WIRELESS SENSORS TECHNOLOGY

THM602-I

THERMOCOUPLE AND MV MODBUS TEMPERATURE HEAD TRANSMITTER

INSTALLATION GUIDE

IG_INHD_THM602-I_E02B

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THERMOCOUPLE AND MV MODBUS TEMPERATURE HEAD TRANSMITTER THM602-I

INSTALLATION GUIDE

Table of contents

step 01

CONNECT AND CONFIGURE THM602-I TEMPERATURE HEAD TRANSMITTER

Pages 3 to 9

step 02

MODBUS MAP

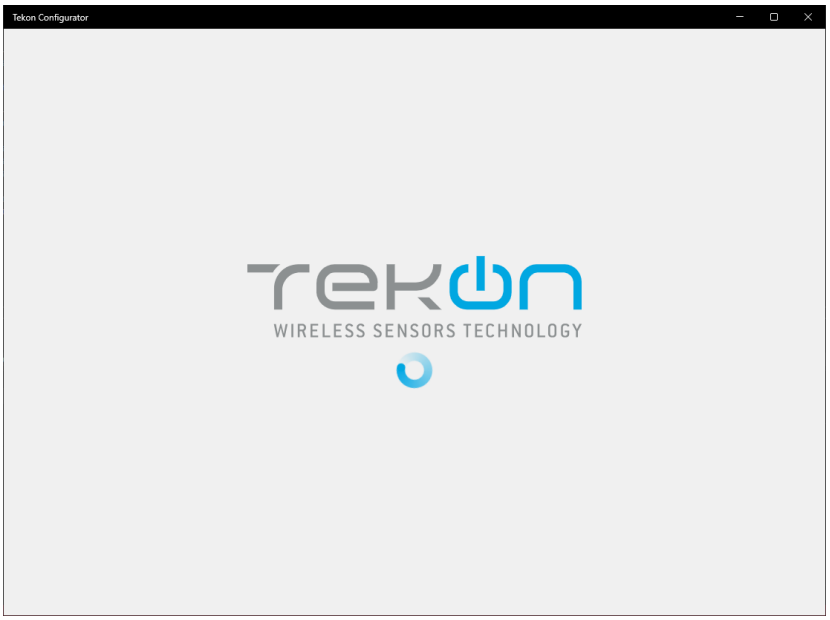
Page 11

step
01
CONNECT AND CONFIGURE THM602-I TEMPERATURE HEAD TRANSMITTER

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

01

Open *Tekon Configurator Software*[1]

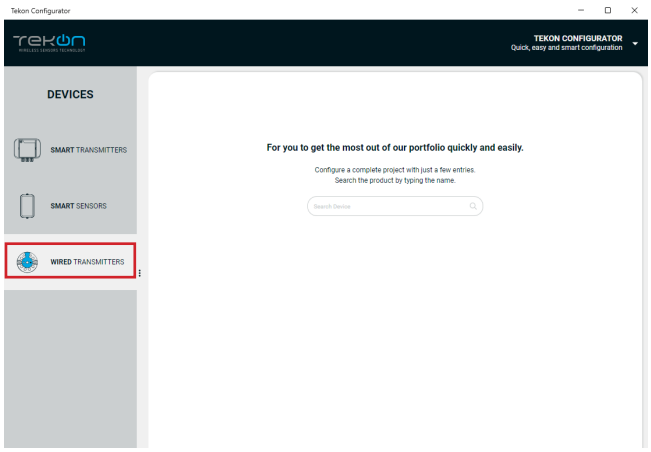


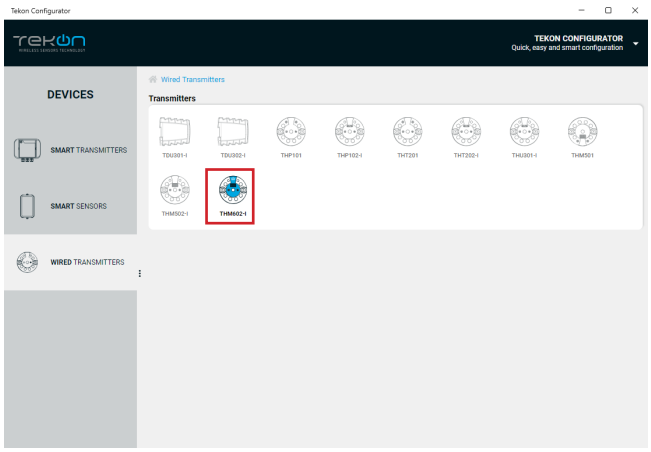
02

Open the THM602-I device page.

