

BKC MT Integrator_SS01 — INSTRUCTION SHEET

Introduction

BKC MT Integrator_SS01 is a configuration and diagnostic software for the **BKC-MT RS485-MB** temperature sensor. It facilitates easy setup of Modbus communication parameters such as device address, baud rate, parity, and stop bits. It also allows real-time monitoring and testing of sensor data over RS485 using the Modbus RTU protocol.

The software is designed for engineers and field technicians to simplify integration, testing, and commissioning of sensors used in industrial environments.

System Requirements

Component	Requirement
Operating System	Windows 7/8/10/11
Communication Port	RS485 Port or USB-to-RS485 Converter
Display Resolution	Minimum 1024 x 768 px
Administrator Rights	Required for installation

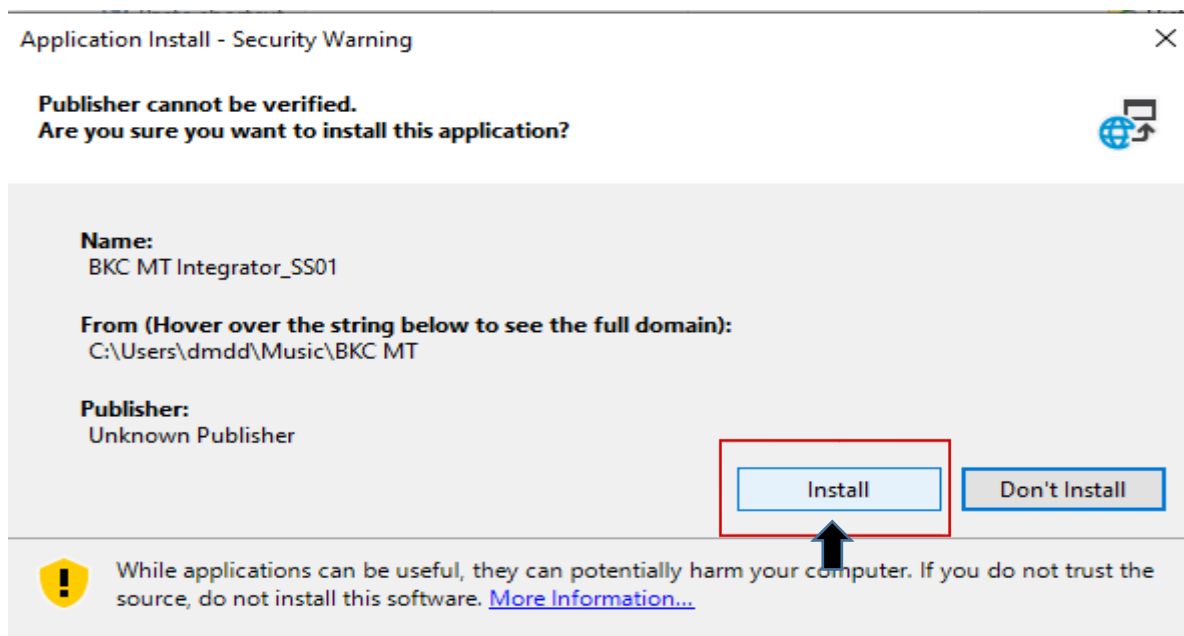
⚠ Ensure no other applications are using the COM port before launching the software.

Software Installation

1. Download and extract the BKC MT Integrator_SS01 software package.
2. Run the `setup.exe` from the extracted folder.
3. Follow the on-screen installation instructions.
4. Once installed, launch the software from the desktop shortcut or Start menu.

