



## eyc-tech BASE-THS-001 Industrial Dew Point Transmitter Instruction Manual

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eyc-tech BASE-THS-001 Industrial Dew Point Transmitter



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## Security considerations

Please read this Specification carefully, prior to use of this, and keep the manual properly, for timely reference.

Solemn Statement :

This product can not be used for any explosion-proof area.

Do not use this product in a situation where human life may be affected.

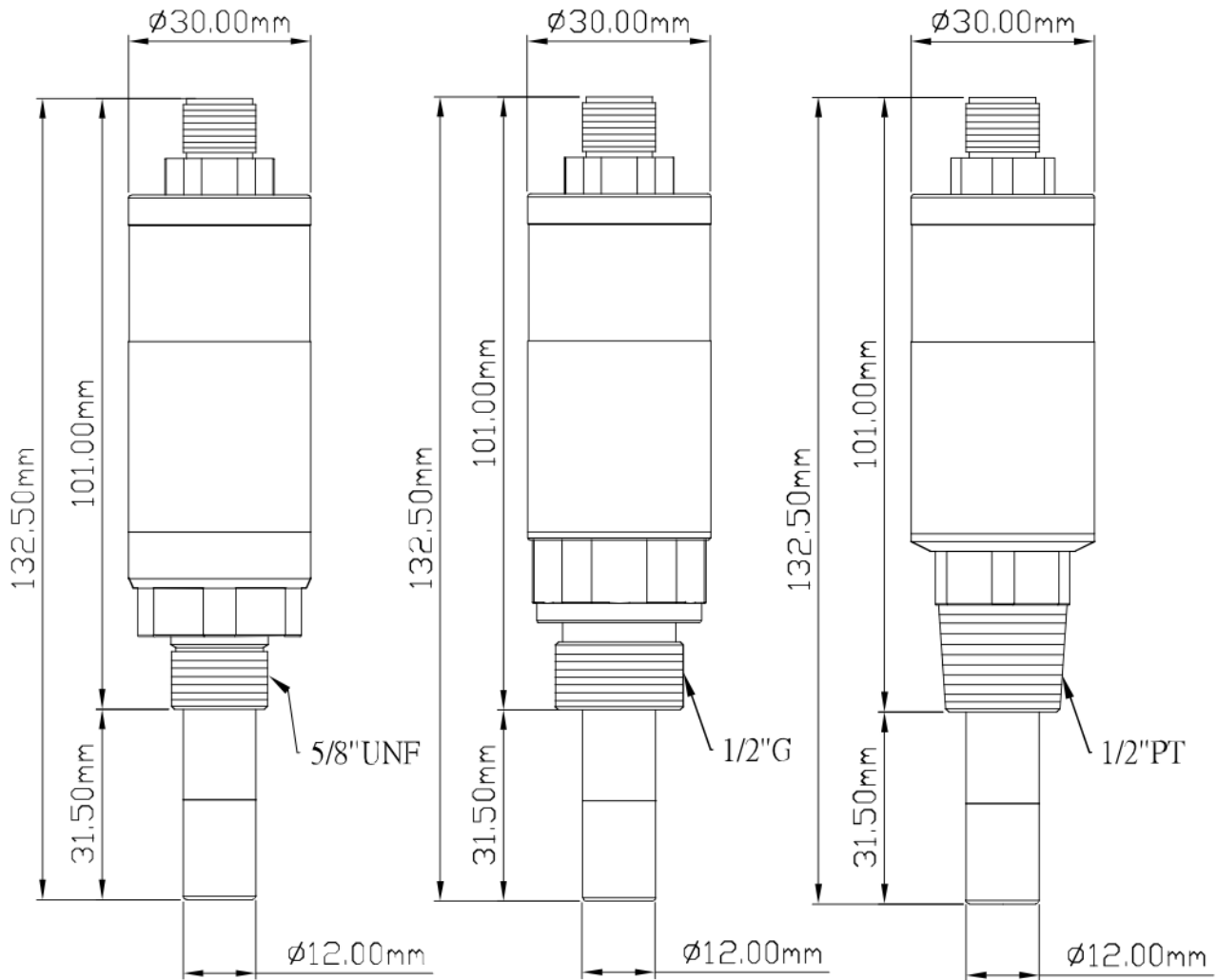
eye-tech will not bear any responsibility for the results produced by the operators !

