WIRELESS SENSORS TECHNOLOGY

THM602-I

THERMOCOUPLE AND MV MODBUS TEMPERATURE HEAD TRANSMITTER

INSTALLATION GUIDE

IG_INHD_THM602-I_E01A

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THERMOCOUPLE AND MV MODBUS TEMPERATURE HEAD TRANSMITTER THM602-I

INSTALLATION GUIDE

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CONNECT AND CONFIGURE THM602-I TEMPERATURE HEAD TRANSMITTER

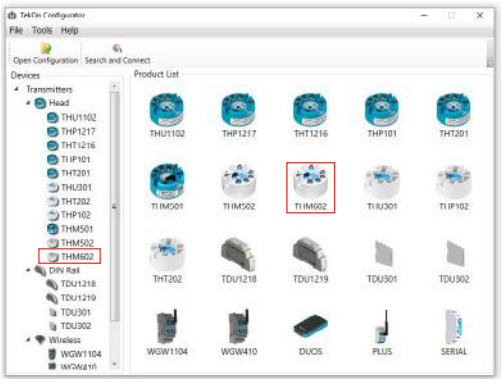
DOWNLOAD AND INSTALL *"TEKON CONFIGURATOR"* FREE SOFTWARE FROM TEKON ELECTRONICS WEBSITE

01

Execute Tekon Configurator software.

02

Select THM602-I transmitter from the main window.

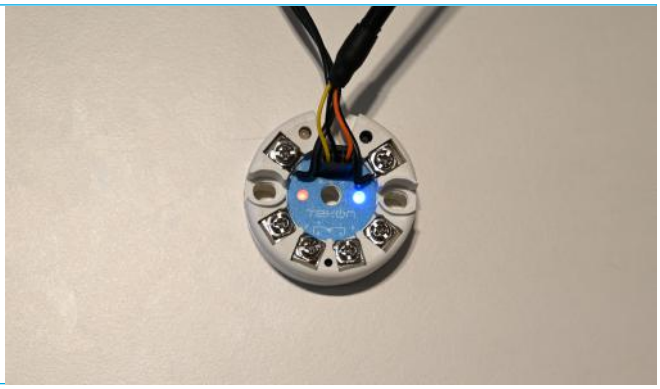


03

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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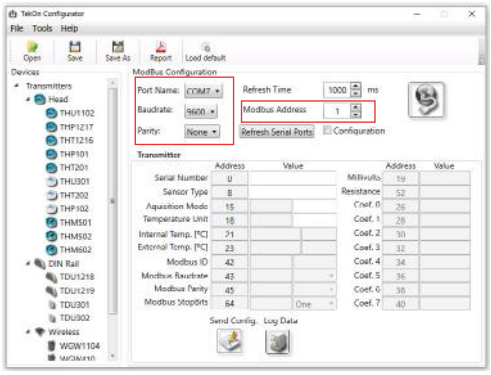
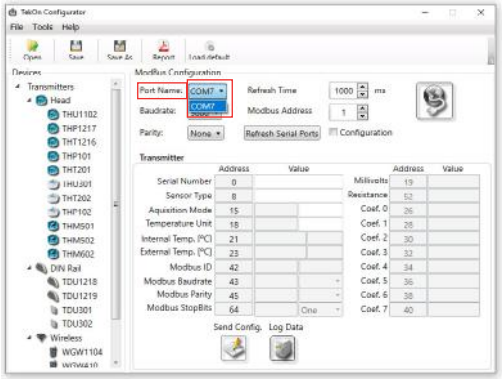
05

Verify THM602-I default configurations: Modbus Address; Baudrate; Parity; Data bits and Stop bits.



06

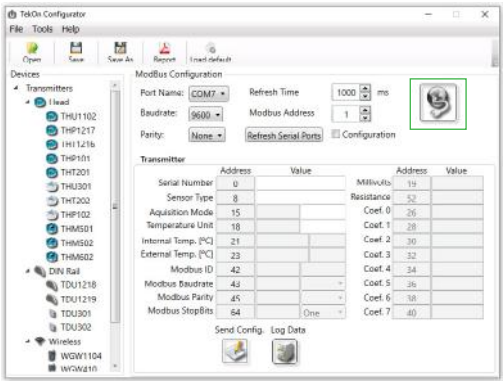
Select the serial port to wich you have connected the THM602-I transmitter.



NOTE:
The serial port depends on the operating system.

07

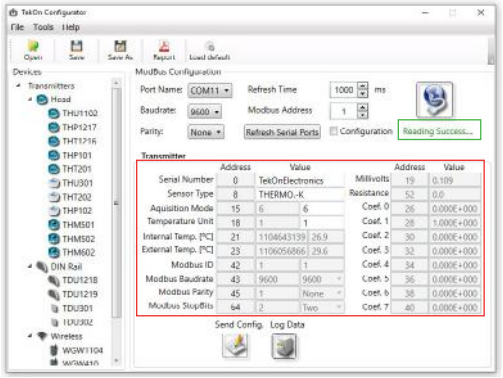
Connect to the THM602-I transmitter.



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, the temperature value will be 65535.00º C.