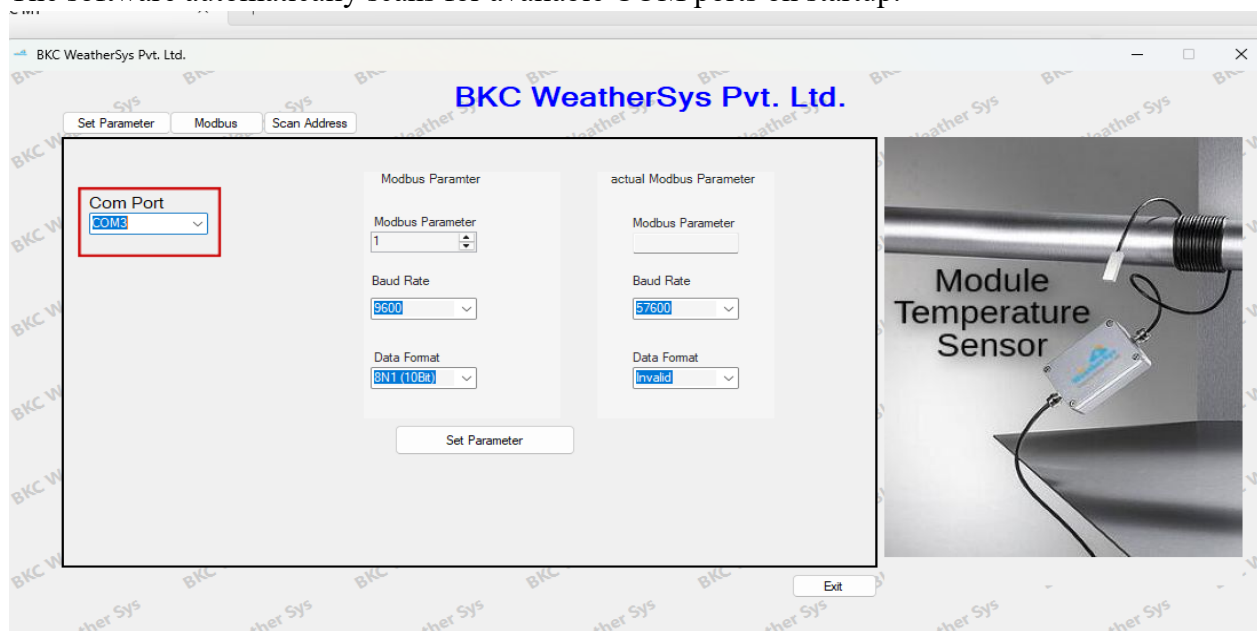
Using BKC MT Integrator_SS01

1. Launch the BKC MT Integrator_SS01 software.



Step 2: Select Communication Protocol

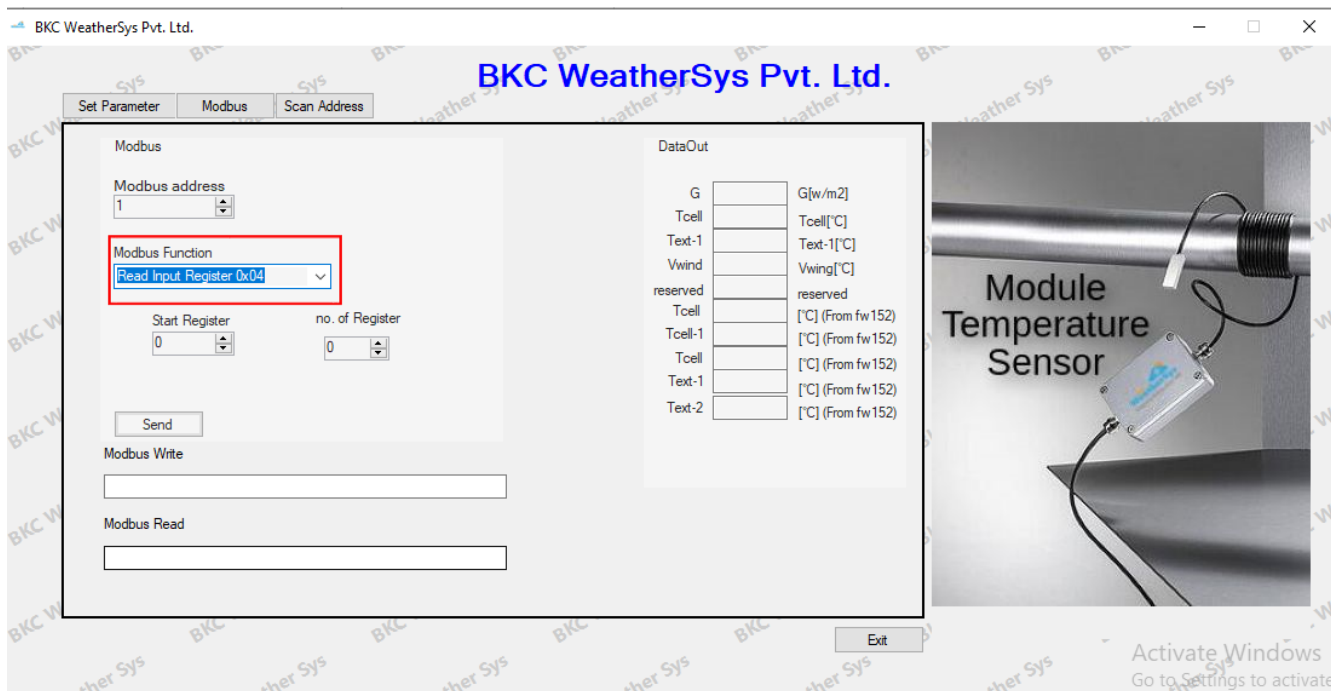
Open the Software BKC MT Integrator_SS01 .
The software automatically scans for available COM ports on startup.



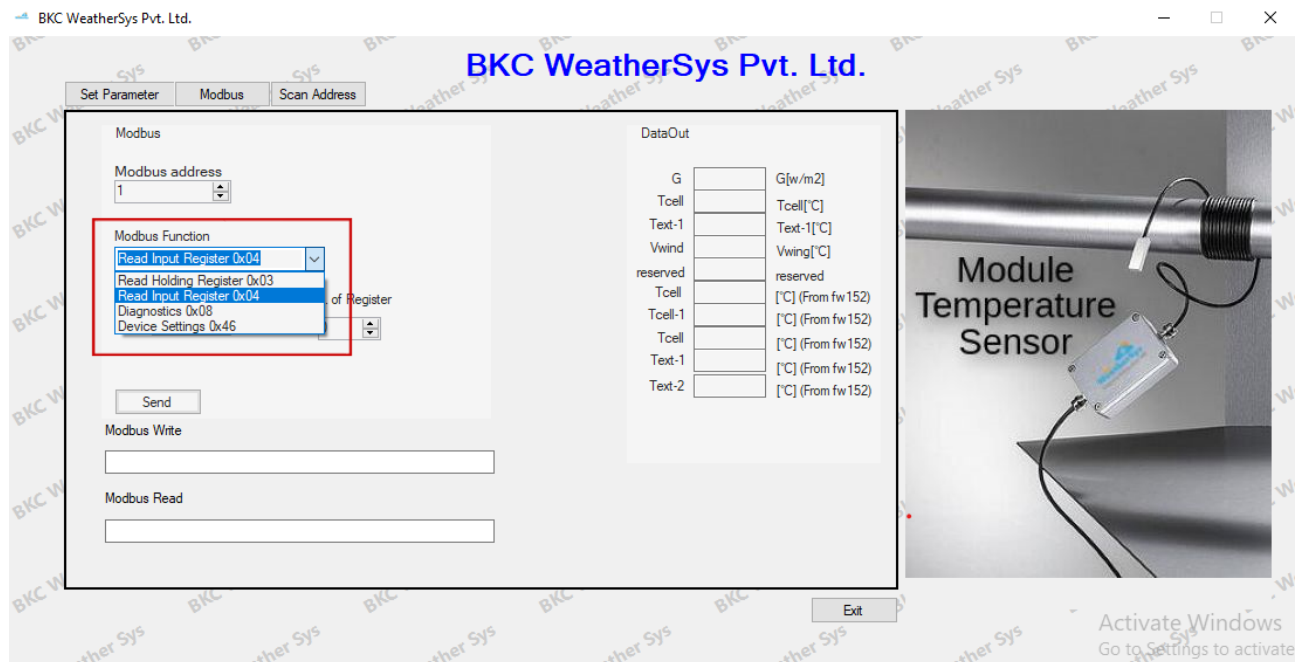
Step 3: Configure Modbus Address



Step 4: Choose Modbus Function (valid range: 1–247).