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

1st option: Click on *"WIRED TRANSMITTERS"* in the left menu and then click on the THM602-I device.

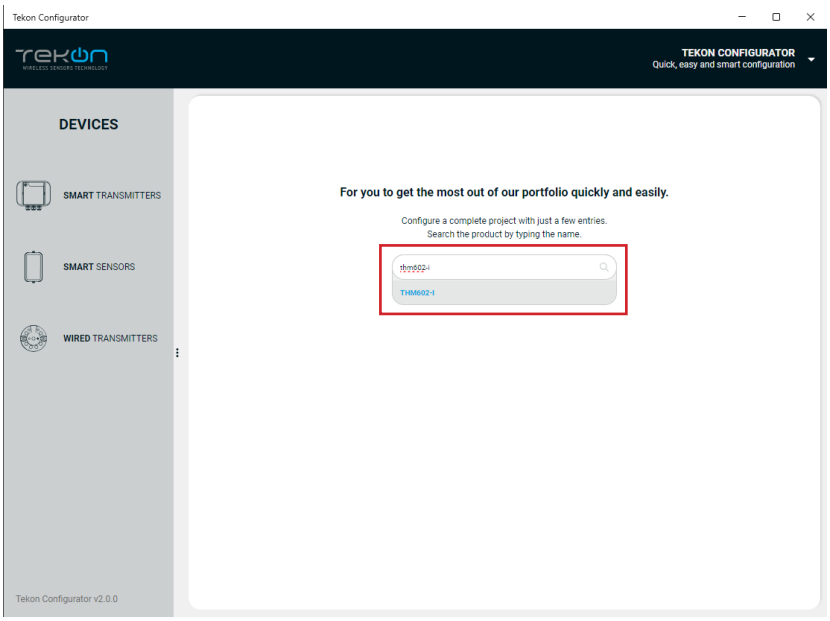




[1] Tekon Configurator software is free of charge and available at www.tekonelectronics.com

