



PLUS TWP-XAI INSTALLATION GUIDE

IG_PLUS_TWP-2AI_E02B

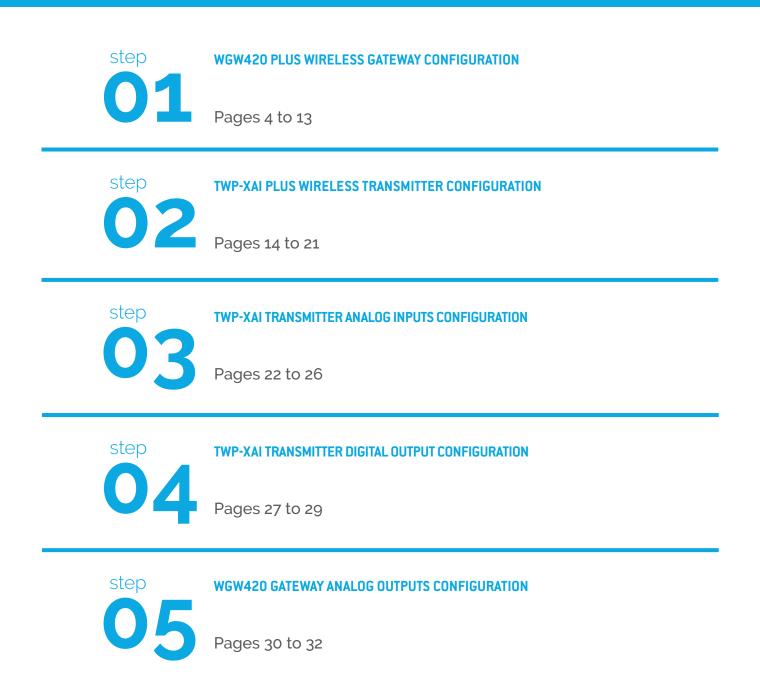
 TEKON ELECTRONICS | AVEIRO, PORTUGAL

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

TEKONELECTRONICS.COM

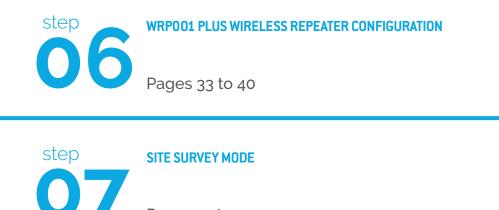
PLUS TWP-XAI WIRELESS TRANSMITTER INSTALLATION GUIDE

Table of contents



PLUS TWP-XAI WIRELESS TRANSMITTER INSTALLATION GUIDE

Table of contents



Pages 41 to 42





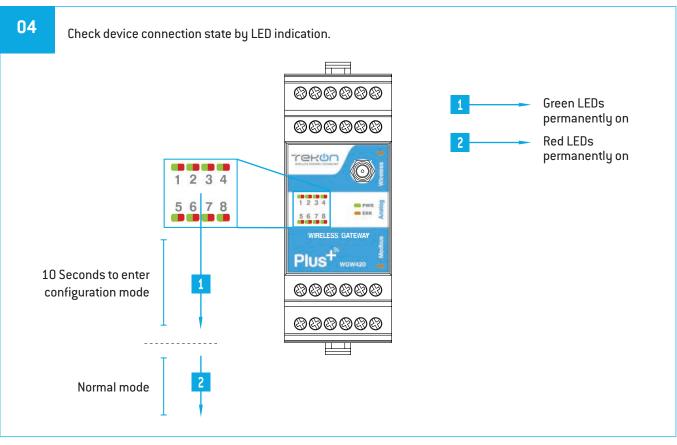
WGW420 PLUS WIRELESS GATEWAY CONFIGURATION

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

01	Connect the antenna to the <i>Gateway</i> .	
02	Wiring Connect the power supply and then the <i>RS485-USB</i> cable to the <i>Gateway</i> .	Wire Indication: Blue - GND; Brown - +24 VDC; Orange - Data+ (A); Black - GND; Yellow - Data - (B)
03	Power ON the device.	









¹ Tekon Configurator software is free of charge and available at <u>www.tekonelectronics.com</u>

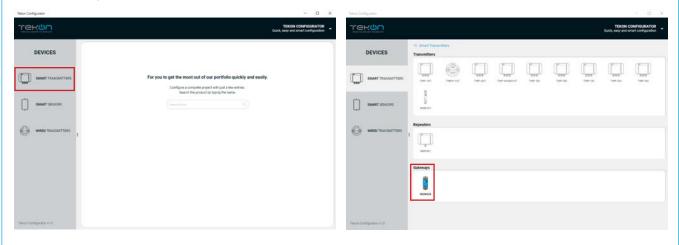


WGW420 PLUS WIRELESS GATEWAY CONFIGURATION

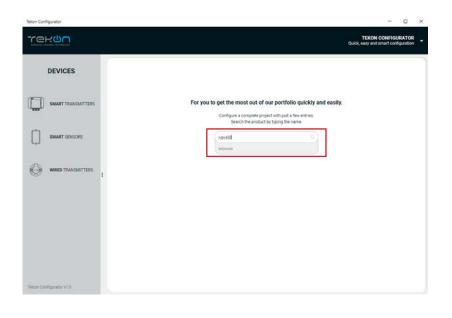
06

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.





Step 01 WGW420 PLUS V	IRELESS GATEWAY CONFIGURATION
07 Load the "Port Configuration Text Configuration	OM" corresponding to the WGW420 Wireless Gateway.
	WOW420 B INSMITTERS Pret COM Seet COM Seet COM
G WHED T	Wireless Interface Wireless Nature 10 Wireless Natu
Teleor Configurator V	(F) wet here
NOTE: If the USB cable has otherwise you need	already been connected before opening the device page, "Port COM" will appear in the list, o click on the " 🙆 " button.
08 Select correspondin	Port name².
רפאטר	TEXON CONTIGURATOR Quick, way and smart configuration If deniart Thanamitters > Dateways > WOW420 WOW420 B
	SMATTERS