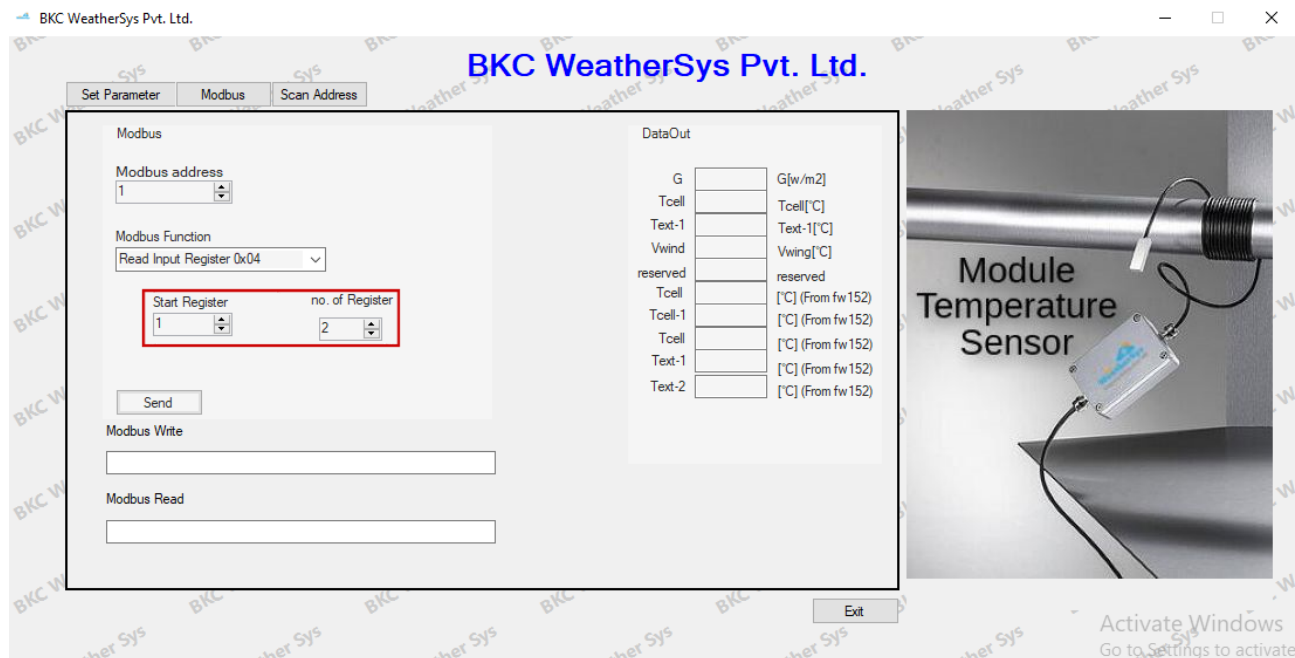
Step 5: Set Modbus Function as Read Input Register 0x04



