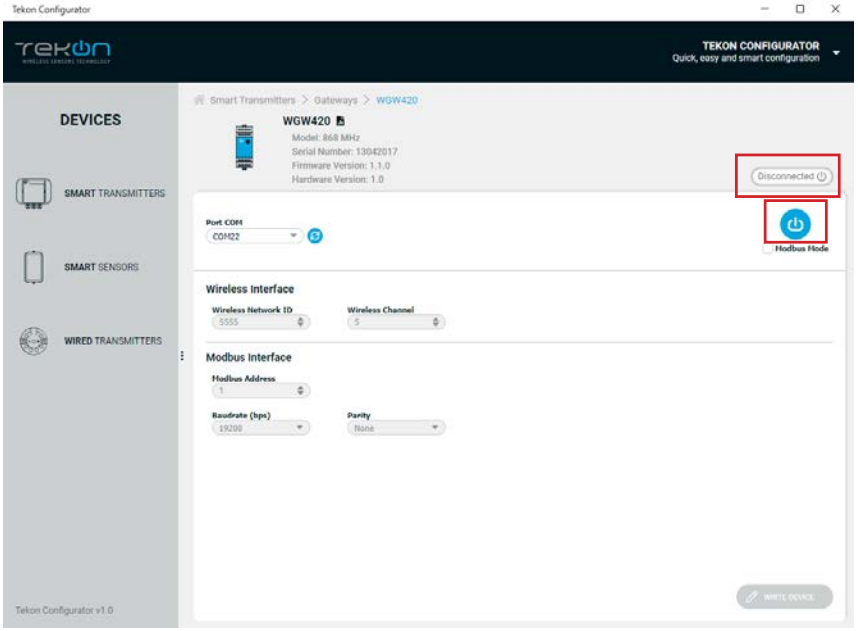
If not, the following symbol will appear [ ],try again and check that the device is connected correctly.

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

step
# 01
## WGW420 PLUS WIRELESS GATEWAY CONFIGURATION

**14**

Click on the button ( ) to exit *configuration mode* and return the device to normal operating mode.