Hodbus Address

 Baudrate (bps)
 Parity
 Stopbits

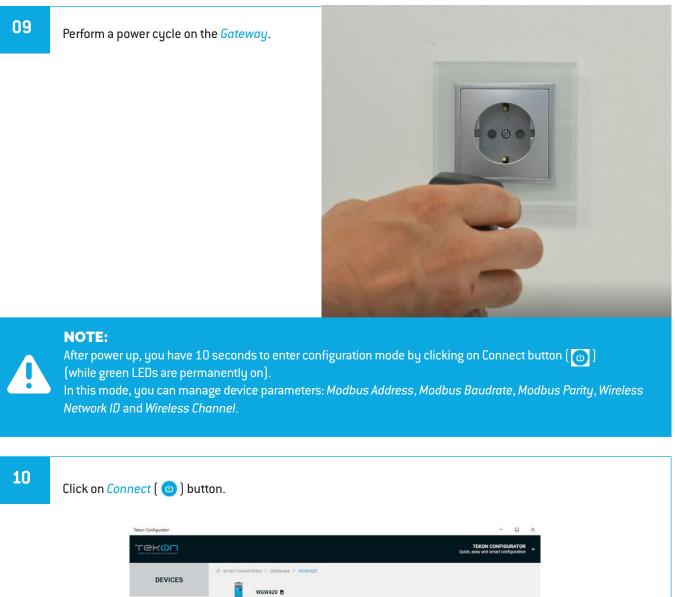
 (800)
 *
 (1000)
 *
 (2)
 *)

Ø нетакиз.

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



WGW420 PLUS WIRELESS GATEWAY CONFIGURATION



DEVICES	vit Senart Transmitters > Galeways > WGW420	
SMART TRANSMITTERS	Port COH (COH2 * ©	(Disconnecter ())
WINED TRANSMITTERS	Wireless InterAce Workess Interace Modbus Interface Nodus Advise Backets (bis) Party Soughts 2 V	
Tekori Configurator v1.6		Ø WITECONS



Il connect to the device.	- 0 X
DEVICES Image: State Tradewirt Tradewirt State S	
s unable to connect to the device, the <u>connecton Failed</u> stat	tus is displayed. If it hasn't
	ill he diseleved
Firmware Version: 1.0	
ify configuration mode activation by checking LEDs on	the gateway.
	Green LEDs performing scan animation
	Sunable to connect to the device, the Connected' message we have to the previous steps and check the port COM. Image device, the "Connected' message we have to the device, the "Connected' message we have to the device, the "Connected' message we have to the device in the devi

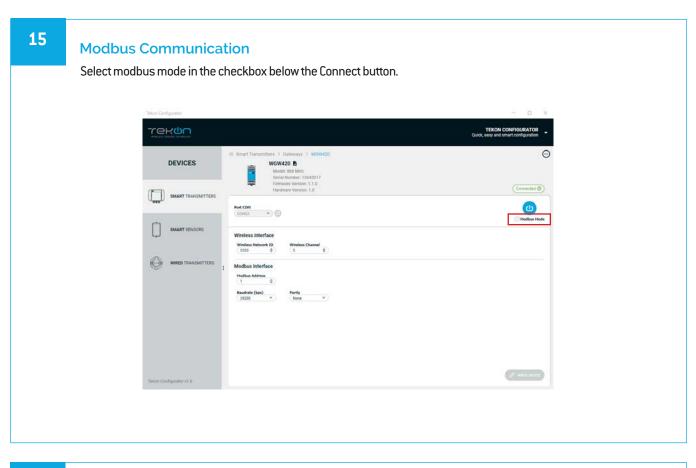


WGW420 PLUS WIRELESS GATEWAY CONFIGURATION

13	Take note of device configuration data available, namely: <i>Modbus Address</i> , <i>Modbus Baudrate</i> , <i>Modbus Parity</i> , <i>Wireless Network ID</i> and <i>Wireless Channel</i> .
	NOTE: The wireless network connection between devices is ensured by setting the same <i>Wireless Network ID</i> and <i>Wireless Channel</i> parameters.
	You can change the editable parameters. To save your changes, click on WRITE DEVICE. If the changes have been written to the device, the symbol () will appear. If not, the symbol () will appear: try again and check that the device is connected correctly.
14	Click on the <i>Disconnect</i> button.
	Marcane Marcane <t< td=""></t<>
Telon Configurator v1.0	The "Connected" status changes to "Disconnected".



01 WGW420 PLUS WIRELESS GATEWAY CONFIGURATION



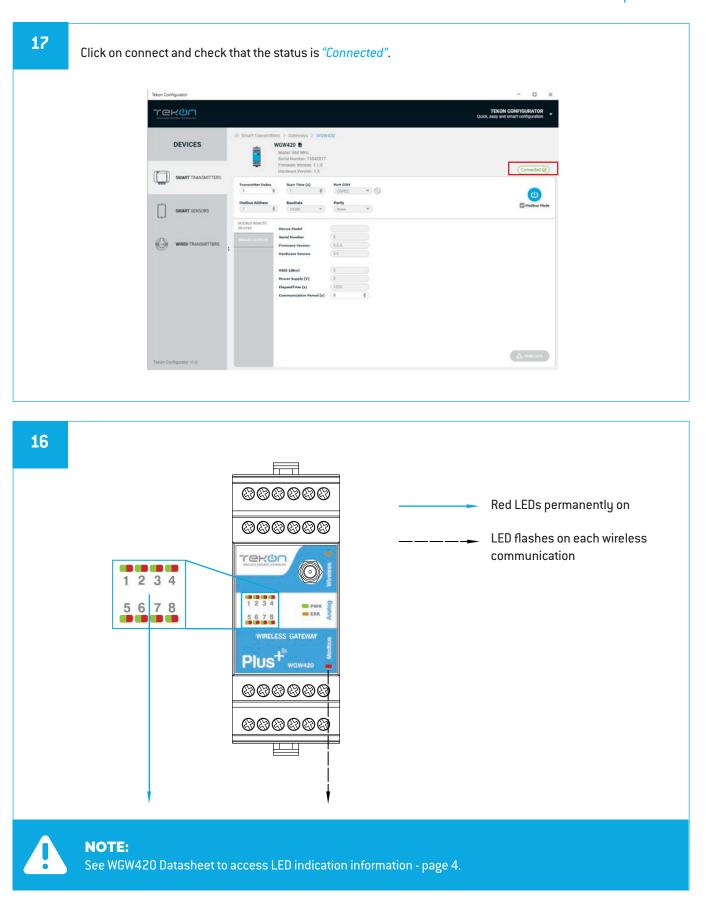
16

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

	er Smart Transmitters > Guteways > WGW420	
DEVICES	W Sharr Insurings 5 voite-lags 7 voit-20 Work420 E Model: 606 Mini: Sarris Hamber Firmmary Vention: 13.0 Hardware Vention: 18	(Disconnected (2))
SMART SENSORS	Transacture Jodes Scan Time (s) Peet C0H 1 0 1 0 00902 * © Holdban Address Bandrate Peetgr 1 0 1000 * Rose *	(1) ≥ Hodbus Hode
WIRED TRANSMITTERS		(A) market



