WIRELESS SENSORS TECHNOLOGY

THM502-I

RTD AND OHM MODBUS TEMPERATURE HEAD TRANSMITTER

INSTALLATION GUIDE

IG_INHD_THM502-I_E01A

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RTD AND OHM MODBUS TEMPERATURE HEAD TRANSMITTER THM502-I

INSTALLATION GUIDE

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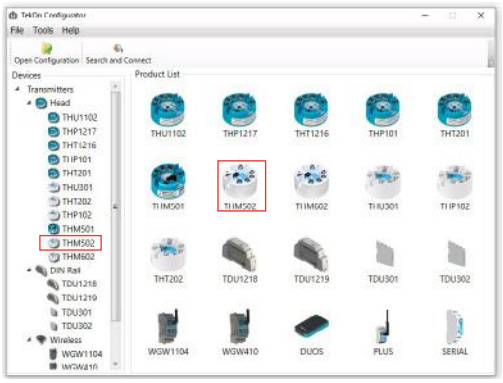
DOWNLOAD AND INSTALL *"TEKON CONFIGURATOR"* FREE SOFTWARE FROM TEKON ELECTRONICS WEBSITE

01

Execute Tekon Configurator software.

02

Select THM502-I transmitter from the main window.



03

Make sure that the equipment is connected to the power supplier.

04

Make sure that the equipment is connected with the computer through a RS485 TO USB CONVERTER CABLE or similar equipment.

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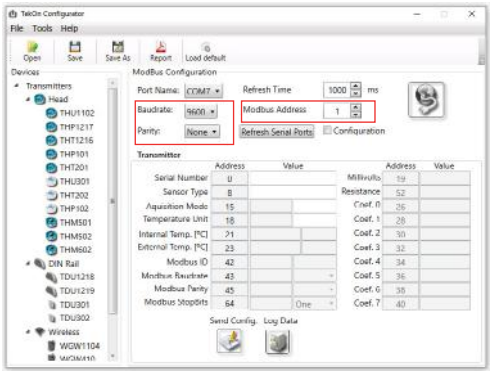
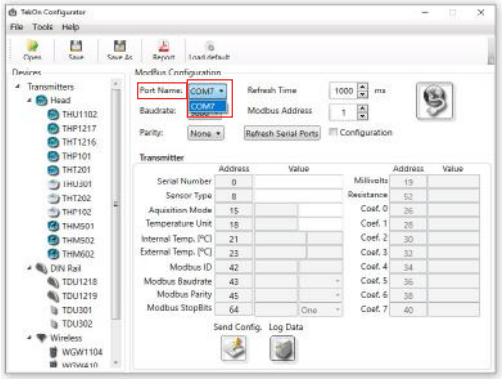
05

Verify THM502-I default configurations: Modbus Address; Baud rate; Parity; Data bits and Stop bits.



06

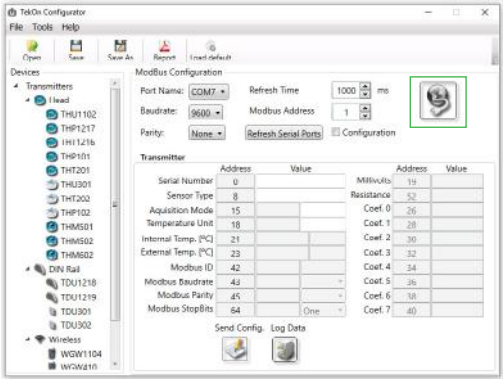
Select the serial port to wich you have connected the THM502-I transmitter.



NOTE:
The serial port depends on the operating system.

07

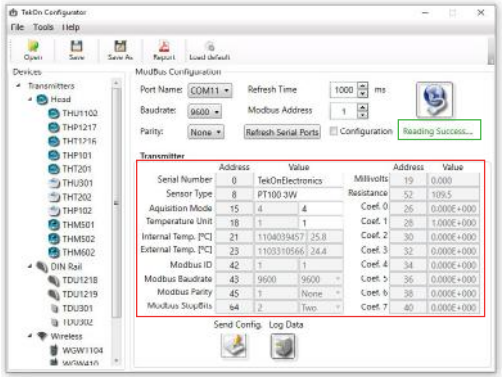
Connect to the THM502-I transmitter.