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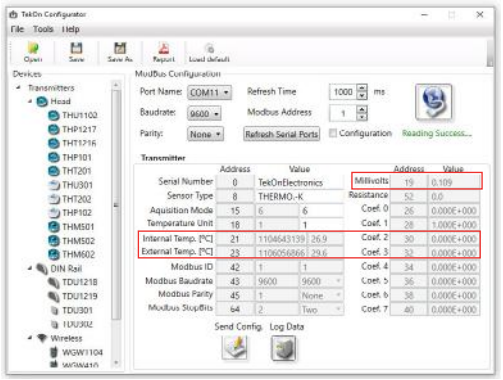
09

External temperature value is a 32-bit format and is available in register 23. Milivolts value is a 32-bit format and is available in register 19.

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



10

To edit the 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.

11

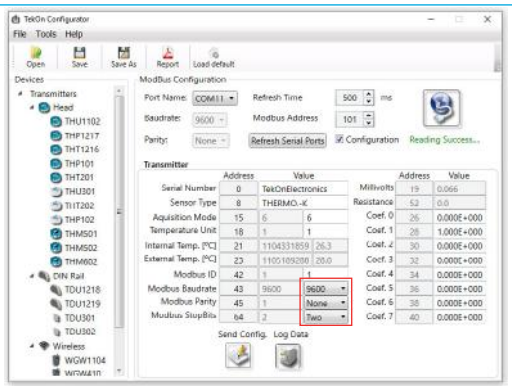
You can set the configuration mode by two diffent actions:

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

12

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



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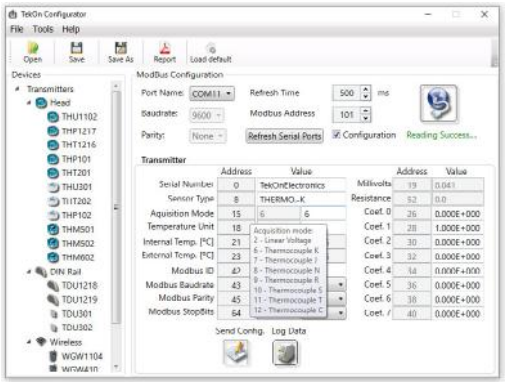
13

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

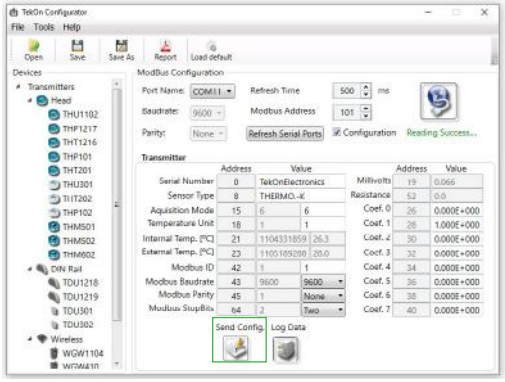
Write your sensor ID in the editable field.



13

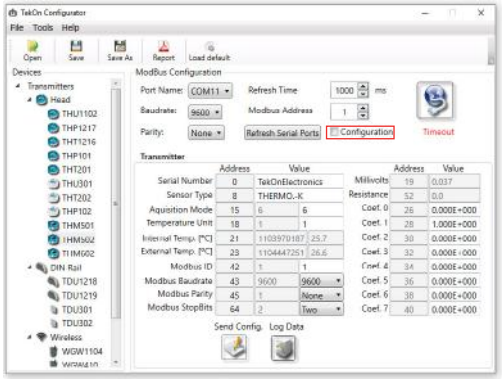
To validate the changes in configuration mode, click on Send Config button.

You must proceed this way to any single change.



14

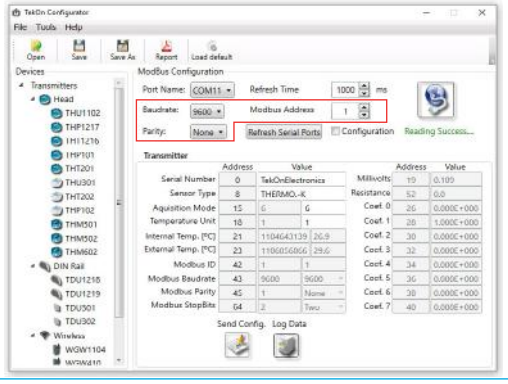
To exit Configuration Mode, unmark the checkbox behind.



15

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 6 - Internal temperature below the minimum allowed limit 7 - Internal temperature above the minimum allowed limit
Acquisition mode configuration	15	UINT16	2 - Linear voltage 6 - Thermocouple K 7 - Thermocouple J 8 - Thermocouple N 9 - Thermocouple R 10 - Thermocouple S 11 - Thermocouple T 12 - Thermocouple C
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
Acquired milivolts	19	FLOAT32	Format: CD AB (little endian byte swap)
Internal temperature (full resolution)	21	FLOAT32	Format: CD AB (little endian byte swap)
External temperature (full resolution)	23	FLOAT32	Format: CD AB (little endian byte swap)
Modbus slave address	42	UINT16	
Modbus baudrate	43	FLOAT32	Format: CD AB (little endian byte swap)
Modbus parity	45	UINT16	
Device model	54	UINT16	70 - THM602-I
FW version: Makor | 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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