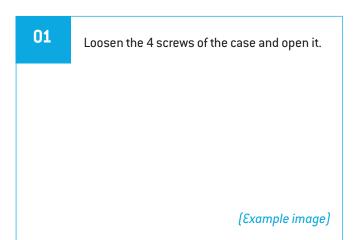
WGW420 PLUS WIRELESS GATEWAY CONFIGURATION







TWP-XAI PLUS WIRELESS TRANSMITTER CONFIGURATION





02 Connect a micro USB cable to the computer and then to *TWP-1AI PLUS Wireless Transmitter*.



(Example image)

03	Open Tekon Configurator Software	

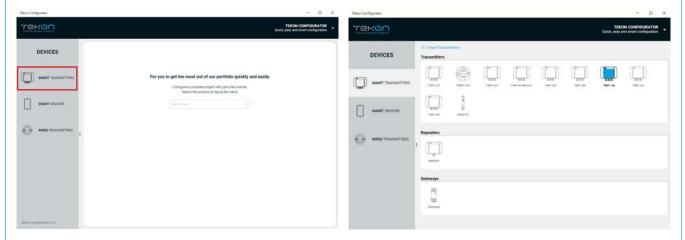


02 TWP-XAI PLUS WIRELESS TRANSMITTER CONFIGURATION

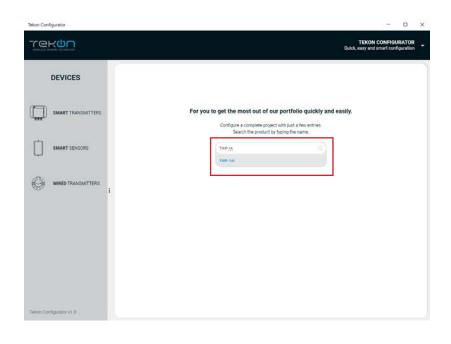
04

Open the TWP-1AI PLUS Wireless Transmitter 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 TWP-1UT.



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





TWP-XAI PLUS WIRELESS TRANSMITTER CONFIGURATION

05	Load the "Port COM" corresponding to the TWP-1AI PLUS Wireless Transmitter.
	NOTE: If the USB cable has already been connected before opening the device page, "Port COM" will appear in the list, otherwise click the button (②)
06	Select corresponding <i>Port Com</i> ² .
	Exercision Exercision Exercision Image: section control of the section control

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



V O 2 TWP-XAI PLUS WIRELESS TRANSMITTER CONFIGURATION	
O7 Click on the "Connect" button (()) to enter <i>Configuration Mode</i> .	
<complex-block><complex-block><complex-block></complex-block></complex-block></complex-block>	



TWP-XAI PLUS WIRELESS TRANSMITTER CONFIGURATION

08	The software will connect to the device.
	Note: State
	NOTE: If the software is unable to connect to the device, the vegeted error to connected, go back to the previous steps and check the port COM.
09	When the software connects to the device, the " <i>Connected</i> " message will be displayed.
	<complex-block></complex-block>



02 TWP-XAI PLUS WIRELESS TRANSMITTER CONFIGURATION

10

Configure *Wireless Network ID* and *Wireless Channel* previously obtained from *Gateway*.

The wireless connection between both devices is ensured by setting the same *Wireless Network ID* and *Wireless Channel* parameters. Gateway Modbus Index will define the modbus registers window used to store information sent by the transmitter. Each transmitter should have a different *Gateway Modbus Index* in order to avoid information override.

Click on Write Device button to update Transmitter settings.

Early Review 111111				TWP-1AI E		DEVICES	
SAMUT SERVICE Marchan Marchan (1) SAMUT SERVICE Correlations Correlations (2) SAMUT SERVICE Correlations Correlations (2) SAMUT SERVICE Correlations Correlations (2) SAMUT SERVICE Correlations Correlations	Convected			Serial Number 1111111 Females Version 1.7.1			-
SMART SENSION Bit of Developments Bypendian Rinds Bit of Dona Image: Sension Rinds Bit of Dona Developments Developments Image: Sension Rinds Bit of Dona Developments Developments	(0		MANT PRAYMENTING	 D
Windows Network (D 100000011) 0				Operation Mude	controutinos	SMART SENSORS	
(B) and a second s			1600085855	Windows Network ED	Associate analysis.		
						WIRED TRANSMITTERS	0
Transmitter Endes (1 0)		0	(1	Transmitter Indea		1	~
Communication Period (a) 1 0		(4)	0	Communication Pariod (s)			
Prevent Supply (V) (3.1							
Enternal Temperature (MC) 27-00			23-86	(Harnal Temperature (HC)			

On this page you can configure the transmitter's *communication period*, i.e. the time interval between measurements and communication of the values to the gateway. In addition, you can configure the *reconnection period* which is only triggered when communication between the gateway and the transmitter fails. When communication fails, the transmitter will try to connect to the gateway using the following logic: - 5 attempts with the communication period set;

- N attempts with the reconnection period until communication is successful.

The default reconnection period is 30 minutes. Please note that short reconnection periods (< 30 minutes) will impact the transmitter's autonomy if communication takes a long time to be re-established.

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 deactivated.