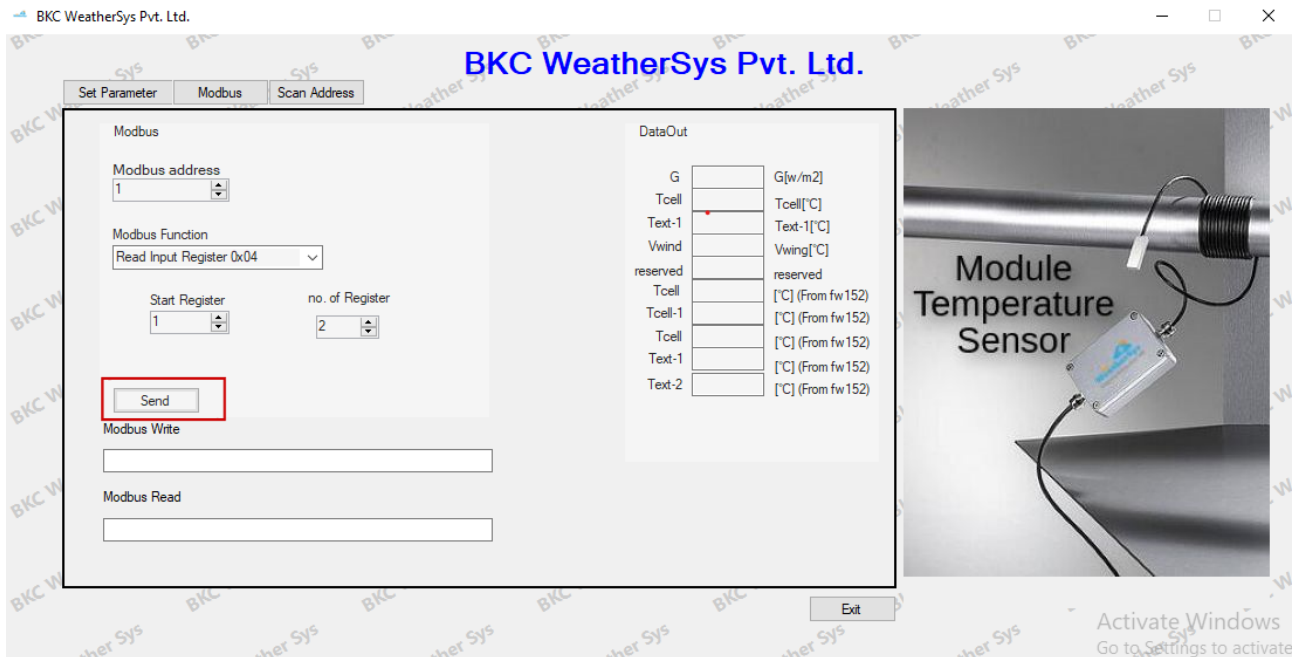
Step 6 : Set Register Parameters

Start Register: Enter 1

Number of Registers: Enter 2

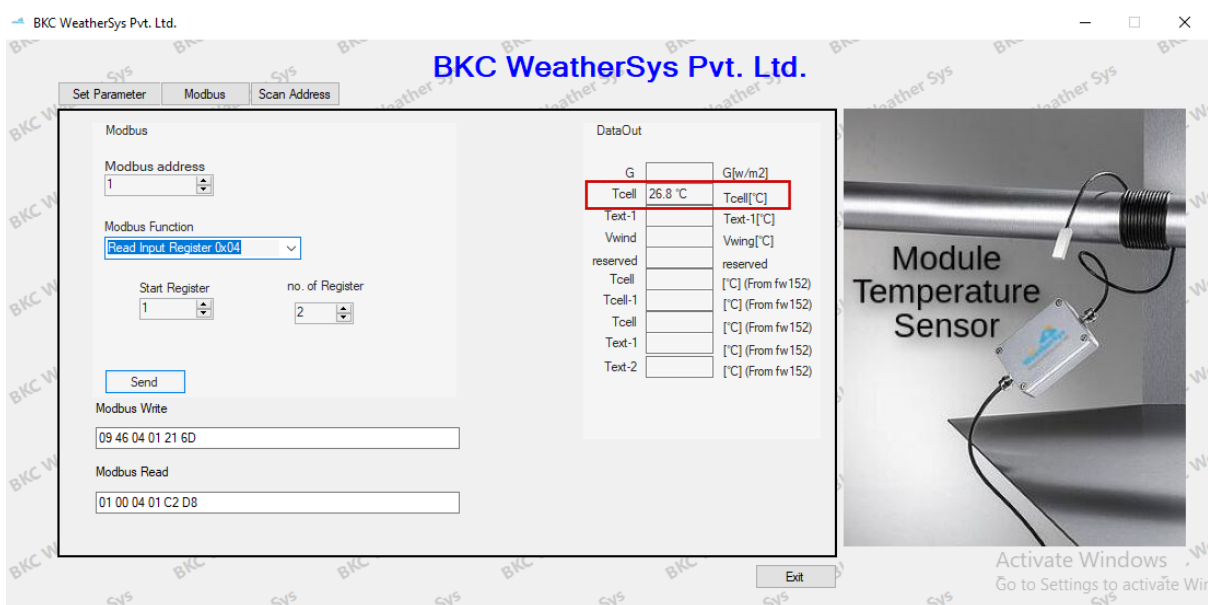


Step 7: Initiate Communication



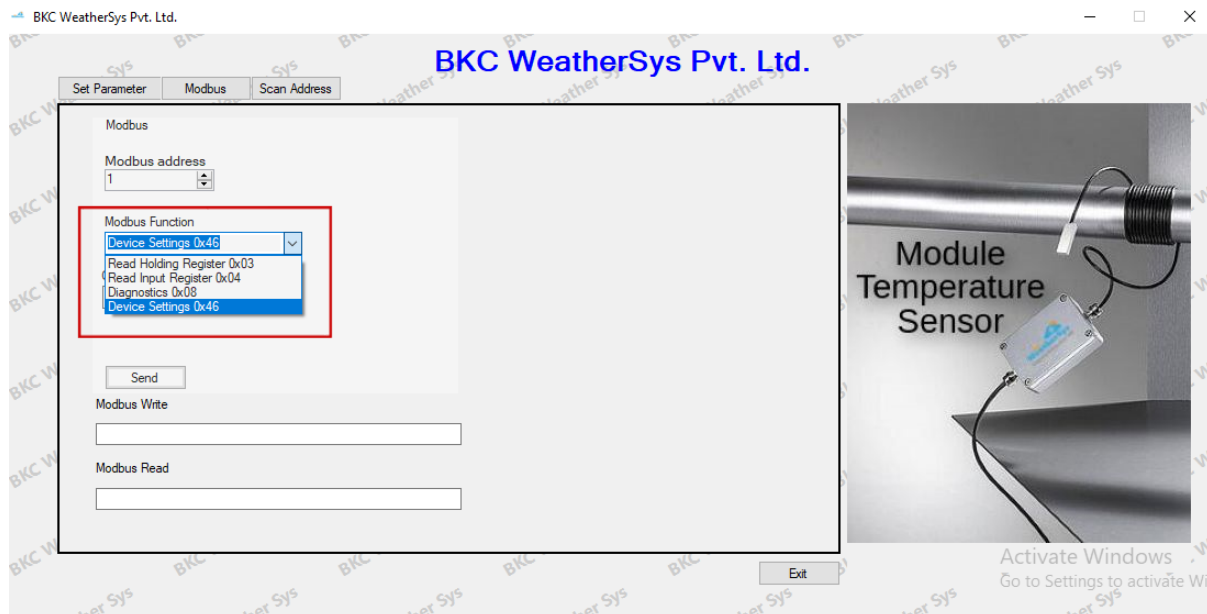
Click on the “Send” button to retrieve and display the sensor data in real time

Step 8 : The **temperature data** from the BKC – MT RS485-MB sensor will be displayed on the **Tcell** field within the **BKC MT Integrator_SS01** software interface.