## Warning!

- Installation and wiring must be performed by qualified personnel in accordance with all applicable safety standards.
- This product must be operated under the operating conditions specified in manual to prevent equipment damages.
- Please using the product under the ordinary pressure, or it will influence safe problem.
- This product must be operated under the operating condition specified in this manual to prevent equipment damages.
- This product must be operated under the normally atmospheric condition to prevent equipment damages.
- To prevent products damage, always disconnect the power supply from the product before performing any wiring and installation.
- All wiring must comply with local codes of indoor wiring and electrical installation rules.
- 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.

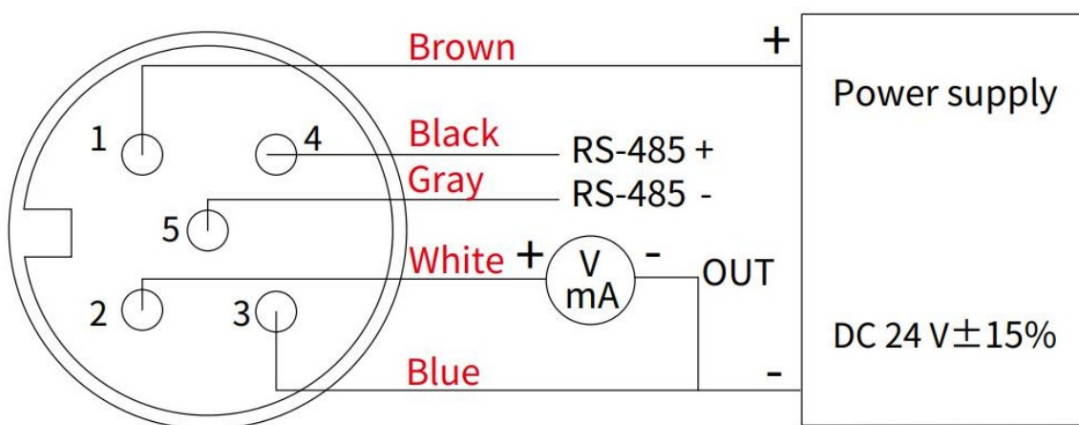
## Dimension

\* Standard – M12-5PIN 2M waterproof cable



## Diagram

### M12 Connector



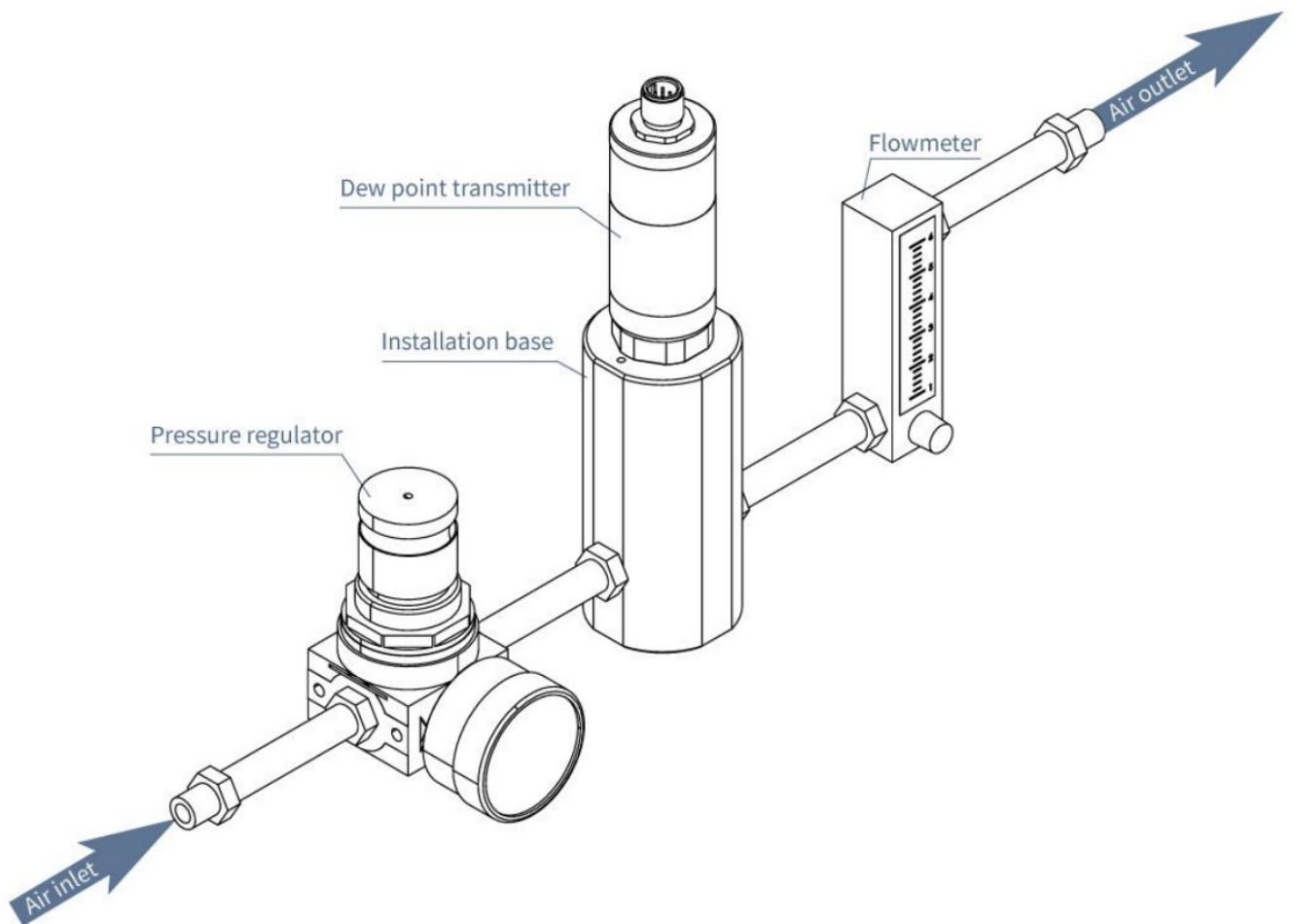
## Accessories for measuring atmospheric dew point

- Environment pressure affects the value of dew point. When environment pressure is higher, water vapor condensate easier. Thus, dew point value in high pressure environment is higher than atmospheric dew point.