While the settings are being written, the following icon will be displayed next to the "WRITE DEVICE" button ()

rs > Transmitters > TWP-	1AI		
WP-1AI B Mode: 868 MHz Serial Namber: 1111111			
Firmware Version: 1.7.1 Hardware Version: 1.1			(Connected (
			6
Operation Hode	End Device		
Wireless Network ID	1600005858	•	
Wireless Channel	(u	0	
Transmitter Index	đ	\$	
Communication Period (s)	(1	•	
Internal Temperature (*C)	27.46		
			O VIIITE DEVICE
	Firmware Version: 1.2.1 Hardware Version: 1.1	Primuse Version 12.3 Narbury Version 1.1	Primuse Version: 1.1 Nardeard Version: 1.1



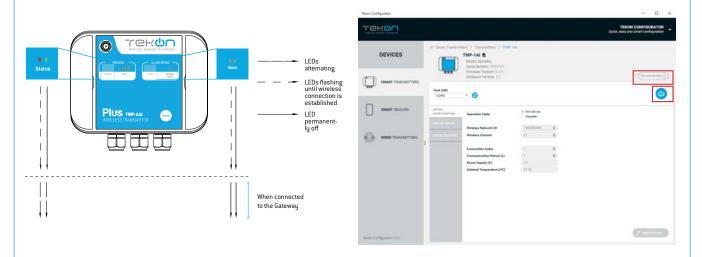
TWP-XAI PLUS WIRELESS TRANSMITTER CONFIGURATION

Tekon Configurator			
			- o ×
			TEKON CONFIGURATOR Quick, easy and smart configuration
	Smart Transmitters > Transmitters > TWP-14 TWP-14 B Mode: 668 Maz Serial Number: 111111 Fermaare Version: 1.7.1 Hardware Version: 1.1	N -	Connectes ()
- me	Fund COH1 (COH3) * (5)		٥
	DEVICE Operation Hode Verticol Device Wireless Network ID	End Dence Repeater (1600085855	
WIRED TRANSMITTERS	Wirders Channel Wirders Channel Transmitter Index Communication Period (s) Power Supply (V) External Temperature (*C)	(13 0) (1 0) (3.1 (27.92	

11

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

After clicking on *Disconnect* button, the device will permanently attempt to connect to a wireless network. If there is no communication, the Status LED flashes slowly and the Mode LED flashes quickly. When there's a successful connection directly to a wireless network, both status LEDs alternate quickly - during 1 minute if the transmitter is operating as end device or permanently if operating as repeater.



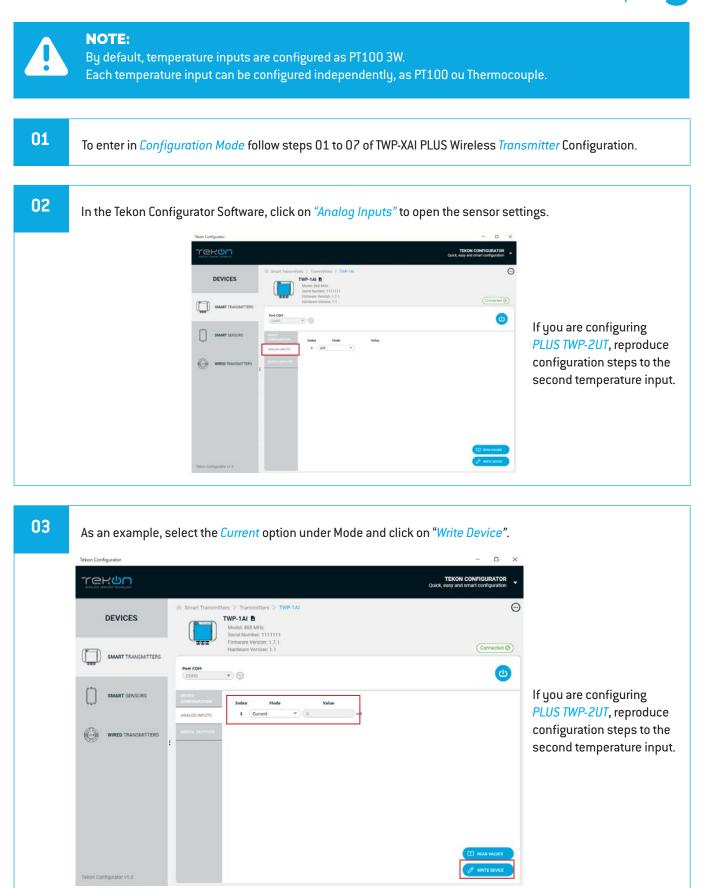
NOTE:

Make sure that the devices are at a distance of at least 3 meters or remove the antenna from the gateway (in case both devices are near each other).