08

After successful connection, the message "Reading Success..." appear below the connection button.

The fields regarding to the transmitter variables are filled with their values.



NOTE:
If you do not connect any sensor to the transmitter, temperature value will be 65535.00º C.

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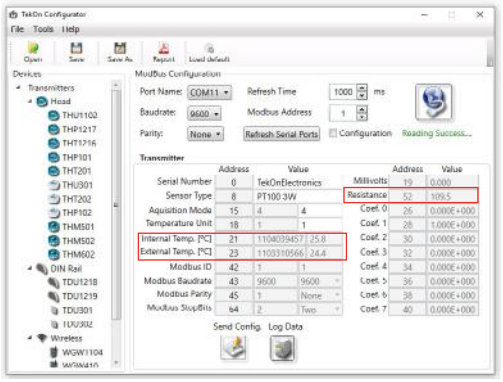
09

External temperature value is a 32-bit format and is available in register 23. Resistance value is a 32-bit format and is available in register 52.

Both registers can be accessed through Read Holding Registers function (FC = 03).
Temperature and Resistance values are in Double32 CD AB type format.

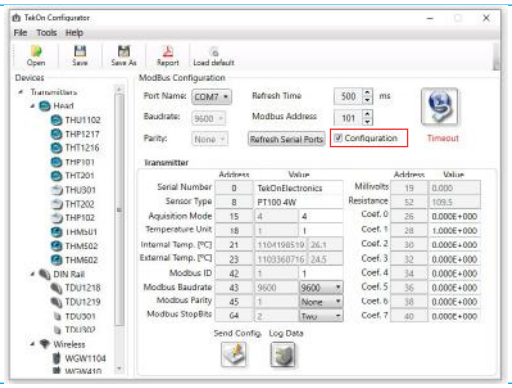


10

To edit transmitter configurations, it is necessary to select the configuration mode.

Select the checkbox before "Configuration".

NOTE:
The transmitter will be in Timeout, when you select the checkbox.



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You can set the configuration mode by two diffent actions:

1) Perform a power cycle, disconnecting the power plug and connecting again. You have a 5 seconds window to enter in configuration mode.

2) Press the transmitter button during five seconds to enter in configuration mode

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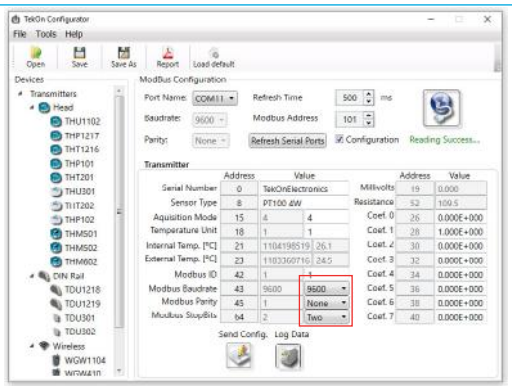
If you succeed, Modbus Baudrate, Modbus Parity and Modbus Stopbits fields will be able to be edited.



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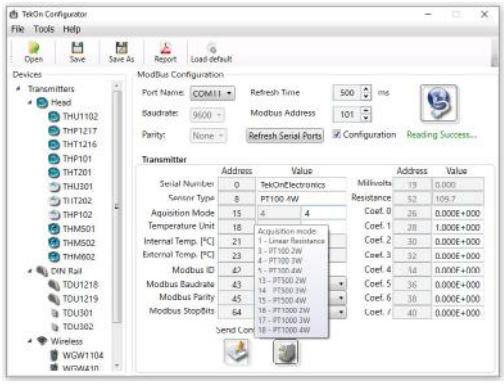
13

To change sensor type, place your mouse over Acquisition Mode field to view models available.