step

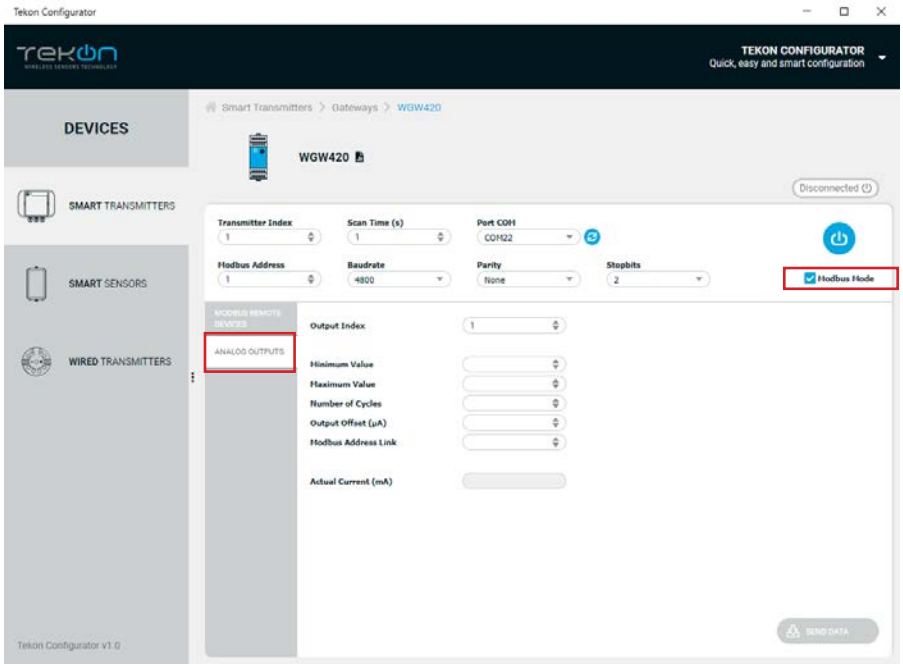
# 02

## WGW420 GATEWAY ANALOG OUTPUTS CONFIGURATION

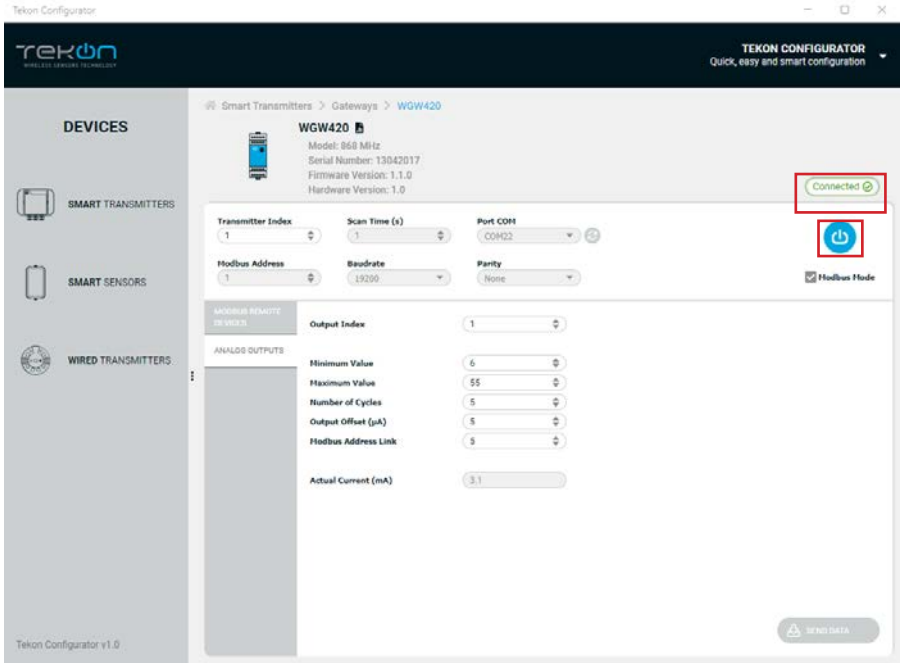
step
# 02
## GATEWAY ANALOG OUTPUTS

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

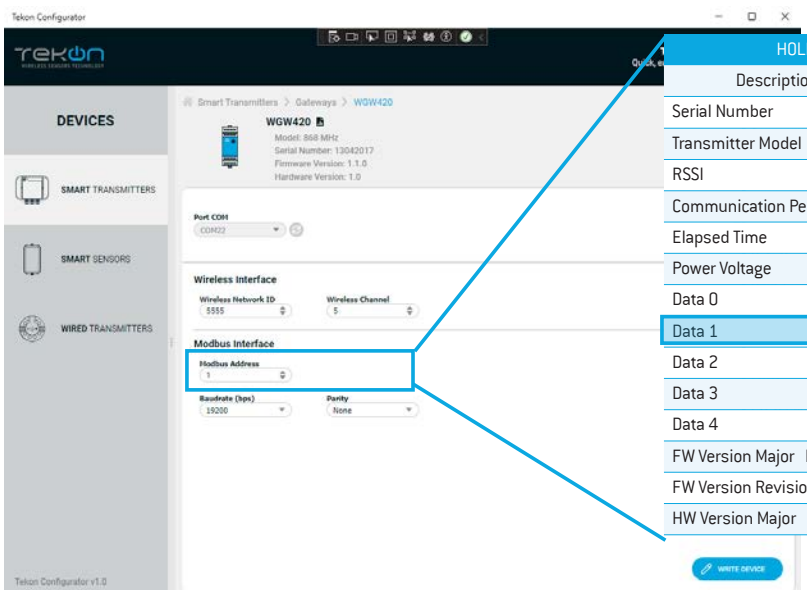
**02** In *Tekon Configurator Software* select *MODBUS MODE* >> *ANALOG OUTPUTS*