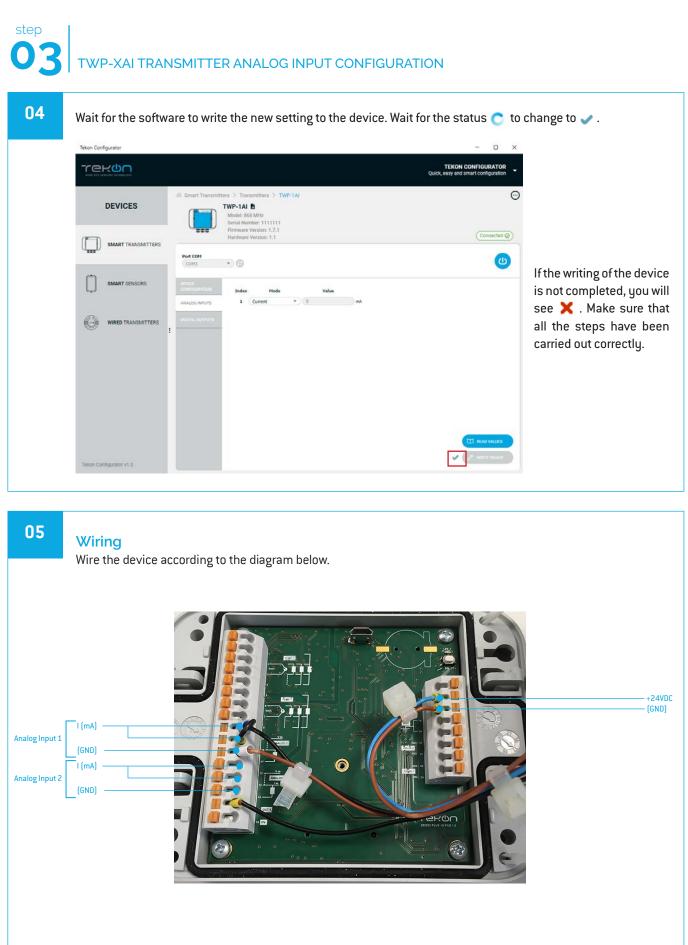




TWP-XAI TRANSMITTER ANALOG INPUT CONFIGURATION







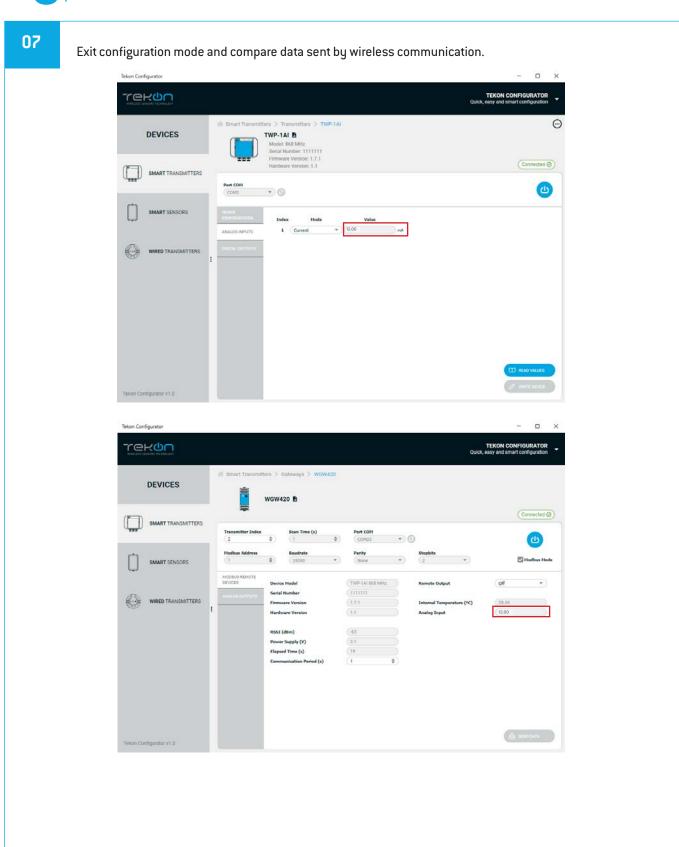


TWP-XAI TRANSMITTER ANALOG INPUT CONFIGURATION

06	Validate conf	iguration by clic	king on <i>Read Values</i> button.	
		kon Configurator		- • ×
				TEKON CONFIGURATOR Quick, easy and smart configuration
		DEVICES	Smart Transmitters > Transmitters > TWP-1AI TWP-1AI Model: IS68 MHz	Θ
	(SMART TRANSMITTERS	Secial Number: 111111 Firmware Version: 1.7.1 Harthware Version: 1.1	(Connected (G)
			Port COM CONS * @	٥
		SMART SENSORS	ANALDO APUTS 1 Carrent * 0	An I
	(Inditia, Collectin	
		ekon Configurator v1.0		
	After clicking	the button, wait	t for the status ${f C}$ to change to ${f v}$. To confirm that the reading has taken place.
		rerun		
		8747121312401817920401357	資 Smart Transmitters > Transmitters > TWP-1AI	Quick, easy and smart configuration
		DEVICES	TWP-1A1 b Model: 868 MHz Secial Number: 111111 Emmare Version: 1.7.1	
	(SMART TRANSMITTERS	Hardware Version: 1.1 Port COH	
		SMART SENSORS	CORD • 3	
		ф Ф.	ANALOS INPUTS 1 Current *) (1200	mà
		WIRED TRANSMITTERS		
		ekon Configurator v1.0		COMPACT AND A CONTRACT AND A CO
			not completed you will one Y	
	correctly.	of the device is	not completed, you will see 👗.	Make sure that all the steps have been carried our
		<u></u>		
	NOTE: Configuration	on and Operation	n validated	
	Measured v			etup. In this example 12mA (12000uA) are bein
	injected.			



03



TWP-XAI TRANSMITTER ANALOG INPUT CONFIGURATION





01

04 TWP-XAI TRANSMITTER DIGITAL OUTPUTS CONFIGURATION

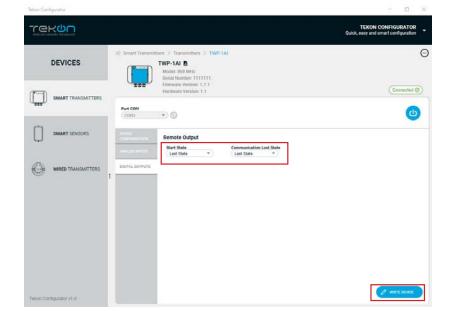
To enter in *Configuration Mode* follow steps 01 to 07 of TWP-XAI PLUS Wireless *Transmitter* Configuration.

02	In <i>Tekor</i>	n Configurator Soft	tware select Digital Outputs.	
		Tekon Configurator		- 0 ×
				TEKON CONFIGURATOR Quick, easy and smart configuration
		DEVICES	Smart Transmitters > Tausmitters > TWP-1AI TWP-1AI TWP-1AI TWP-1AI Model: R68 MHz Straid Number: 1111111 Firmware Version: 1.7.1	
		SMART TRANSMITTERS	Hatchware Version: 1.1	(United States)
		SMART SENSORS	Start Start Remote Output Ank Communication Loss Start State Off *	
		WIRED TRANSMITTERS	Bold TAL OUTPUTS	
		Tekon Configurator VI 0		Ø WHITE ELEVEL

03 Remote Control Output

Digital output remotely controlled by Gateway modbus protocol.

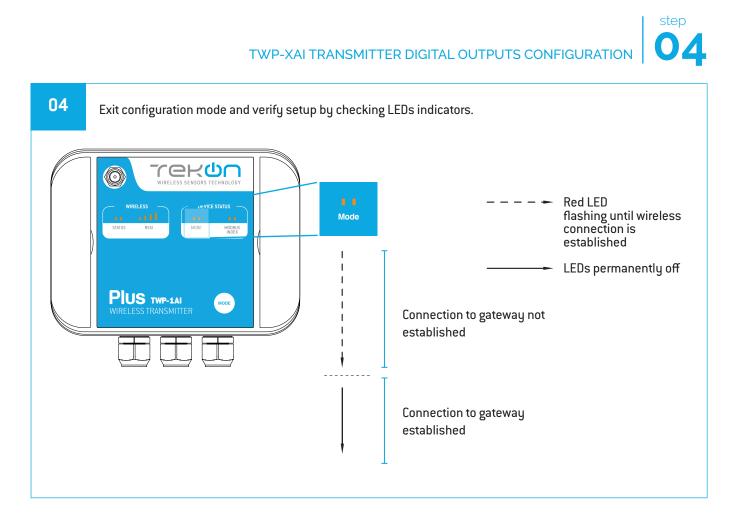
Define Start state and Communication lost state. Click on Write Device button.



