eyc-tech eyc-THG03 CO2 Temperature and Humidity Transmitter User Manual

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Operation-Manual
eYc THGO03, THR23, GS23
CO,, Temperature & Humidity Transmitter
(Indoor)

Contents

Tech eyc-THG03 CO2 Temperature and Humidity Transmitter

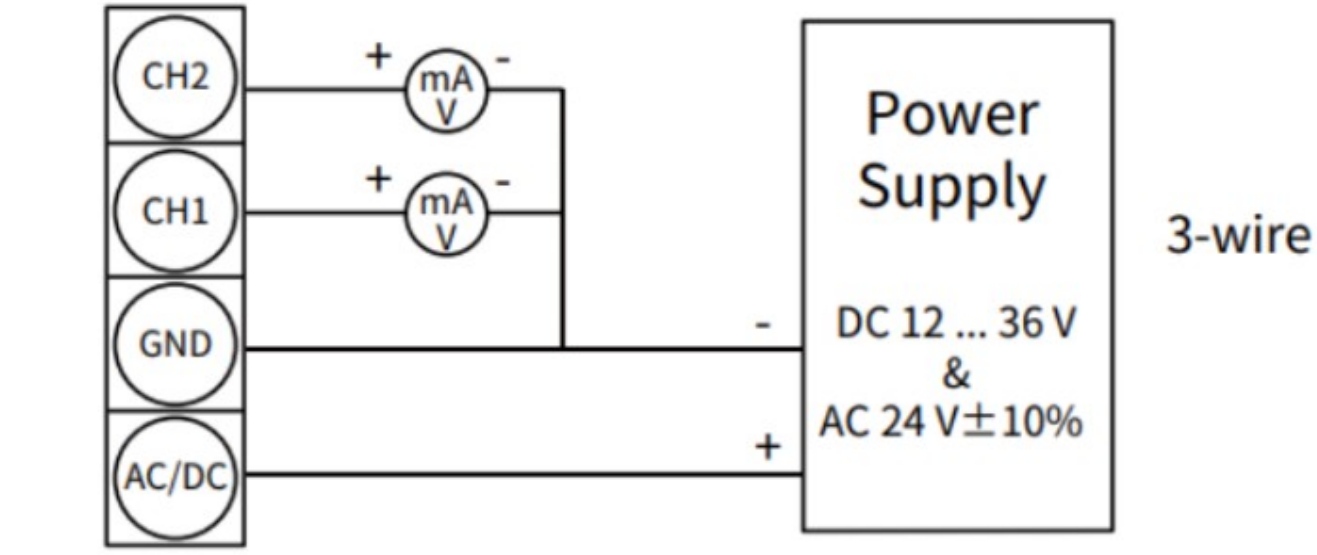
Safety Precautions

- Before using this product, the user must to read the details of this user's manual, then use this product with correct steps.
- This user's manual is for reference while using / Setting this product, and required to conserve properly.
- This product is improperly to use in explosion-proof area, do not use this product in dangerous situation where human health & life may be threaten & affected.
- If the user install this product in special environments as Dust-Free Room, Breed Environment for Animals, etc., please initiate a specialized product consultation to our professional sales of our company.
- If the improper & dangerous results which result from improper operator or improper environment, our company will not bear any legal responsibility.

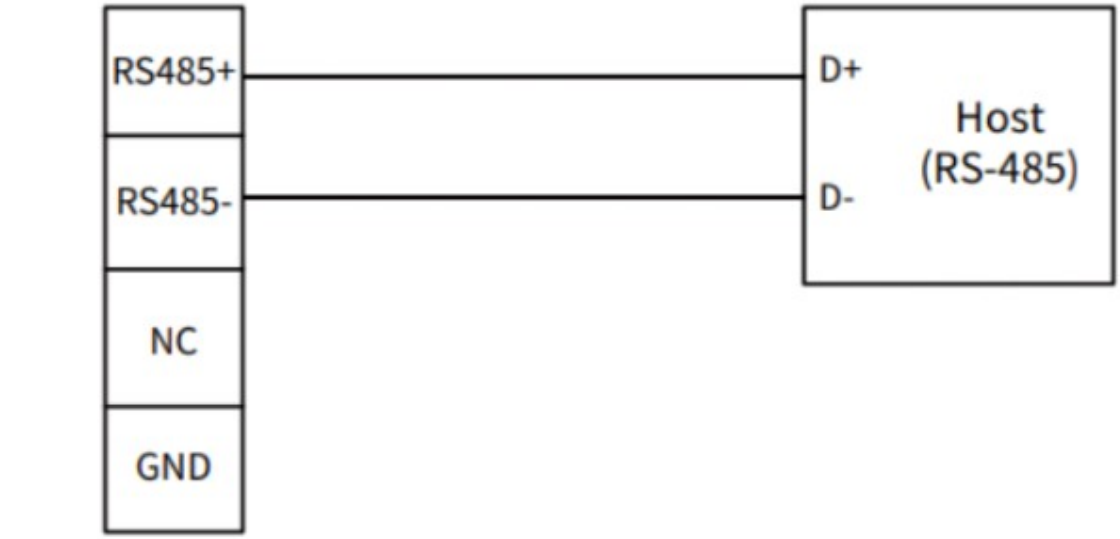
Warning

- Please ensure the outlook / outbox do not have any damage which result from improper transportation, or malfunction which results from lost attachments.
- In order to prevent the GM from damages. This product must be used in the proper environment which specified in this user's manual.
- Please implement the wiring operation under power-off status; otherwise it will cause electric shock, or become the root cause of machinery breakdown.
- For prevent equipment damage, disconnect the power supply from the product before performing any wiring and installation.
- This product must be operated under ruled power supplying value, and be operated under the ruled normal operation conditions which described in the user's manual ; otherwise it may cause the disasters as fire accident or be the root cause of machinery breakdown.
- This product must be operated under the operating conditions specified in manual to prevent equipment damage.
- Installation and wring must be performed by qualified personnel in accordance with all applicable safety standards, According to applicable safety standards all wiring must comply with local codes of indoor wiring and electric installation rules.
- All wiring must comply with the rule for indoor wiring and electrical installation rules. The screw must be tight for upper cover & lower base.
  In order to prevent the interferences from frequency converter, etc., and avoid error signal to result in the product damage, please use the isolated conducting wire.
- Please use crimp type terminal.
  To prevent personal injury, do not touch the moving part of product in operation.
  It may cause high humidity atmosphere during the product was breakdown. Please take safety® strategy.
- While discard this product, the user must to comply with the related rules for industrial domestic wastes for different country / location.