**03** Click the [ ⏻ ] button and wait for the device to connect.



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




*MB Add*

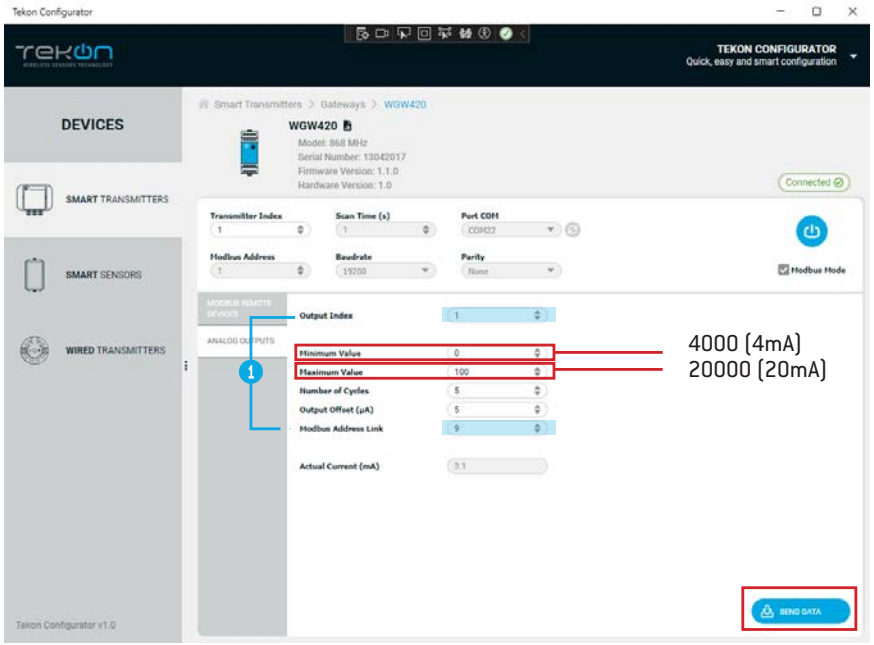
| HOLDING REGISTERS - TRANSMITTERS DATA | | |
|---|---|---|
| Description | Address | |
| Serial Number | (Transmitter Modbus Index-1) x 20+0 | 0 |
| Transmitter Model | (Transmitter Modbus Index-1)x20+2 | |
| RSSI | (Transmitter Modbus Index-1)x20+3 | |
| Communication Period | (Transmitter Modbus Index-1)x20+4 | |
| Elapsed Time | (Transmitter Modbus Index-1)x20+5 | |
| Power Voltage | (Transmitter Modbus Index-1)x20+6 | |
| Data 0 | (Transmitter Modbus Index-1)x20+7 | |
| Data 1 | (Transmitter Modbus Index-1)x20+9 | 9 |
| Data 2 | (Transmitter Modbus Index-1)x20+11 | |
| Data 3 | (Transmitter Modbus Index-1)x20+13 | |
| Data 4 | (Transmitter Modbus Index-1)x20+15 | |
| FW Version Major Minor | (Transmitter Modbus Index-1)x20+17 | |
| FW Version Revision | (Transmitter Modbus Index-1)x20+18 | |
| HW Version Major Minor | (Transmitter Modbus Index-1)x20+19 | 19 |

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

step
# 02 GATEWAY ANALOG OUTPUTS

**04**

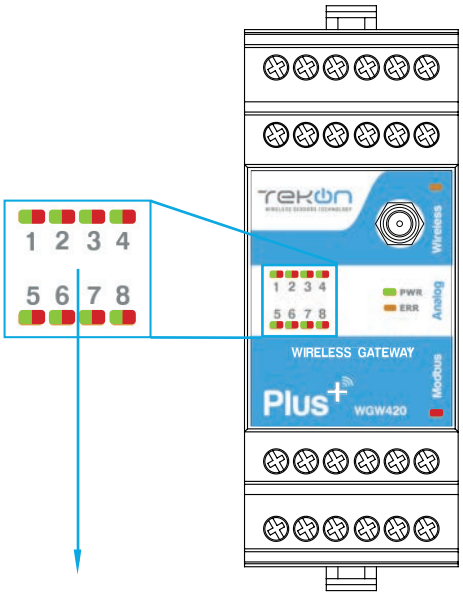
Link the "*Output Index*" (Gateway) to Temperature Input 1 (Transmitter) and configure the "*Modbus Address Link*" according to the previous step. Set the minimum and maximum values and click on "*Send Data*".




**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

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