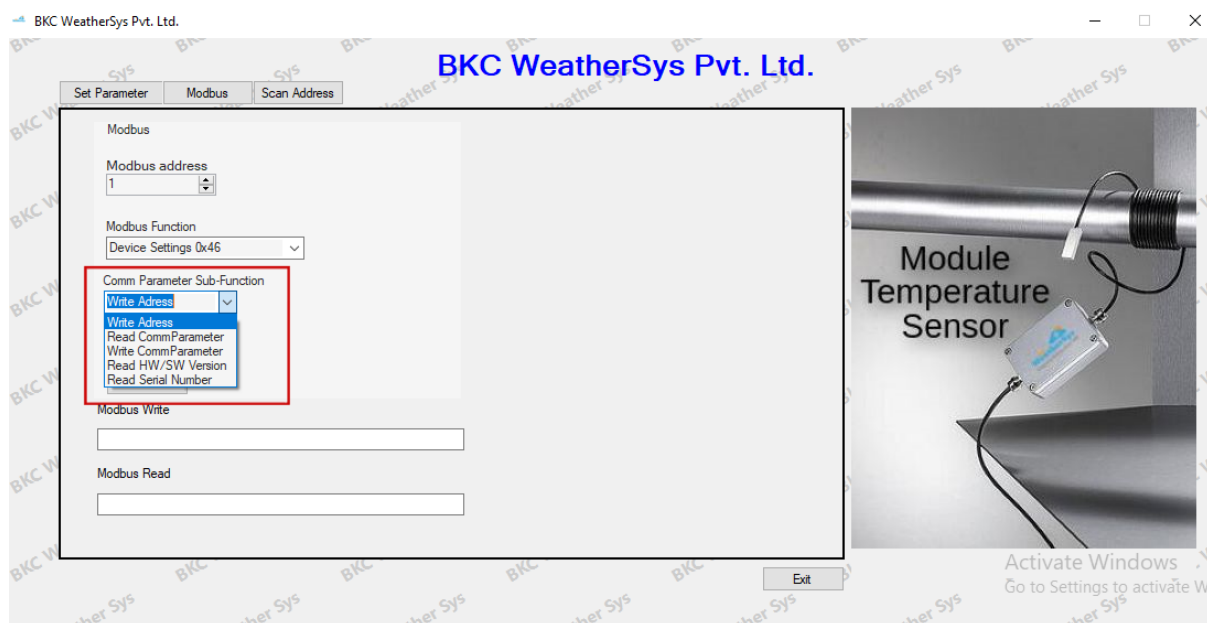


Changing Modbus Address

Step 1: Navigate to the **Device Settings** section



Step 2: In the **Comm Parameter** section, select the “Write Address Sub Function.”



Step 3: Enter the new Modbus address (valid range: 1–247).



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Set Parameter Modbus Scan Address

Modbus

Modbus address
1

Modbus Function
Device Settings 0x46

Comm Parameter Sub-Function
Write Address

New Address(1..247)
4

Send

Modbus Write

Modbus Read

Exit

Module Temperature Sensor

Activate Windows
Go to Settings to activate Windows

Step 4: Click on “Send” to apply the new address to the sensor.



BKC WeatherSys Pvt. Ltd.

Set Parameter Modbus Scan Address

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Modbus address
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Modbus Function
Device Settings 0x46