Connection Diagram

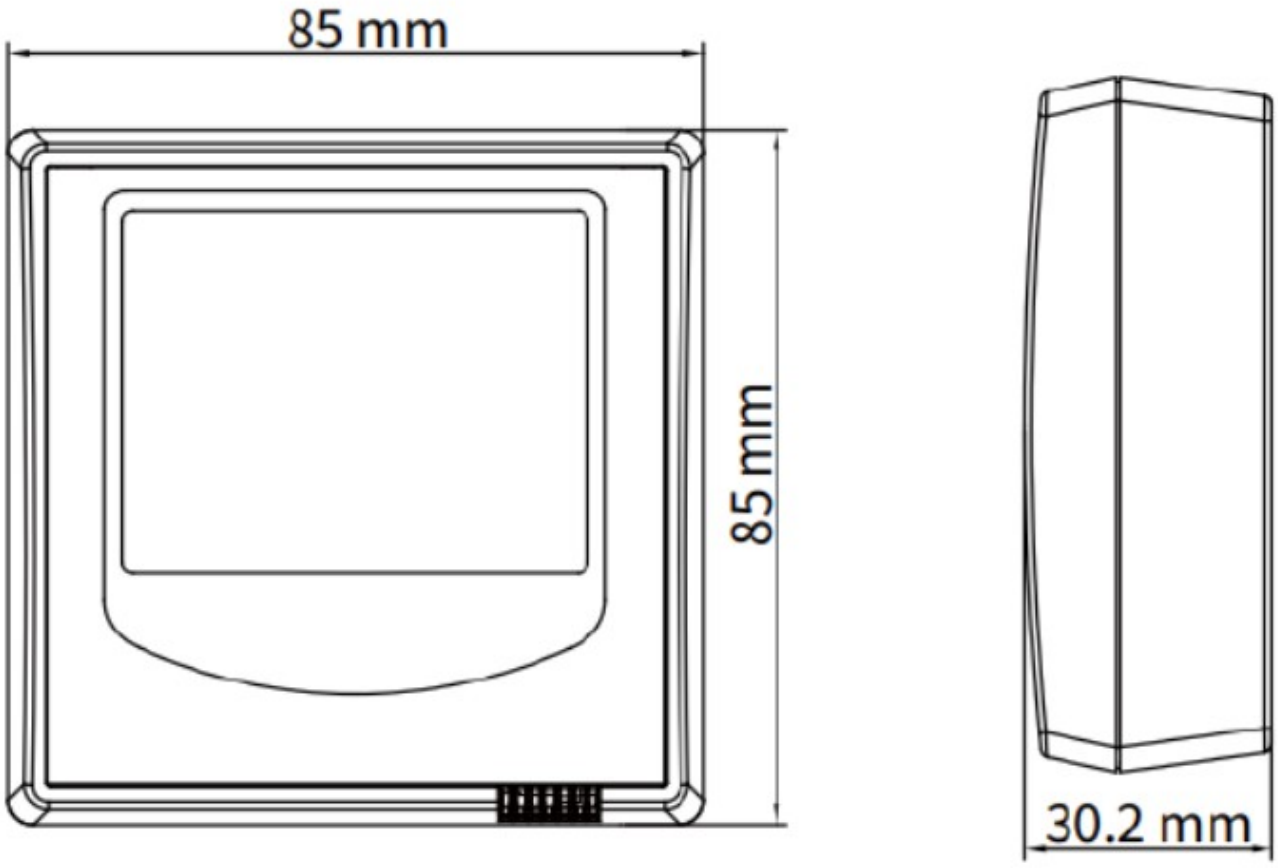


4P connection Analog Output



4P connection RS-485

Dimension



RS-485 and Modbus

TGPO3 integrate a RS-485 interface for digital communication as an option feature. Based on Modbus protocol makes the general convenience on PLC, HMI and PC connection. For Modbus protocol information please download the file from website. Besides he PLC, HMI application, the user software provide the device setting and data logging function, it also can free download from website.

Technical Data

1. Max. network size : 32 transmitters
2. Communication : with COM-Port (serial interface) of PC
3. Max. network expansion : 1200m (3937ft) total length at 9600 baud
4. Transmission rate : 9600, 19200, 38400, 57600, 115200 Baud
5. Parity : None, Even, Odd
6. Data length : 8 bit
7. Stop bit : 1 or 2 bit
8. Factory default Station address 1, Data format 9600, N81

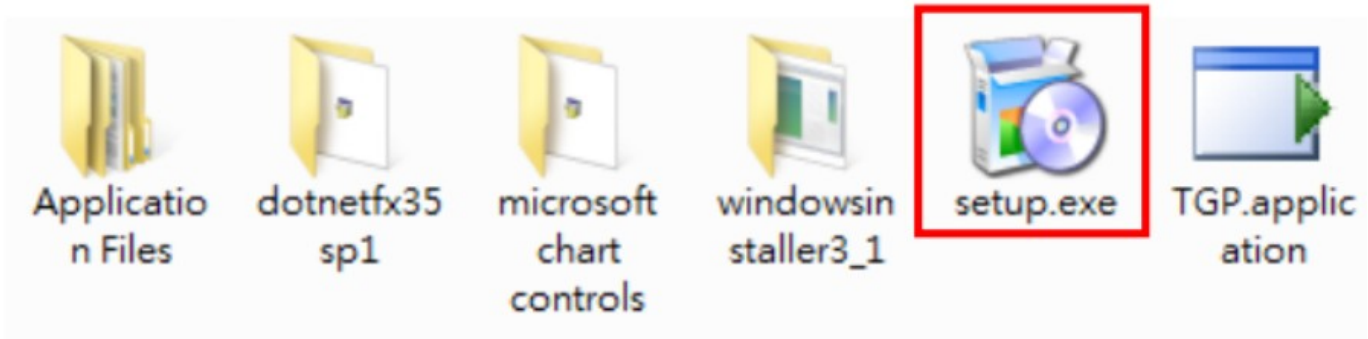
Configuration

Free installation program : eYc-TGPO3THP03-UI-YYYYMMDD-X.Y.Z.exe, where YYYYMMDD stand for 8 digits date code and X,Y,Z stand for version number. This menu based on eYc-TGPO3THP03-UI- 20190508-0.0.6.EXE (3%Please use installation program when free program doesn't execute)