Wait for the software to write the new setting to the device. The status \bigcirc of should change to \checkmark .

If the writing of the device is not completed, you will see 🗙 . Make sure that all the steps have been carried out correctly.





05

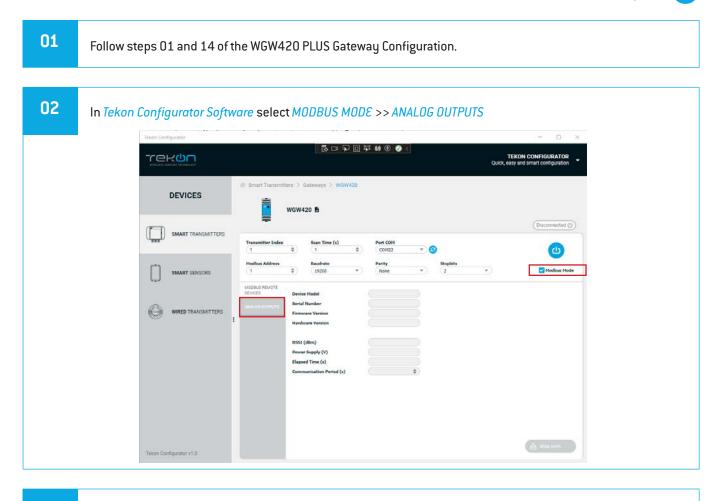
Using the Tekon Configurator you can change the State of Remote Output by setting the modbus register on the gateway. The Gateway will send the information in the next time the transmitter performs a communication.

NINGLELE EENGOPS TEENDLUGT					easy and smart configura
DEVICES	-	ers > Gateways > WGW420 WGW420 🖺			
SMART TRANSMITTERS	Transmitter Index	Scan Time (s) 0 (1 0	Port COM	0	Connec
SMART SENSORS	Modbus Address	Baudrate (19200)	Parity None *	Stopbits * (2 *	Modbur
ц.	MODBUS REMOTE DEVICES	Device Model	TWP-1AI 868 MHz	Remote Output	On
		Serial Humber Firmware Version Hardware Version	(1111111) (17.1 (1.1	Internal Temperature (°C) Analog Input	(28.64 (0
		RSSI (dBm)	(-68		
		Power Supply (V) Elapsed Time (s)	0		
		Communication Period (s)	(<u>1</u> •)		





GATEWAY ANALOG OUTPUTS



03

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

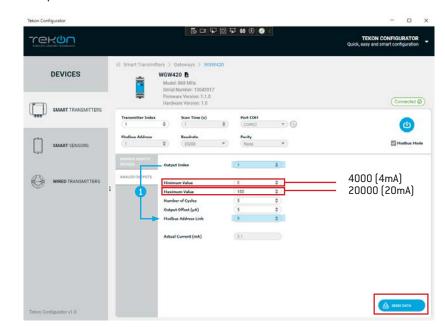
21 P		Description	Address
DEVICES	mert Transmitters > Gateways > W3W420 WGW420	Serial Number	(Transmitter Modbus Index-1) x 20+0
	Model: 868 MHz Sertal Number: 13042017	Transmitter Model	(Transmitter Modbus Index-1)x20+2
SMART TRANSMITTERS	Firmware Version: 1.1.0 Hardware Version: 1.0	RSSI	(Transmitter Modbus Index-1)x20+3
den h	e COM	Communication Period	(Transmitter Modbus Index-1)x20+4
—	0H22 • 3	Elapsed Time	(Transmitter Modbus Index-1)x20+5
SMART SENSORS	reless interface	Power Voltage	(Transmitter Modbus Index-1)x20+6
	fineless Network ID Wireless Channel	Data O	(Transmitter Modbus Index-1)x20+7
WIRED TRANSMITTERS	odbus Interface	Data 1	(Transmitter Modbus Index-1)x20+9
2	lodbus Address	Data 2	(Transmitter Modbus Index-1)x20+11
	audrate (bps) Parity 19200 * None *	Data 3	(Transmitter Modbus Index-1)x20+13
	12000 · · · · · · · · · · · · · · · · · ·	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
Tekon Configurator v1.0			



step 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

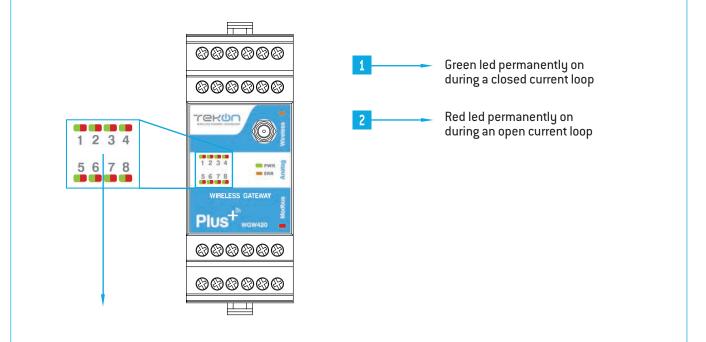




NOTE:

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.



:





6 connect and configure the plus wireless repeater

01	Loosen the 4 screws of the case and oppen it.
	-





Connect a micro USB cable to the computer and then to *WRP001 PLUS Wireless Repeater*.



03

Open the WRP001 PLUS Wireless Repeater device page. There are two different ways to get to the device page.