Comm Parameter Sub-Function
Write Address

New Address(1..247)
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Send

Modbus Write

Modbus Read

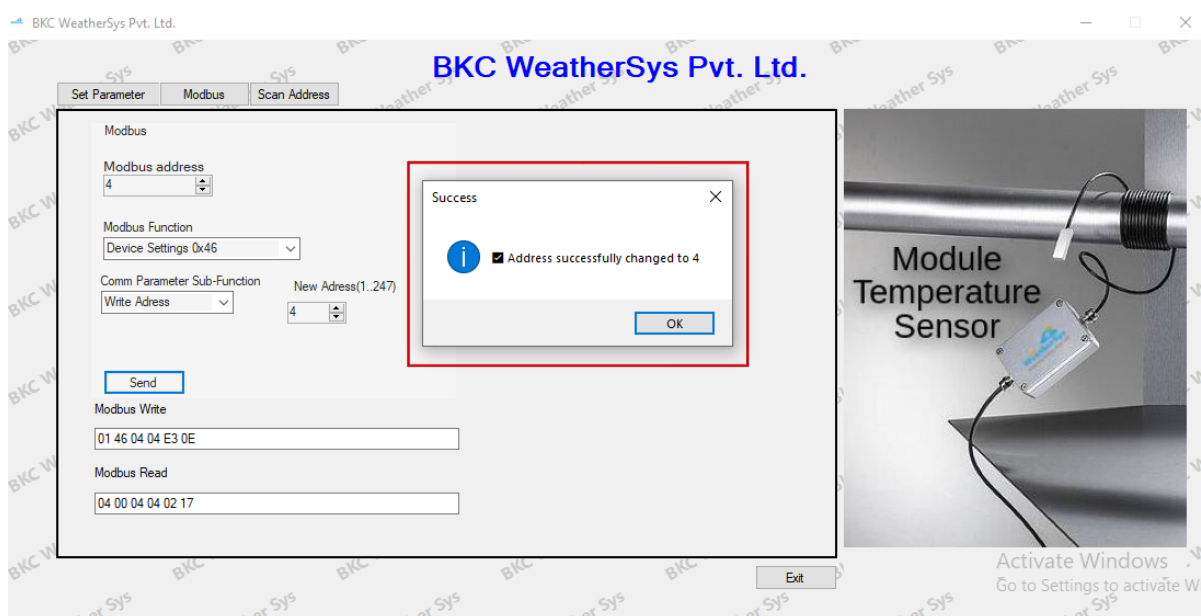
Exit

Module Temperature Sensor

Activate Windows
Go to Settings to activate Windows

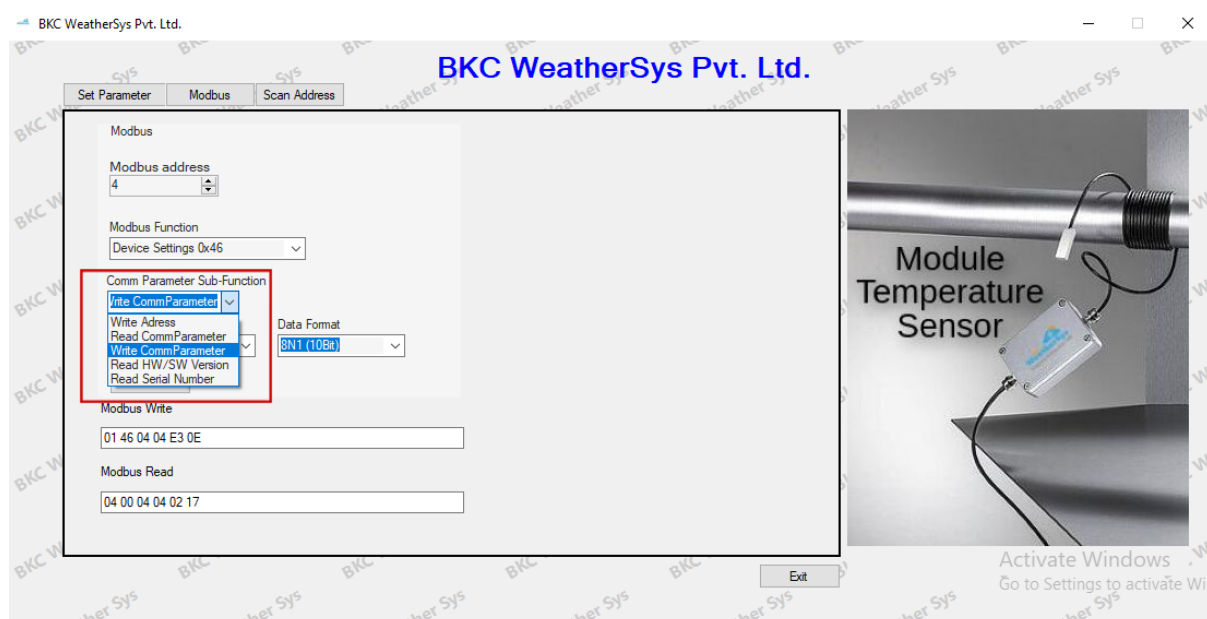
Step 5: Click **“OK”** in the confirmation prompt to save the changes.

Power off the sensor, wait for **30 seconds**, then **power it back on** to apply the new communication settings.



Configuring Baud Rate & Data Format

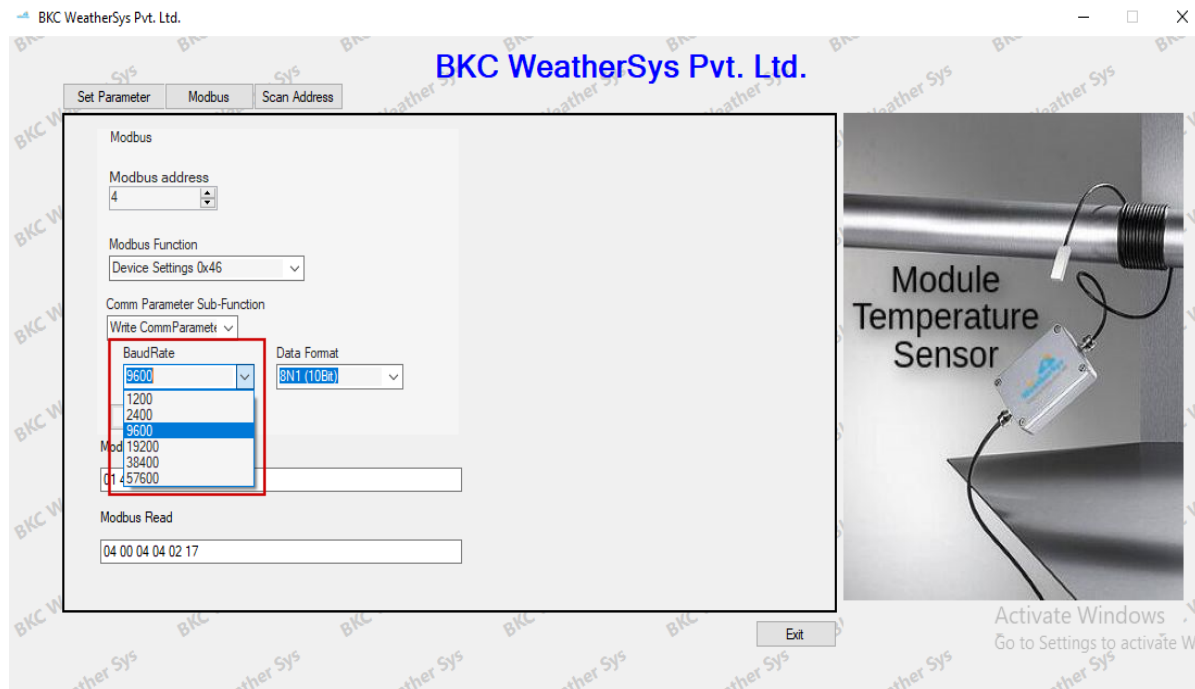
Step 1: Navigate to the **Comm Parameter Sub Function** dropdown, choose **“Write comm Parameter ”**.