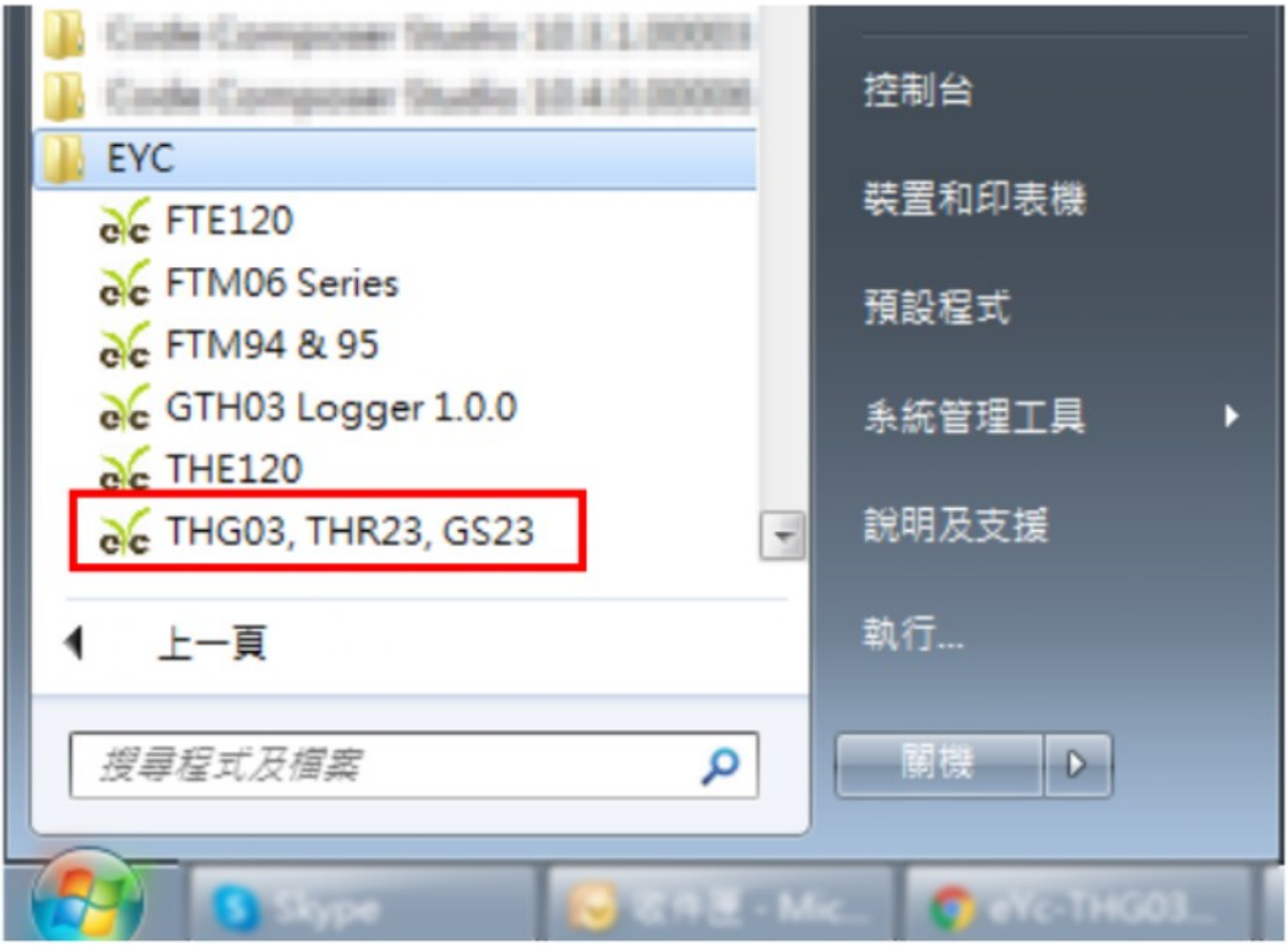
Installation program : eYc-TGPO3THP03-UI-YYYYMMDD-X.Y.Z (INSTALLER).rar

a. Operating System requirements : above Windows XP SP2

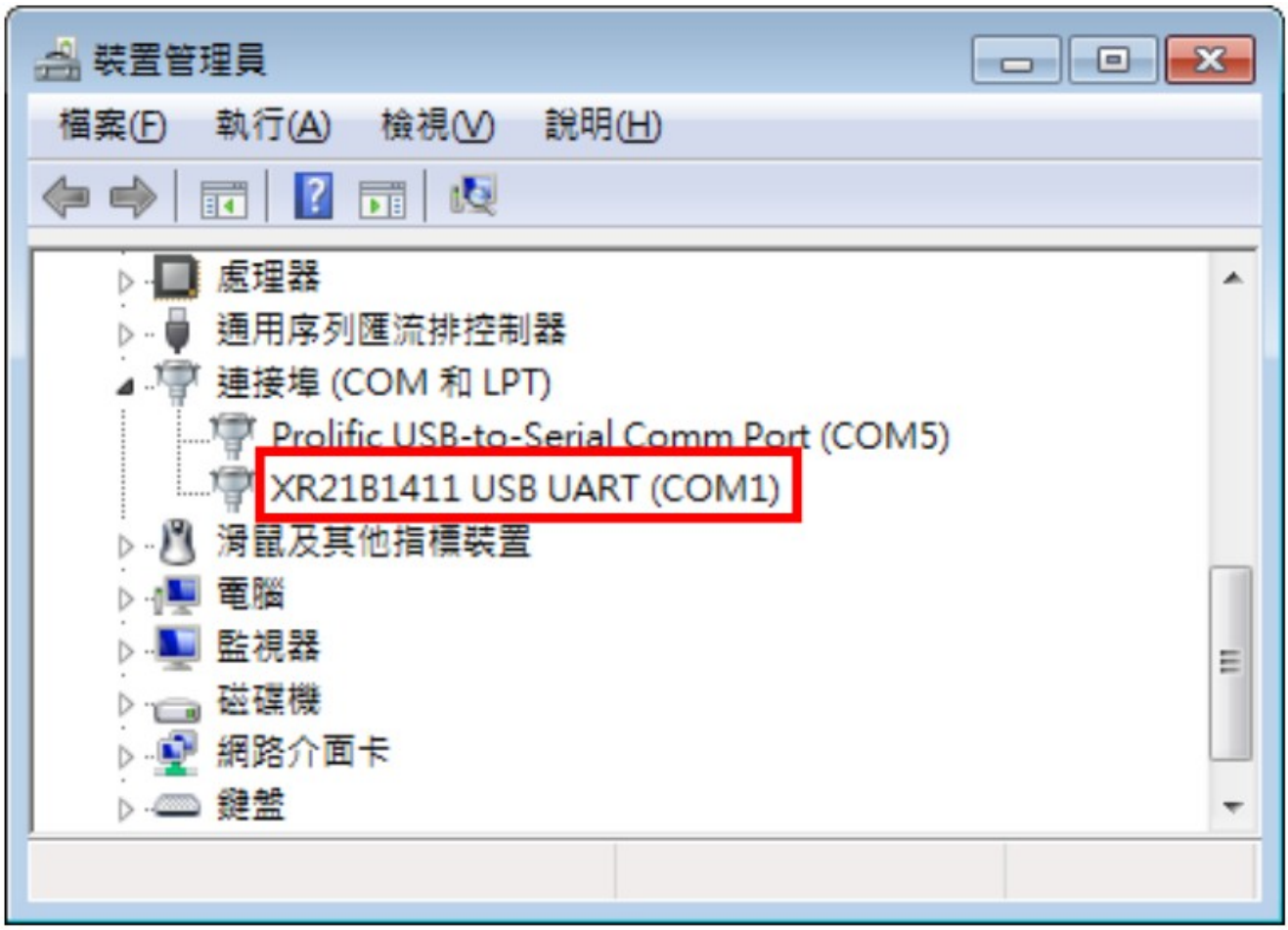
b. Decompress installation program and click Setup to install