step
01
CONNECT AND CONFIGURE THM602-I TEMPERATURE HEAD TRANSMITTER

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

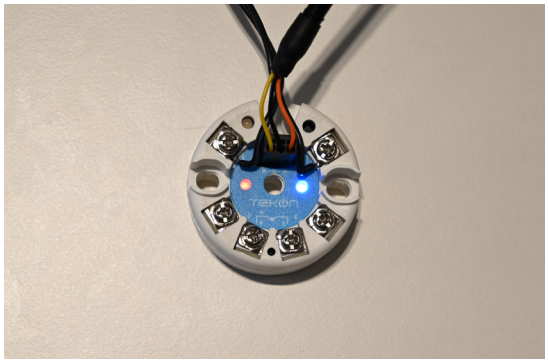


03

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

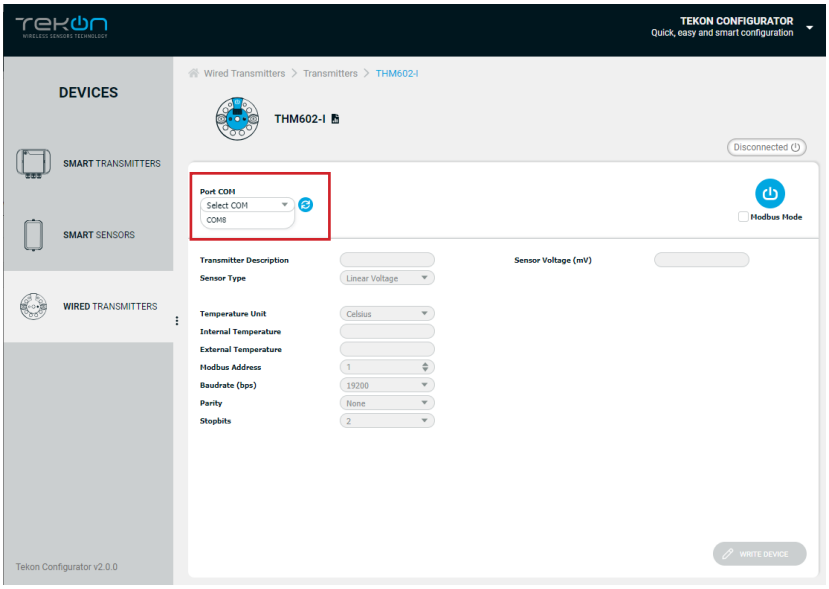
04

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



step
01 CONNECT AND CONFIGURE THM602-I TEMPERATURE HEAD TRANSMITTER

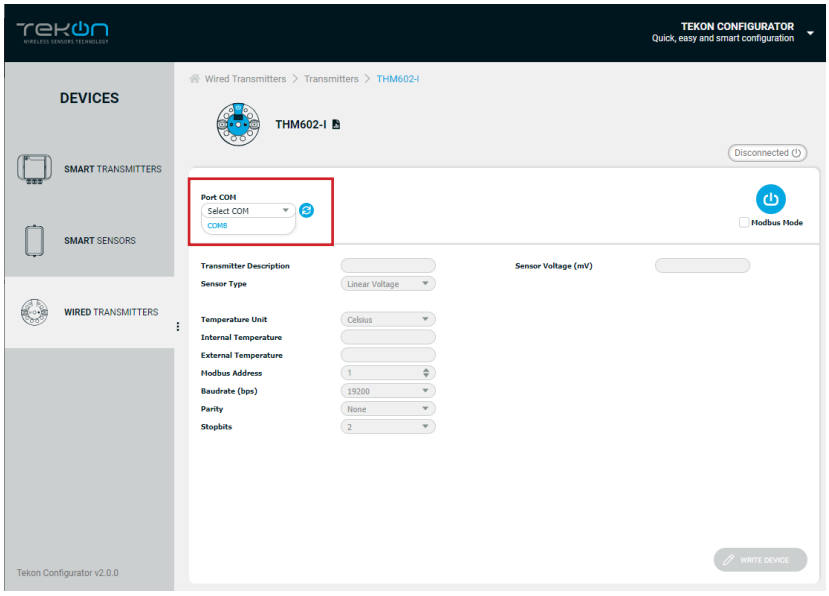
05 Load the “Port COM” corresponding to the THM6002-I



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.

06

Select corresponding *Port name*[2].



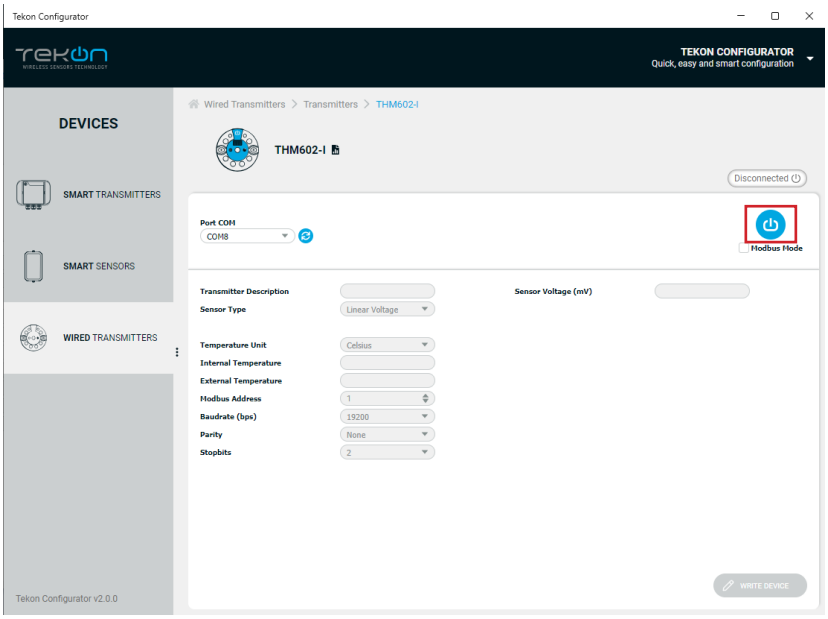
NOTE:
The serial port depends on the operating system.

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

step
01
CONNECT AND CONFIGURE THM602-I TEMPERATURE HEAD TRANSMITTER

07

Click on *Connect* (⏻) button.