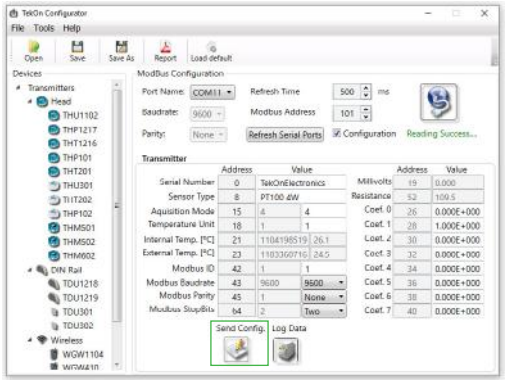
Write your sensor ID in the editable field.



14

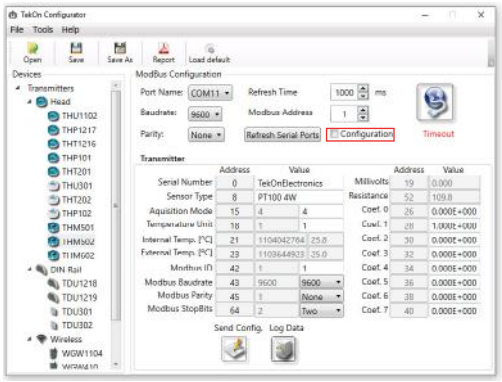
To validate the changes in configuration mode, click on Send Config button.

You must proceed this way to any single change.



15

To exit Configuration Mode, unmark the checkbox behind.



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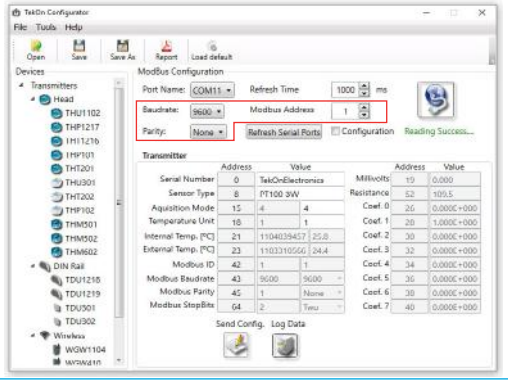
Update the Baudrate, Modbus Address and Parity to the values that you have changed in Configuration Mode and perform a power cycle again or press transmitter button for 5 seconds.

The changes will be enable when the message "Reading Success..." appears below the Connection button.



step 02 MODBUS MAP

MODBUS TABLE (HOLDING REGISTERS)			
Description	Address	Type	Values
Sensor status	13	UINT16	1 - Reading OK 2 - Open circuit 3 - Short circuit 6 - Internal temperature below the minimum allowed limit 7 - Internal temperature above the minimum allowed limit
Acquisition mode configuration	15	UINT16	1 - Linear resistance 3 - PT100 2W 4 - PT100 3W 5 - PT100 4W 13 - PT500 2W 14 - PT500 3W 15 - PT500 4W 16 - PT1000 2W 17 - PT1000 3W 18 - PT1000 4W
Internal temperature (simple resolution)	16	INT16	Temperature value from the internal sensor multipled by 10
External temperature (simple resolution)	17	INT16	Temperature value from the internal sensor multipled by 10
Temperature format configuration	18	UINT16	1 - °C 2 - °F 3 - K
Internal temperature (full resolution)	21	FLOAT32	Formato: CD AB (little endian byte swap)
External temperature (full resolution)	23	FLOAT32	Formato: CD AB (little endian byte swap)
Modbus slave address	42	UINT16	
Modbus baudrate	43	FLOAT32	Formato: CD AB (little endian byte swap)
Modbus parity	45	UINT16	
Sensor resistance measured	52	FLOAT32	Formato: CD AB (little endian byte swap)
Device model	54	UINT16	69 - THM502-I
FW version: Major | Minor	56	UINT16	
FW revision	57	UINT16	
HW version: Major | Minor	58	UINT16	
System state	59	UINT16	1 - Normal running 2 - Configuration 3 - Tekon user configuration 5 - Load default settings 255 - Deadlock
Modbus stop bits	64	UINT16	

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