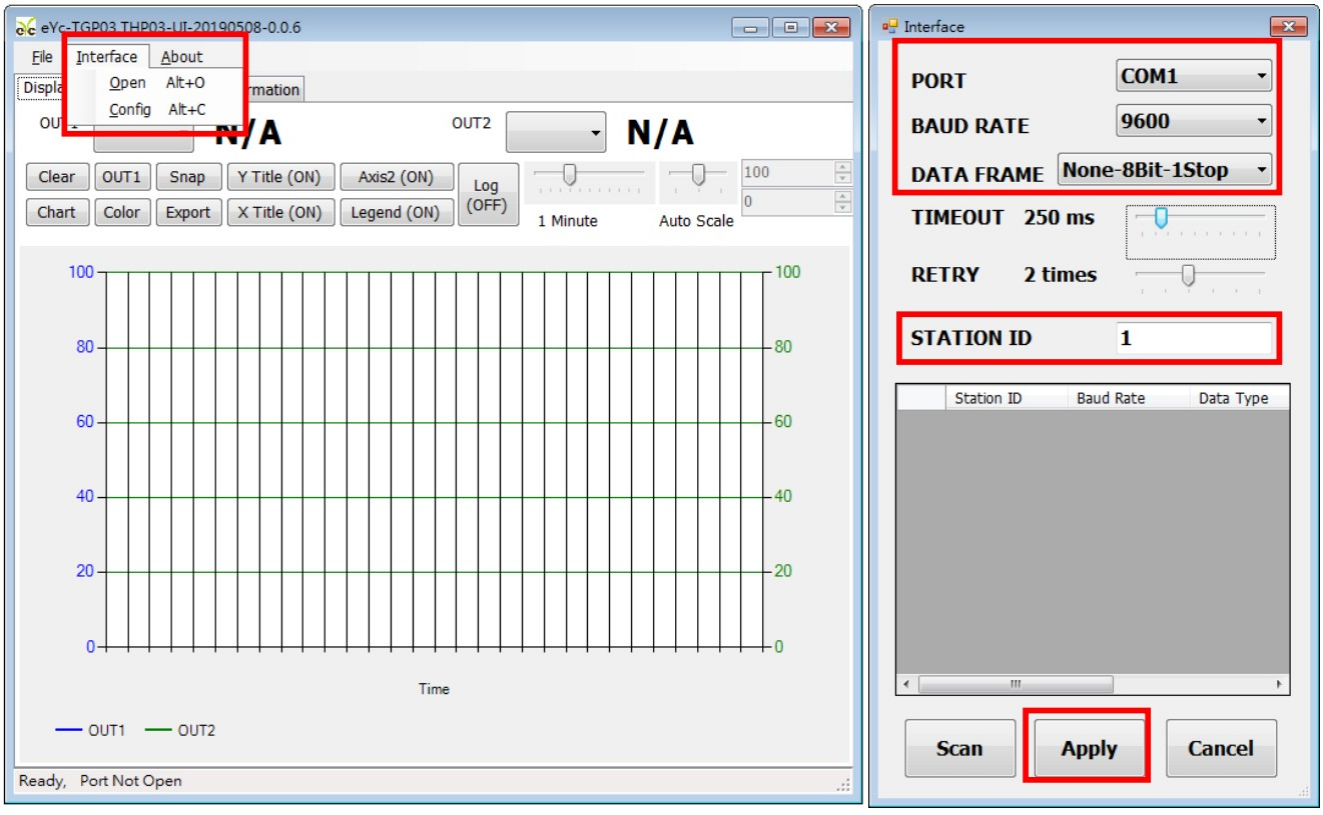
c. Navigate to program group EYC and click TGP03



1. Hardware connection : Connect the TGP03 to PC through USB to RS-485 or RS-232 to RS-485 converter
2. Check the COM port number from Device Manager in Computer Management. e.g. COM1in illustration