- In process line, pressure could change and fluctuate easily, and leads to inconstant reading value. To avoid this problem, eyc-tech suggest user to measure dew point at atmospheric pressure (atmospheric dew point).

- To help user measuring atmospheric dew point easily, eyc-tech provide related accessories, which including installation base for dew point transmitter, pressure regulator and flowmeter ...etc. User can select accessories depends on installation. Please ask our sales personnel for further information.

Part number	Description
BASE-THS-001	Installation base(1/2"PT for transmitter), SUS304, Connection for air inlet and outlet: 1/4"PT
BASE-THS-002	Installation base(1/2"PF for transmitter), SUS304, Connection for air inlet and outlet: 1/4"PT
BASE-THS-003	Installation base(5/8"UNF for transmitter), SUS304, Connection for air inlet and outlet: 1/4"PT
BASE-THS-002-1	Installation base(1/2"PF for transmitter), SUS304, Connection for air inlet : 1/4"PF, regulator included.

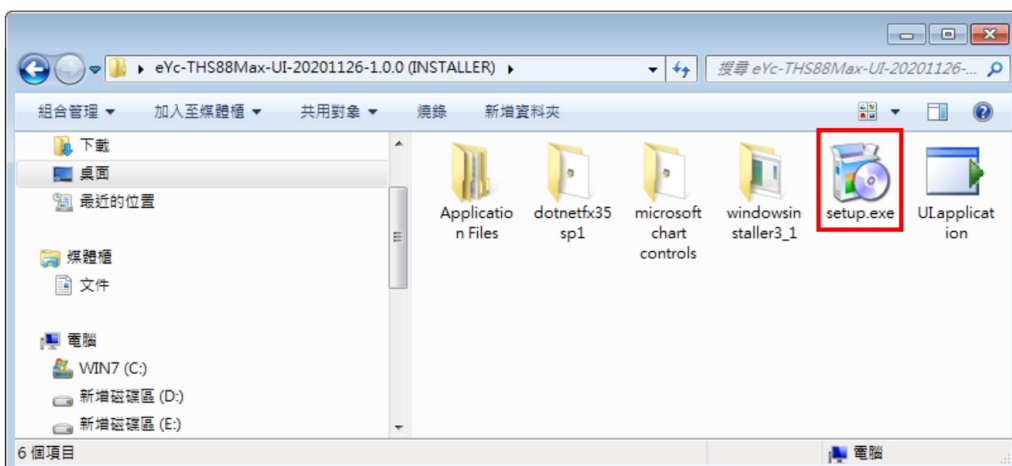
- A schematic of installation is shown below. Using pressure regulator to regulate pressure to 1 atm, and adjust airflow to 1~5 LPM to have stable reading of atmospheric pressure.