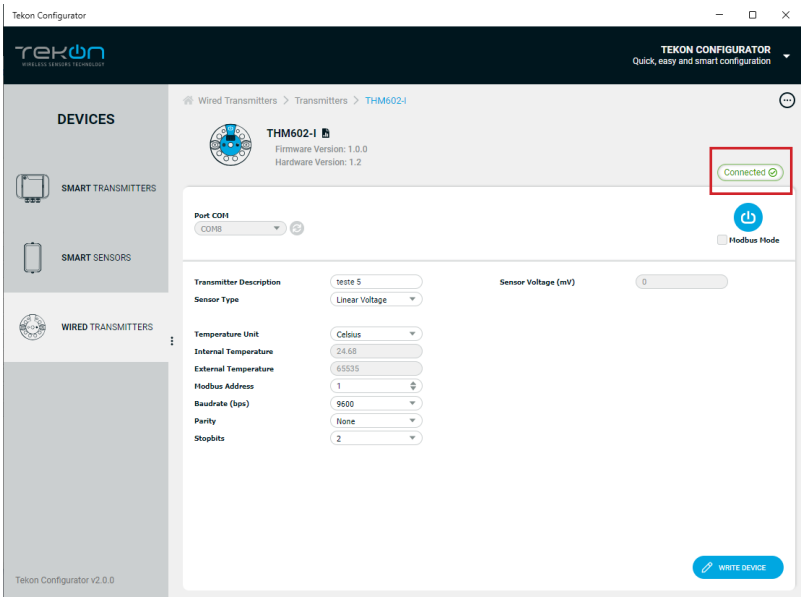
You can set the configuration mode by two diffent actions:

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

08

When the software connects to the device, the “Connected” message will be displayed.



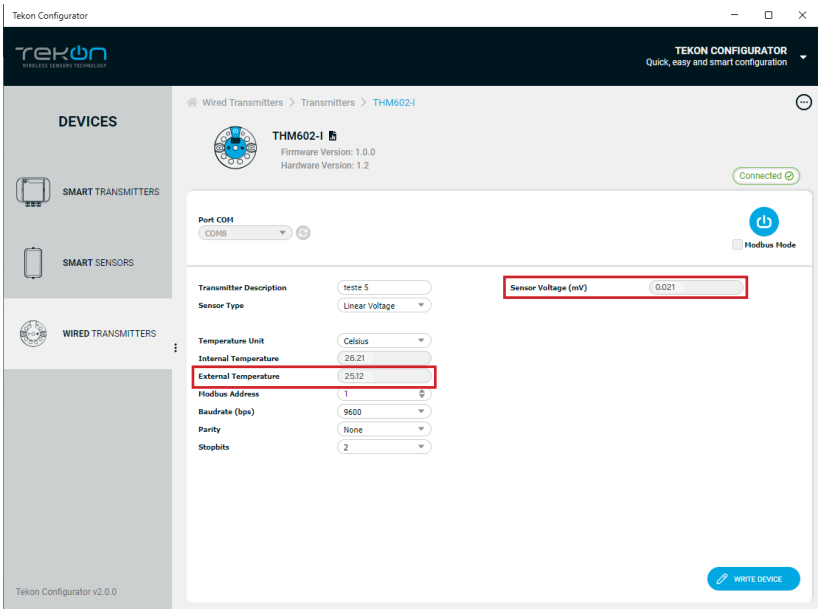
NOTE:
If you do not connect any sensor to the transmitter, the temperature value will be 65535.00º C.