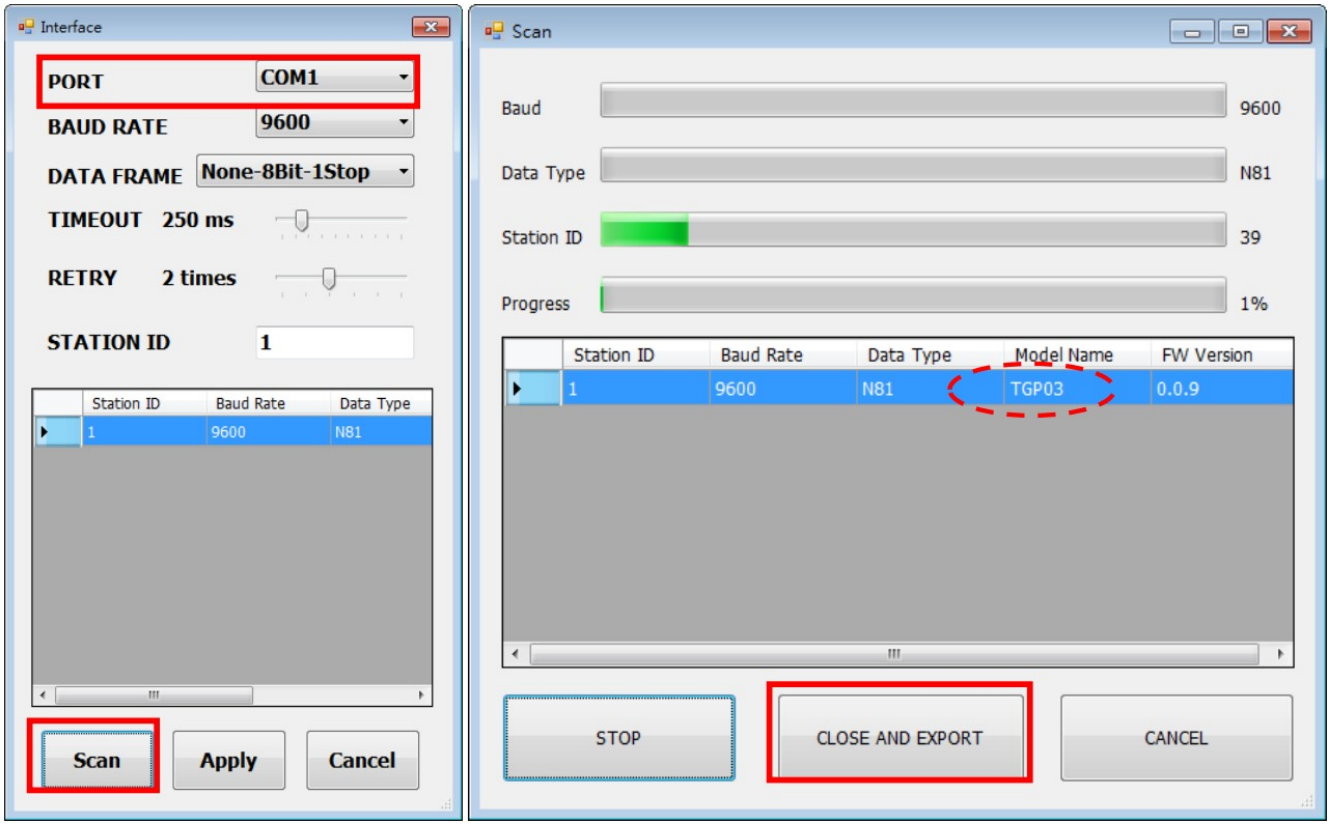


3. Open the TGPO3 UI, go to function ” Interface” ,clickitem ” Config” and then setting COM port, BAUD rate, data format and Station ID, pressed ” Apply ” for connection



4. Scan RS-485 connection

Open the TGPO3 UI, go to function ” Interface” , clickitem ” Config” and then setting COM port, pressed ” Scan” bottom for scan devices and pressed ” Close and Export ” when the interested devices found.

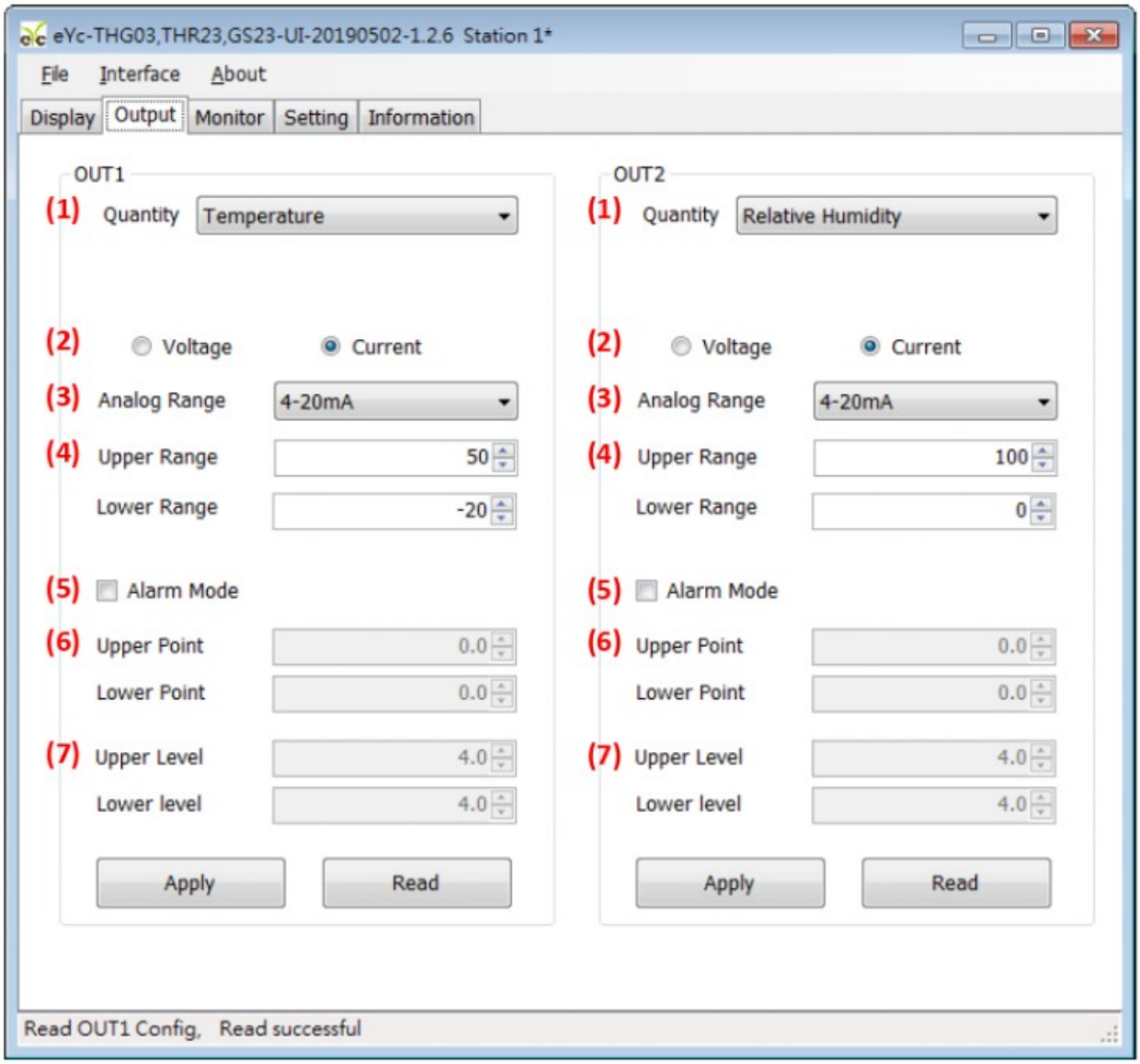


Pick up the device that you want to connect to and then press “Apply” to go.