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

lekon Configurator		- D X Tekon Configurator								- 0 ×
rekon		Cuck, easy and strart configuration							TEKC Quick, easy a	N CONFIGURATOR
DEVICES		DEVICES		Emart Transmitters	Atlens					
SMART TRANSMITTERS	For you to get the most out of our portfolio quickly and easily. Configure a complete project with just a twe entries.	SAMAT TRANS	TTERS	THP-12T	Tatra sat	() 109-207	() 398 789-101	THE DI	() 	() THE THE
MART SENSORS	Search the product by being the name	SMART SUCCO	6	100-44	dir wil					
		C WIRED TRAVISIO		epeaters						
				wareau						
			64	ateways						
				101403						
famon Contriguentor v1 II										



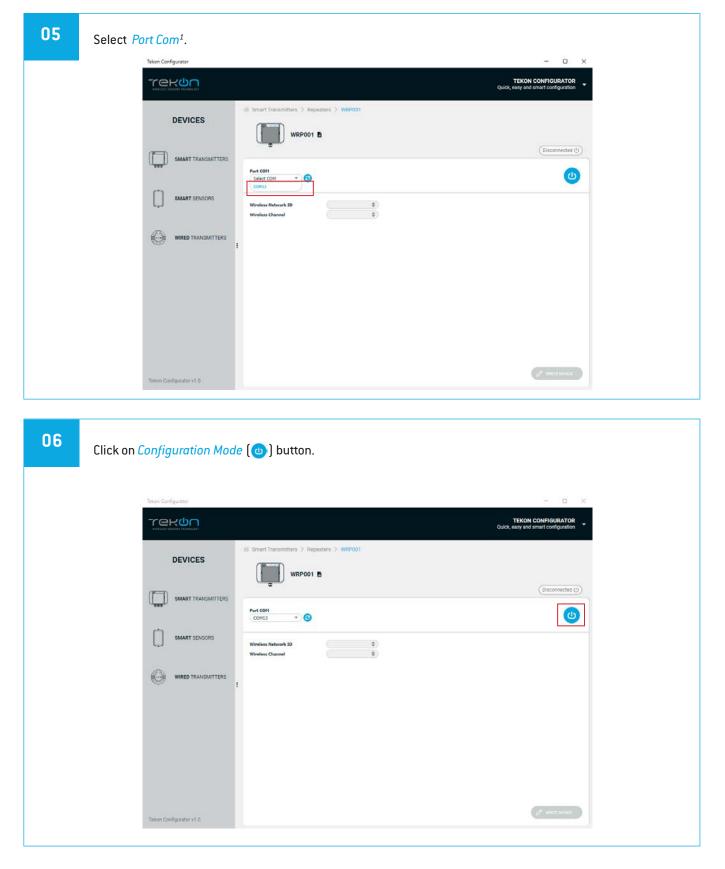
CONNECT AND CONFIGURE THE PLUS WIRELESS REPEATER

2nd option: Enter the nam	e of the device in the " <mark>Search Device</mark> " field on the home page and select.
Tekon Configurator	- D X
	TEKON CONFIGURATOR Quick, easy and smart configuration
DEVICES	
SMART TRANSMITTERS	For you to get the most out of our portfolio quickly and easily.
SMART SENSORS	Configure a complete project with just a few entries. Search the product by typing the name.
Ģ	nuccos
WIRED TRANSMITTERS	
	ponding to the WRP001 PLUS Wireless Repeater.
If the USB cable has alread the list, otherwise click on	y been connected before opening the device's page, the "COM Port" will appear in the button ②.
Tekon Configurator	- • ×
	TEKON CONFIGURATOR Quick, easy and smart configuration
DEVICES	Smart Transmitters > Repeaters > WRP001 WRP001 WRP001
SMART TRANSMITTERS	(Disconnected ())
(*) SMART SENSORS	Windess Network ID Windess Network ID

1



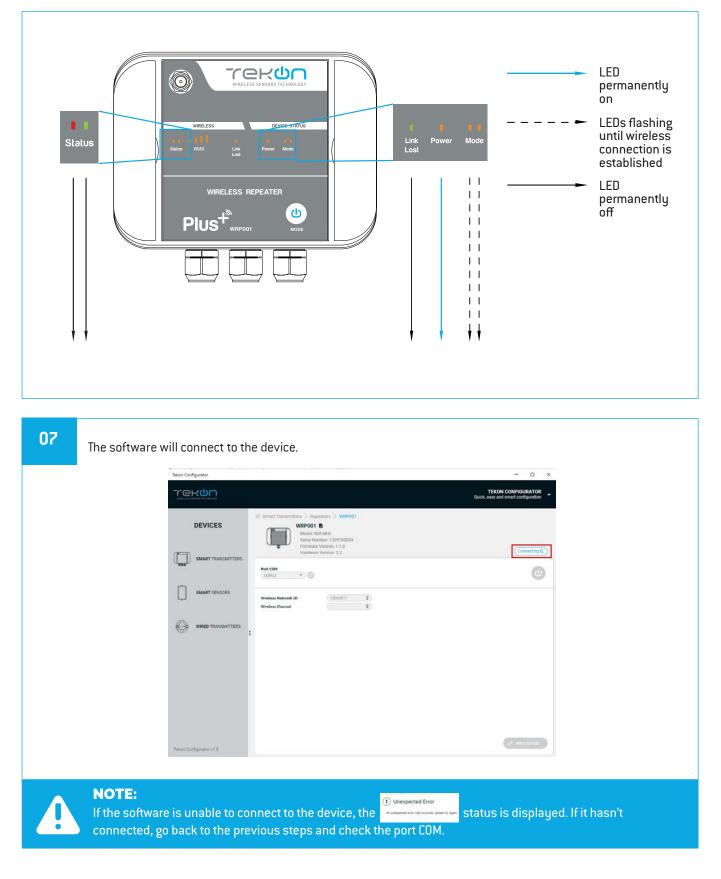
6 connect and configure the plus wireless repeater