Step 2 : select Baud Rates

Supported Baud Rates:

- 2400
- 4800
- 9600 (Default)
- 19200
- 38400
- 57600

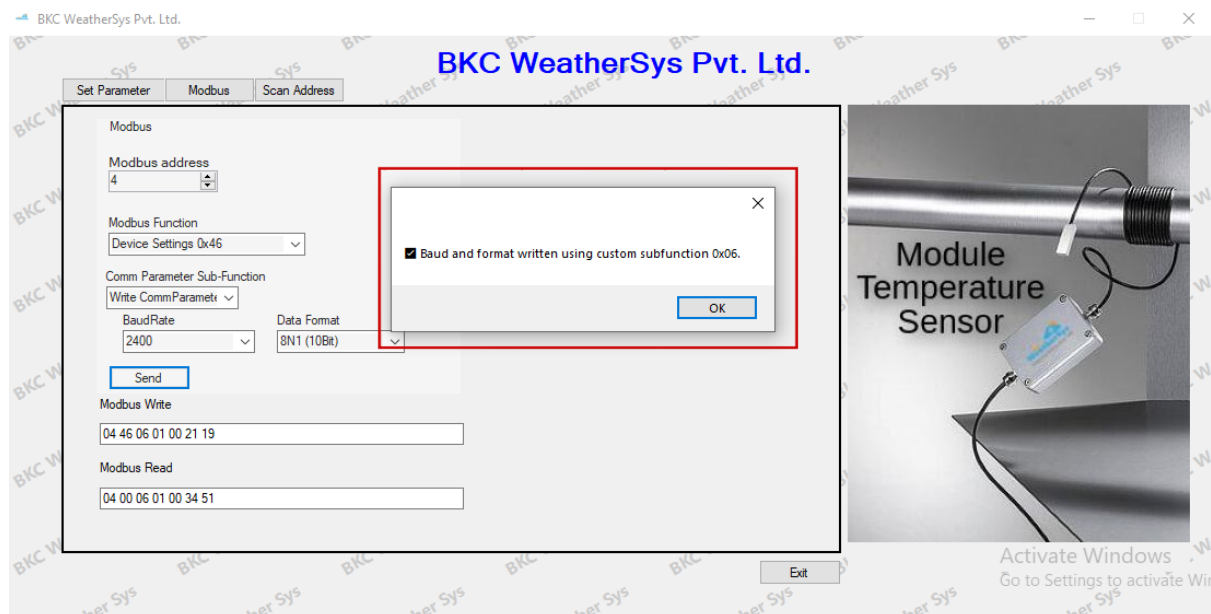


Step 3 : Select the desired **Baud Rate** from the dropdown list and click “Send” to apply.



Step 5 : Click **“OK”** in the confirmation prompt to save the changes.

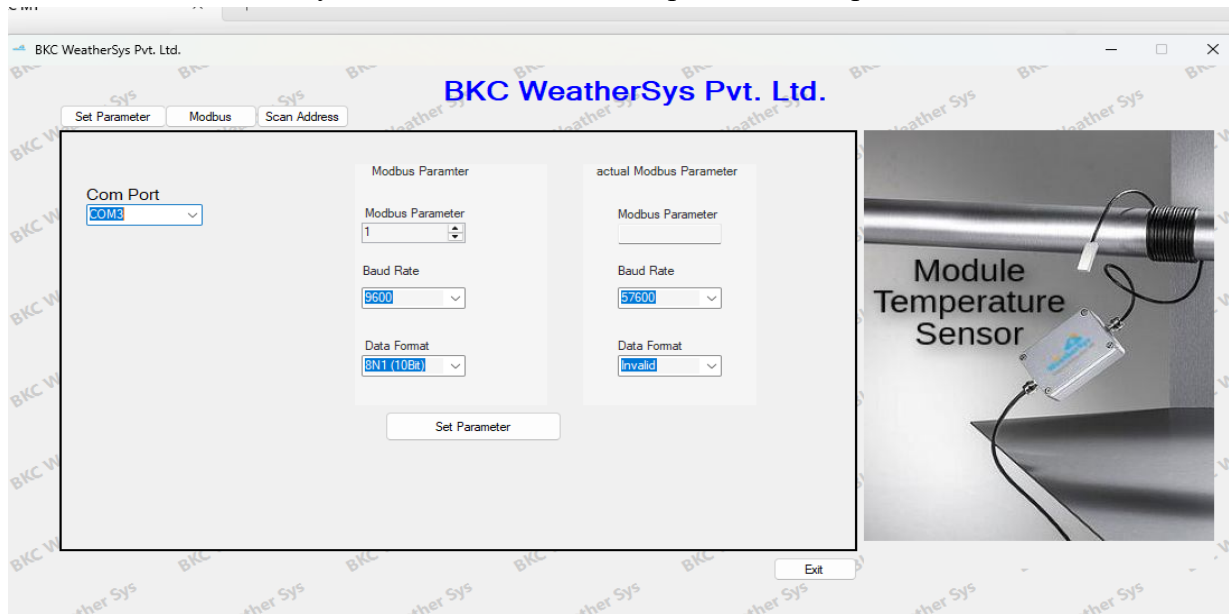
Power off the sensor, wait for **30 seconds**, then **power it back on** to apply the new communication settings.