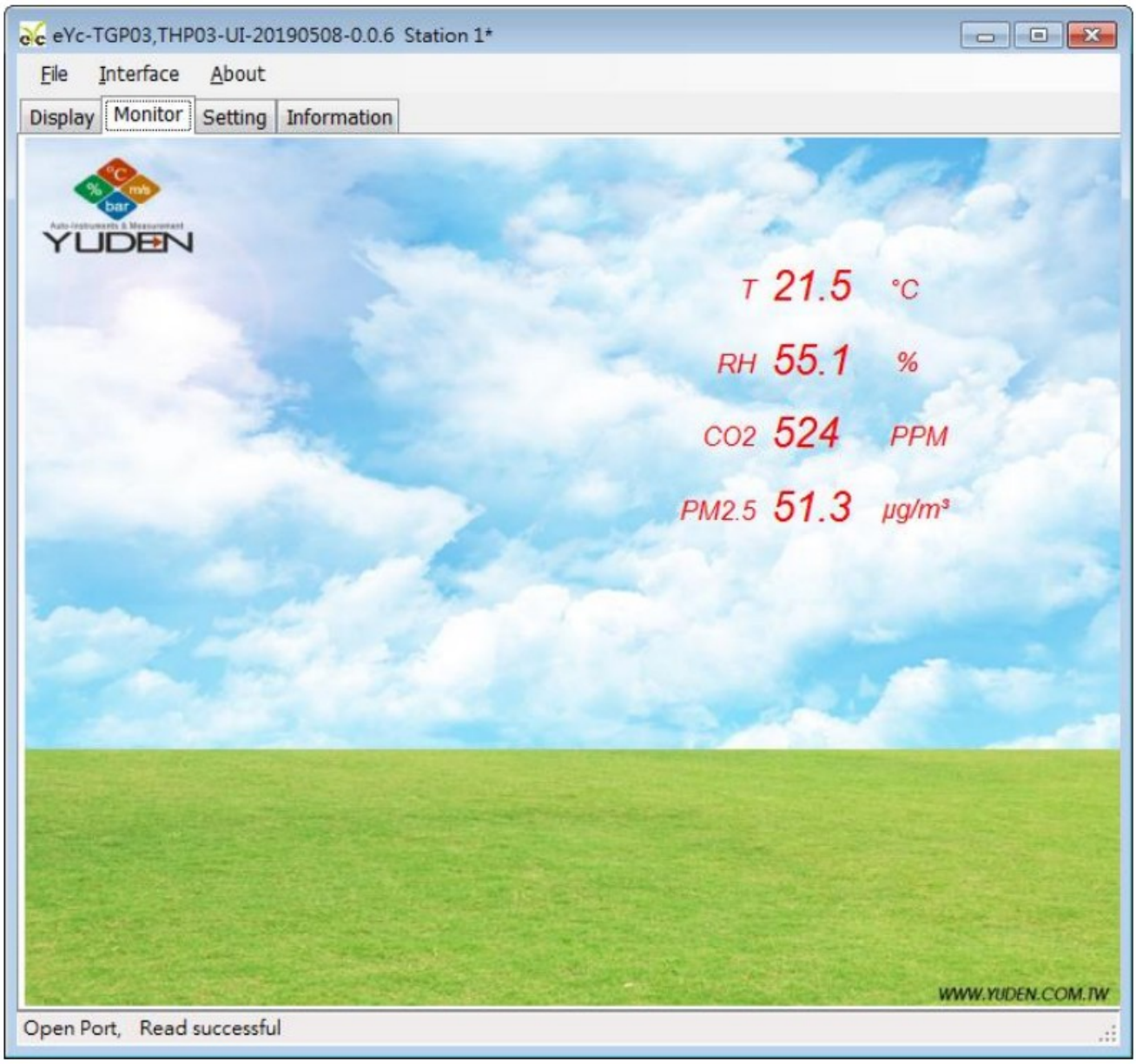
5. Setting on Analog Output

   In the group of OUT1(OUT2), Output tab. The both outputl and output2 related setting could be found.

   1. Quantity : Temperature, Relative Humidity, Carbon Dioxide (CO2)
   2. Analog type : Voltage or Current
   3. Analog Range : 0…20 mA /4 …20 mA (if output current) / 0 … 10 V (if output voltage)
   4. Range for Upper and Lower
   5. Alarm Mode: Check the box if analog output pretend a alarm switch output
   6. Alarm Trigger Point: Upper and Lower
   7. Alarm Output Level: Upper and Lower



6. Display PanelIn the Monitor tab. There is a large display of available measurements



7. Setting on RS-485, Data Transmission Test and environment parameters There are 4 groups in setting tab. The description of each item as below.