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 CONNECT AND CONFIGURE THM602-I TEMPERATURE HEAD TRANSMITTER

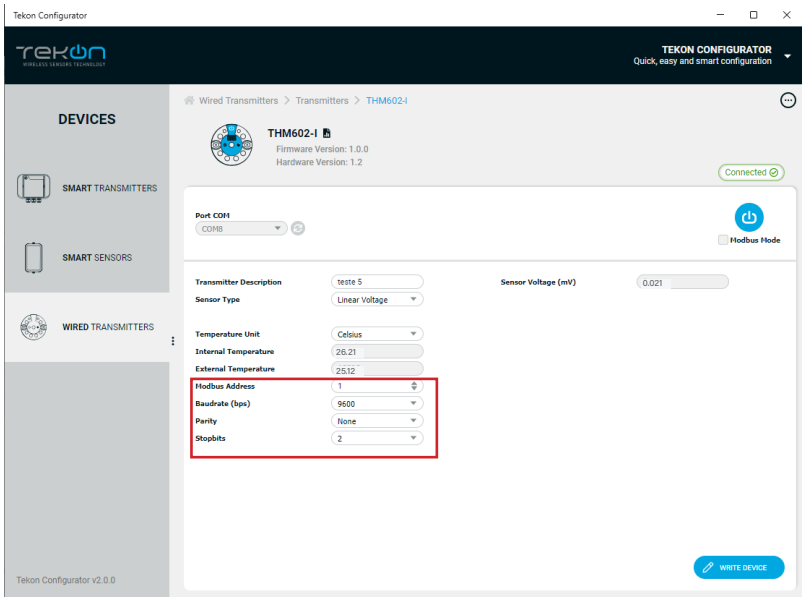
09

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

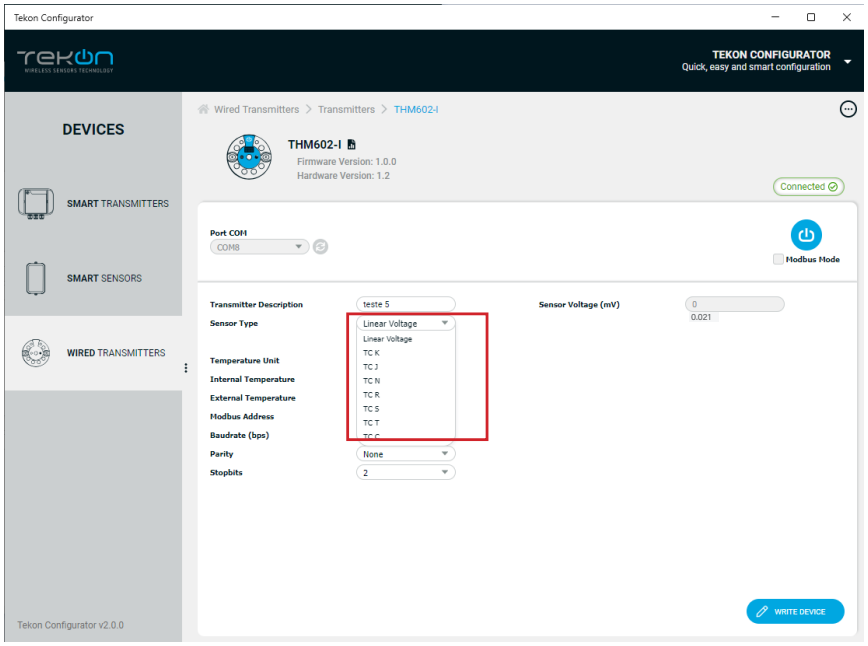
Set Modbus Address, Baudrate (bps), Parity and Stopbits.



step
01 CONNECT AND CONFIGURE THM602-I TEMPERATURE HEAD TRANSMITTER

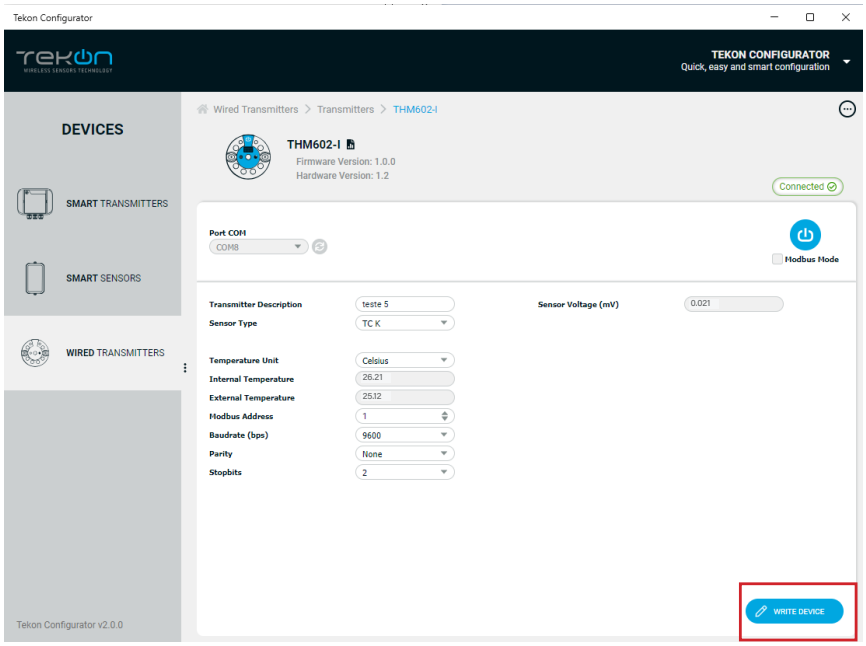
11

To change Sensor Type, click on select list and select the sensor.