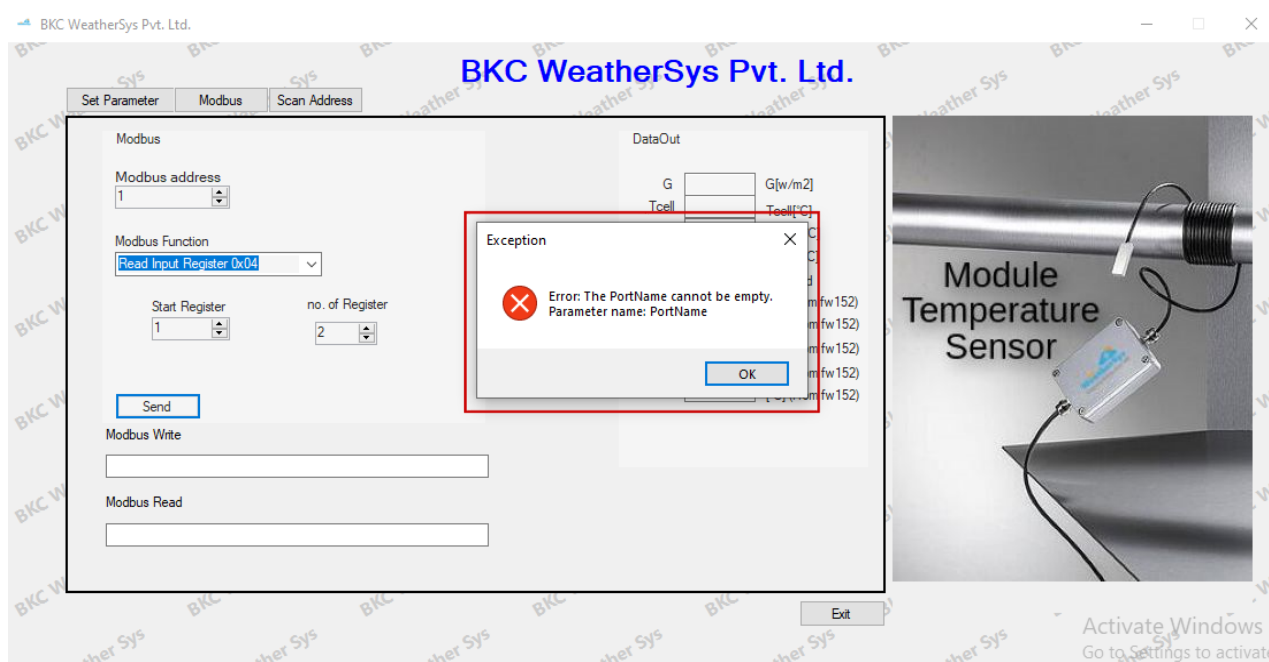
Troubleshooting

Issue	Solution
Port not opening	Ensure COM port exists and is not used by another program
Sensor not detected	Check all wiring connections and ensure sensor is powered
Can't set parameters	Ensure sensor is in configuration mode (power cycle it)
Incorrect temperature value	Verify data type, scaling formula, and register address
Software crashes	Reinstall software and ensure .NET dependencies are present
COM port not listed	Ensure USB-RS485 driver is installed and recognized by OS

1. The software automatically scans for available COM ports on startup



2. If no COM port is found, a warning message will be displayed and functionality will be disabled until resolved.

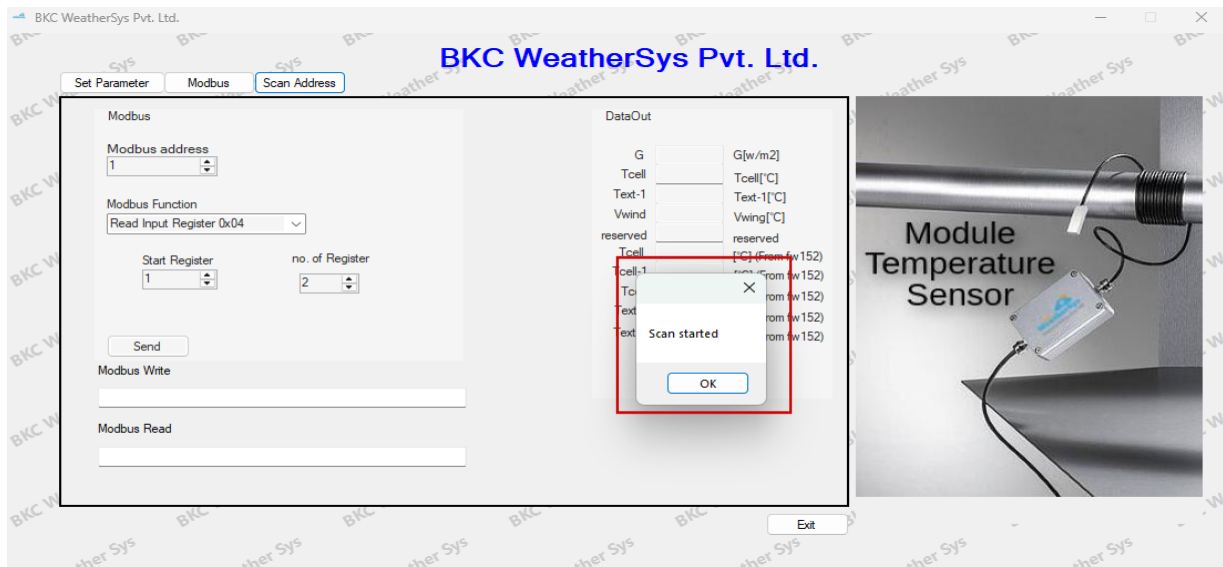


3. Click "Open Port"

- If the port is already in use by another application, an error message will be shown.

4. Click "Scan Device" to automatically detect Modbus address and baud rate.

- If the sensor is connected and responsive, it will display current settings.
- If not found, a message will indicate connection failure or sensor error.



Default Factory Settings

- **Modbus Address:** 1
- **Baud Rate:** 9600
- **Data Bits:** 8
- **Parity:** None
- **Stop Bit:** 1
- **Register:** Input Register

Modbus Communication

1. Navigate to the "**Modbus Communication**" tab.
2. Select the Modbus function code:
 - **0x04** (Read Input Register)
3. Enter the register address (e.g., **30001** for temperature).
4. Click "**Send**" to execute the command.
5. Observe the sensor response in the data pane.
6. To return to config mode, click "**Back to Configuration**".

 You may need to **power cycle** the sensor (switch OFF and ON) to enter configuration mode. This window is active for **4 seconds** after powering up.

Additional Features

- **Auto Scan:** Quickly detects COM ports, connected sensors, and retrieves communication settings.
- **Error Handling:** Informs the user if the selected port is unavailable, used, or not connected to a sensor.