   Environment Parameters

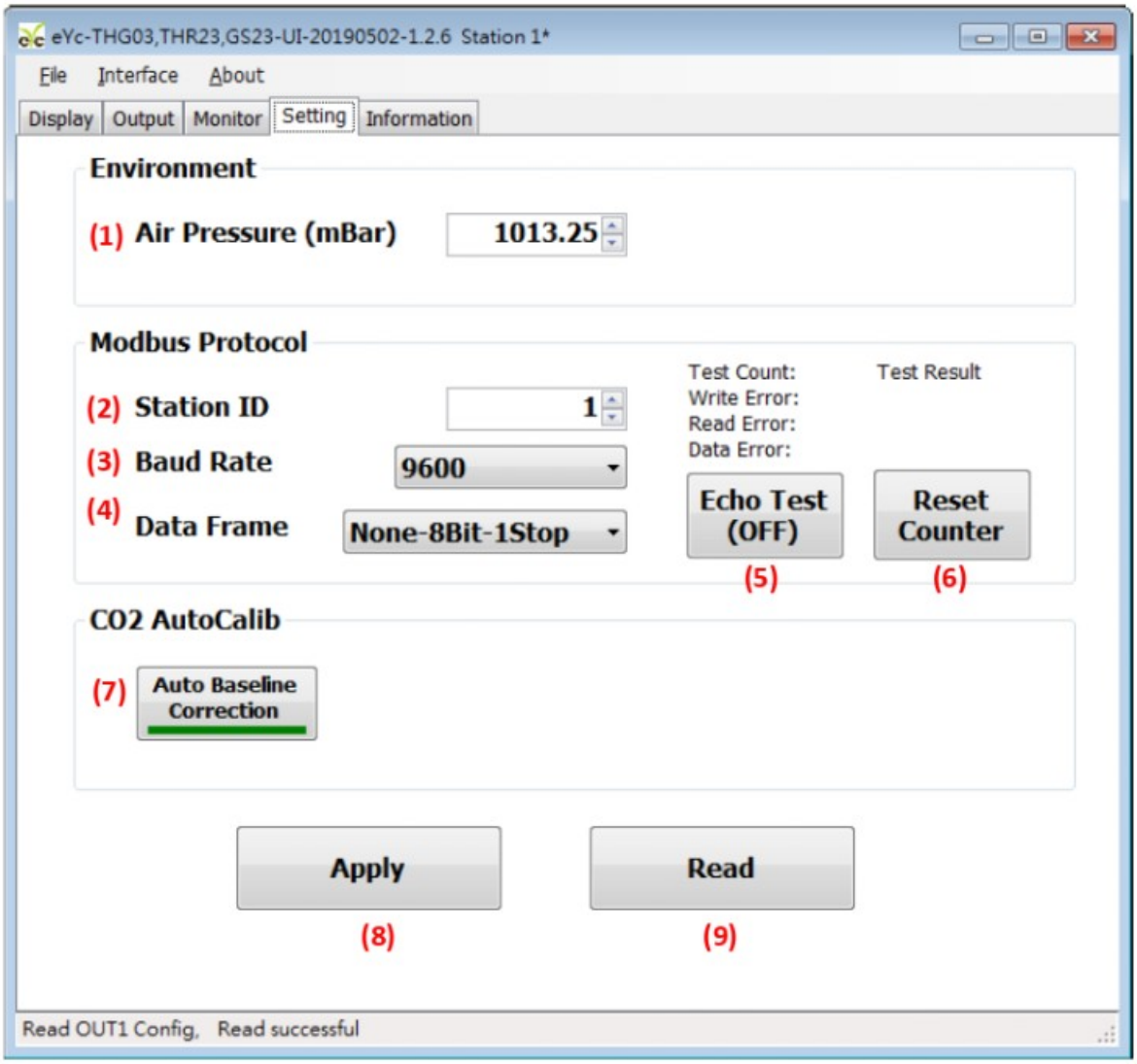
   1. Air Pressure

      Modbus Protocol
   2. stationID
   3. Baud Rate
   4. Date Frame
   5. Modbus Echo Test Enable/Disable
   6. Modbus Echo Test Result Reset

      CO2 Auto Calibration
   7. CO2 Auto Calibration : Function is enabled if the bar color green, otherwise function is disabled. In the general environment, the CO2 concentration usually measured as 400ppm. The environments as From Room/ Office with the condition as midnight period & nobody status, the CO2 concentration usually measured as 400ppm. Thus GS use the average statistics values for 7 days to implement Self-Correcting feature. This feature is not adaptive to use in special environment as Factory/ Plant Greenroom where the CO2 concentration may keep on high value & keep for long period.