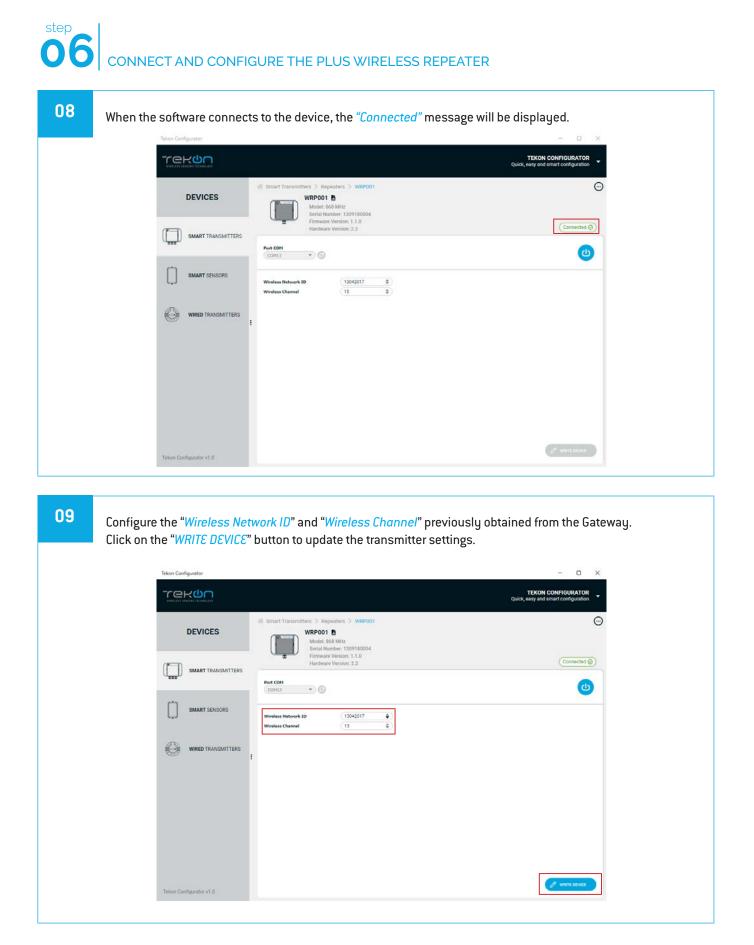
¹ You can check device's serial port name in "Device Manager" on Microsoft® Windows® operating system.











TEKONELECTRONICS.COM

÷

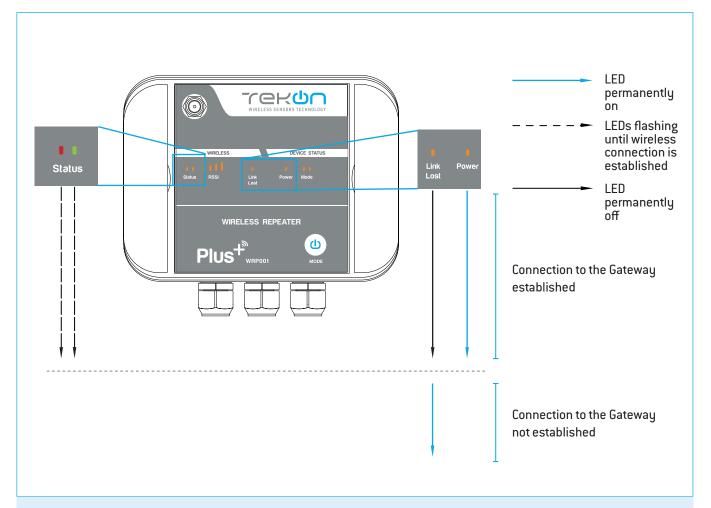


CONNECT AND CONFIGURE THE PLUS WIRELESS REPEATER

10	Wait for the software to write the new setting to the device. Wait for the status Ċ to change to 🛹 .
	Tekon Configurator – – X
	TEKON CONFIGURATOR Quick, easy and smart configuration
	DEVICES WRP001 C
	Model: 865 MHz Serial Humber: 1309180004
	Emmarre Version: 1.1.0 Hardware Version: 2.2
	SMART SENSORS Wiveless Retwork ID 13042017 0 Wiveless Channel 13 0
	WIRED TRANSATTERS
	Telion Configurator v1.0
	If the writing of the device is not completed, you will see 🗙. Make sure that all the steps have been carried out
	correctly.
11	Click 幽 to exit the configuration and return to normal operating mode.
	Quick, easy and smart configuration
	OEVICES OEVIC
	Berial Namber: 1309190004 Firmware Version: 1.1.0 Disconnected (0)
	SMART TRANSMITTERS
	SMART SENSORS
	Worless Hetwork ID 13042017 Whreas Channel 13
	WIRED TRANSMITTERS
	Tekon Configurator v1.0
	Tekon Configurator v1.0







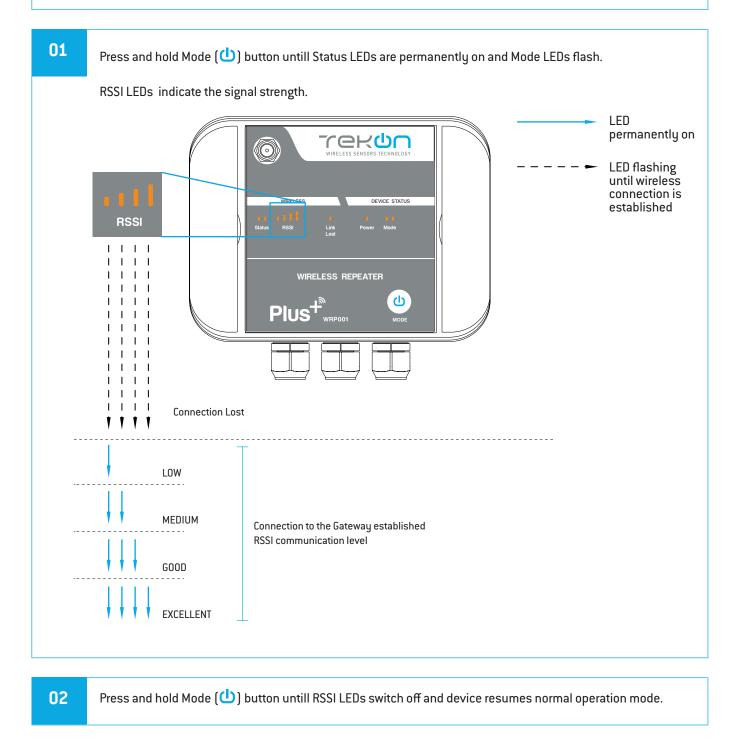




07 SITE SURVEY MODE

Site survey mode is a tool that allows a quick wireless signal strength evaluation at the site of installation. It doesn't require additional equipment or software.

This feature is available in all the transmitters and repeater from PLUS Product Family.



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