12

To validate the changes in configuration mode, click on "*WRITE DEVICE*" button.



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 ( )

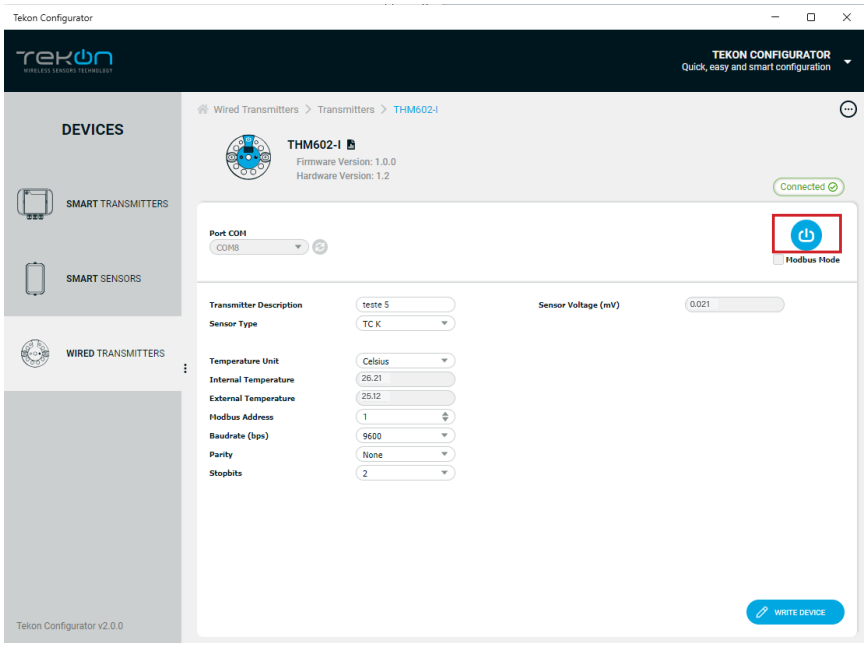
If not, the following symbol will appear ( ),try again and check that the device is connected correctly.

NOTE:
The "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.

step
01 CONNECT AND CONFIGURE THM602-I TEMPERATURE HEAD TRANSMITTER

13

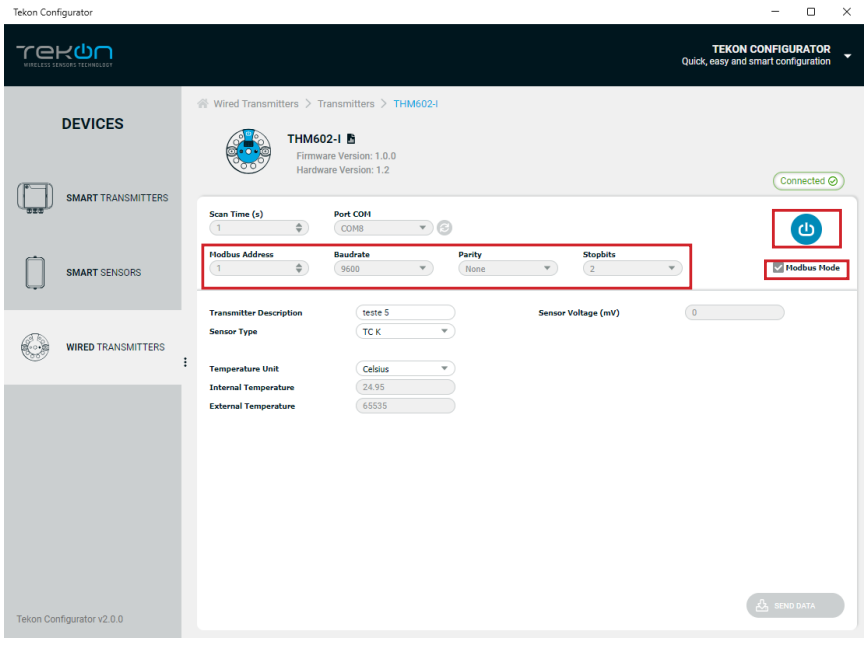
Click on the button [⏻] to exit *configuration mode* and return the device to normal operating mode.



14

Modbus Mode

Check "*Modbus Mode*" and update Modbus Address, Baudrate, Parity, Stopbits and click on ⏻ .



step

02

MODBUS MAP

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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