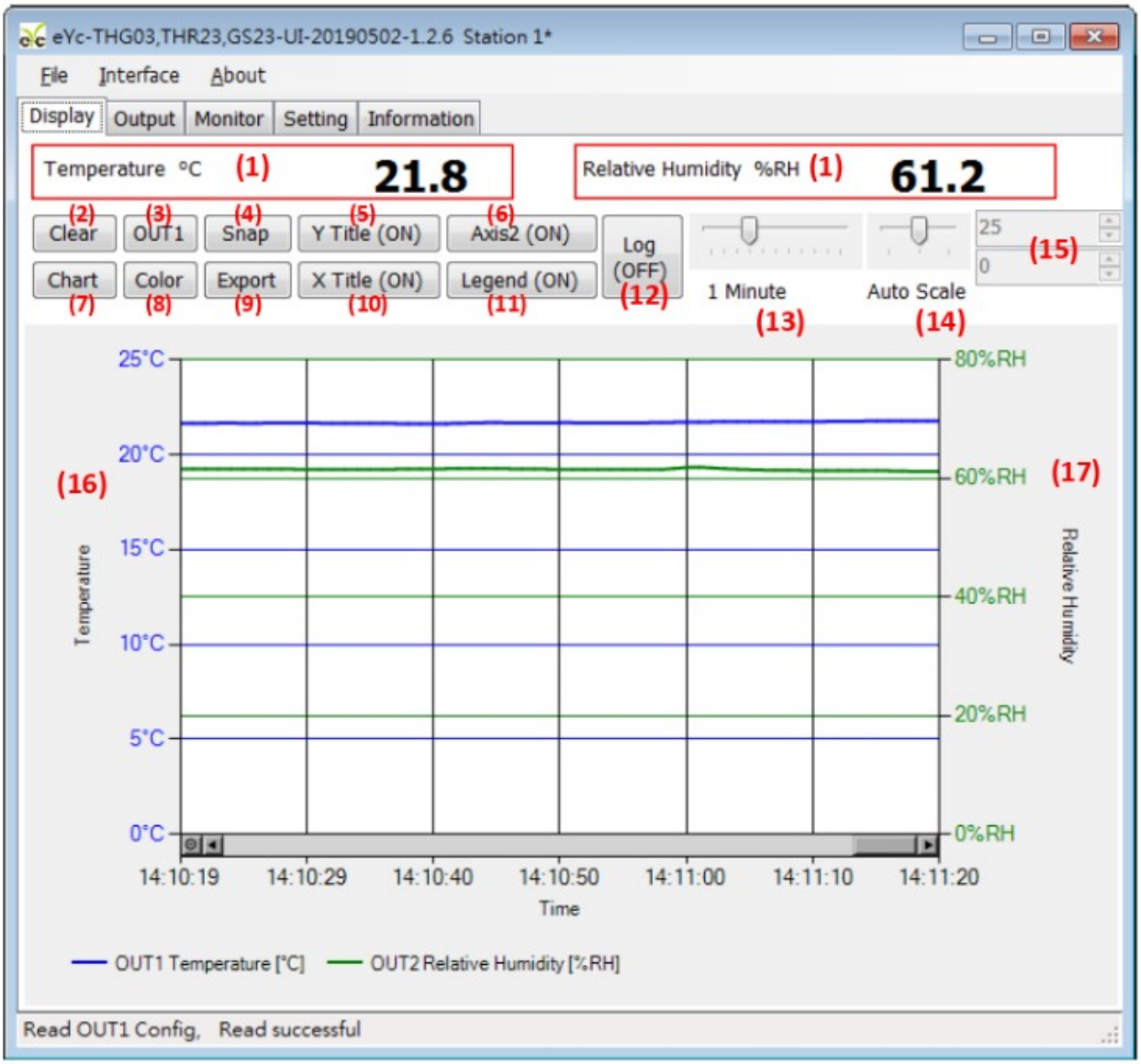
      Others

8. Write Setting
9. Read Setting

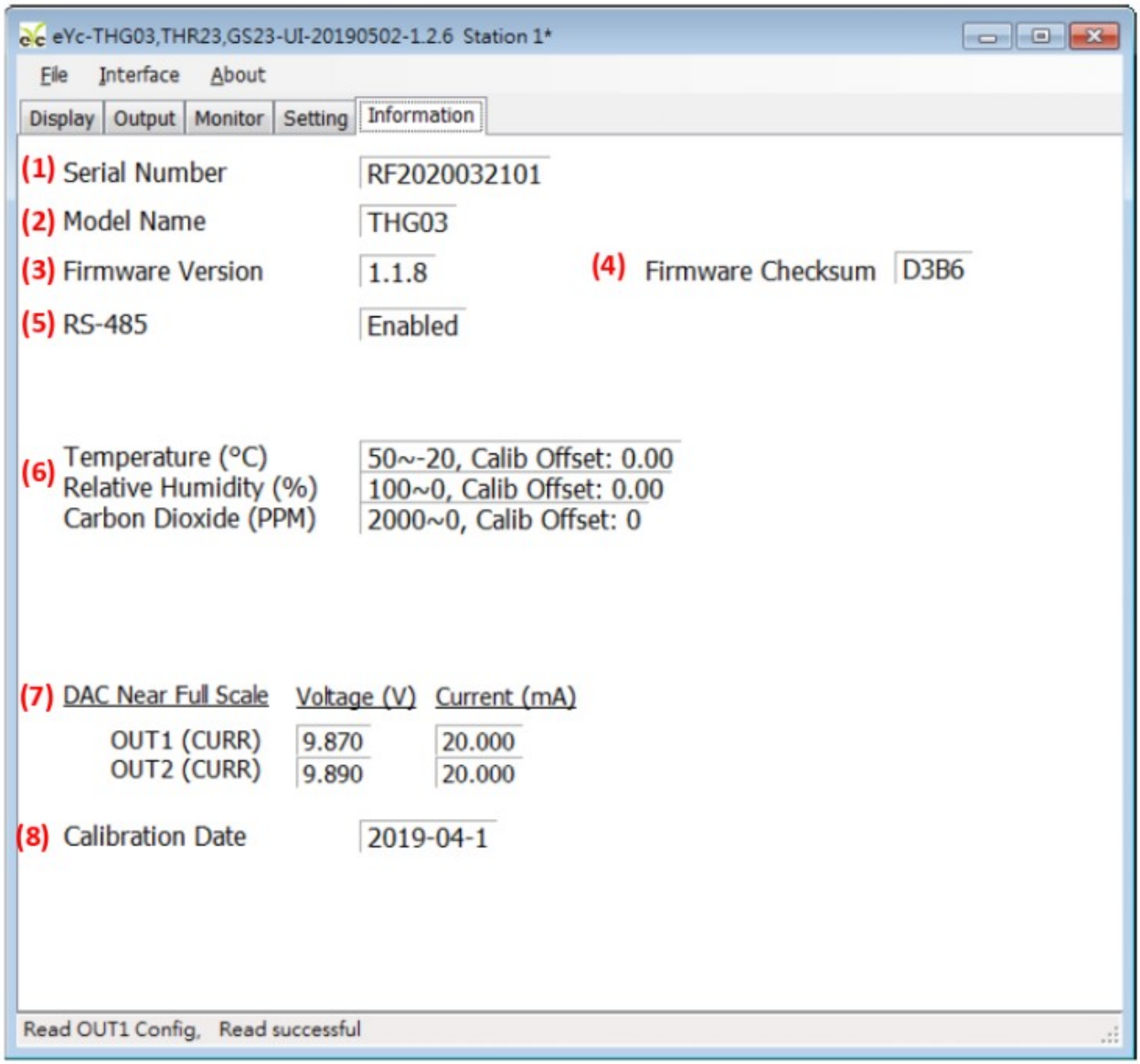


8. Data display and logging
    1. The measurement of OUT1 and OUT2 will be display here. The available quantity depends on device model.
    2. Clear plot chart
    3. Toggle the selection channel of color function, refer to item (8)
    4. Snap the current plot chart
    5. Display title of vertical axis (ON or OFF toggle in turn once click)
    6. Enable secondary axis (right axis)
    7. Change chartline style in turn
    8. Select the color of plot channel
    9. Export the records in plot buffer
    10. Enable horizontal axis
    11. Enable the legend of plot channel
    12. Enable the log function, the data in cvs format with comma delimiter
    13. The scale of horizontal scale
    14. Select the scale method of vertical axis
    15. Select the range of vertical axis
    16. The vertical axis, label of OUT1

17. The vertical axis, label of OUT2



9. Device Information
    1. Serial Number
    2. Model Name
    3. Firmware Version
    4. Firmware Checksum
    5. The activation of RS-485 function
    6. Programming range of measurements and offset values
    7. Analog Output Calibration Data
    8. Calibration Date



Inspection and maintenance

1. Maintenance

Since this product is inspected and calibrated for high accuracy at the factory before shipment, no calibration on the installation site is necessary when this product is installed

For inspection and maintenance follow the instructions below :

(a) Periodic inspection

Periodically inspect this product for its sensing accuracy, and clean the cover

Set the period between inspections based on atmospheric dust and other contaminants in the installation environment

(b) Sensor maintenance

Do not damage sensor surface during maintenance process

(c) Troubleshooting

If any problem occurs during operation, refer to the table below for appropriate solutions

2. Troubleshooting:

Problem	Cleck items	
No output Unstable output	Disconnected wiring Loose wiring Power supply voltage Sensor damages	Re-perform wir Crew on termir Replace the se
Slow response to output Error in output	Moisture / Condensation on the product Check installed location Check installed angle Check dust and contamination on the sensor	Remove the se air seasoning Refer to the se Cleaning the fil Calibrate Replace the se

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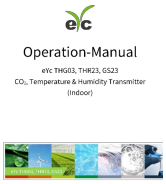
Documents / Resources

	eyc-tech eyc-THG03 CO2 Temperature and Humidity Transmitter [pdf] User Manual eyc-THG03 CO2 Temperature and Humidity Transmitter, eyc-THG03, CO2 Temperature and Humidity Transmitter, Temperature and Humidity Transmitter, Humidity Transmitter

References

- eyc-techï½œTaiwan measurement specialist, sensor manufacturer