## Software and calibration operation step

### Application Program statement

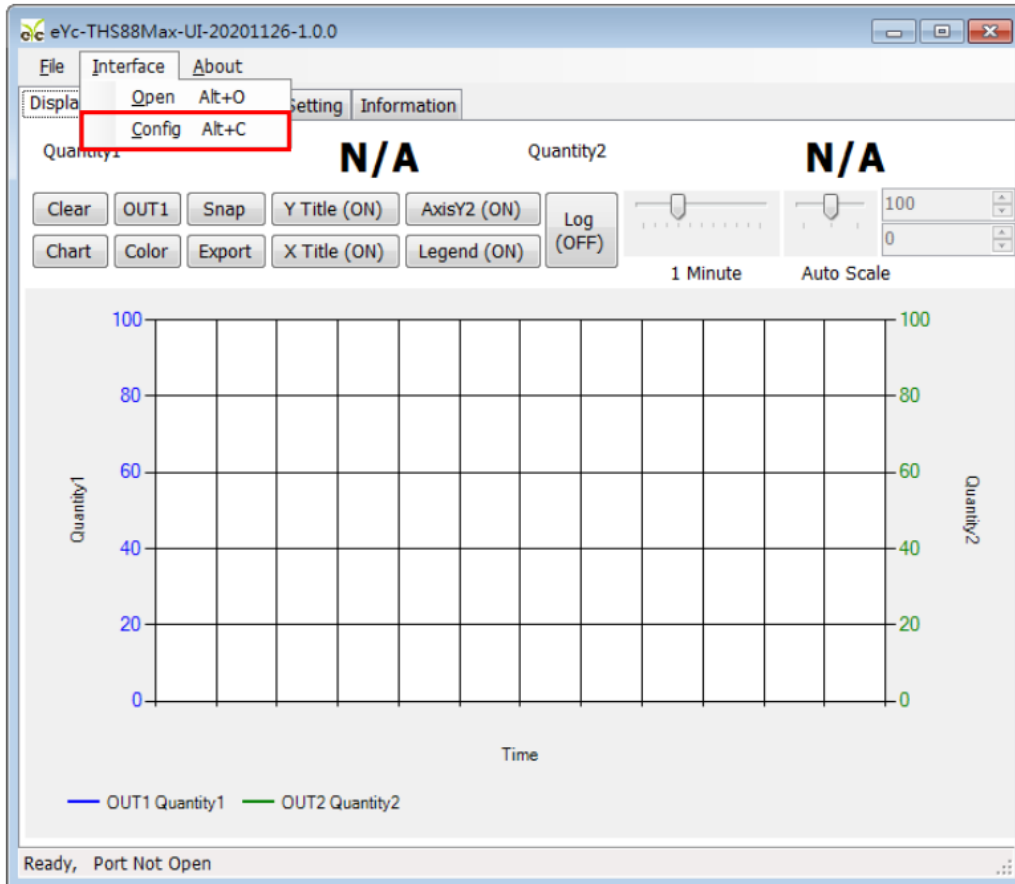
1. Free installation program : eYc-THS88Max-UI-20201126-I.0.0.EXE  
(:x.:Please use installation program when free program doesn' t execute)
2. Installation program : eYc-THS88Max-UI-20201126-I.0.0 (INSTALLER).rar
  - a. Operating System requirements : above Windows XP  
(Download : [https://drive.google.com/file/d/1IEbW4dFDktfI08locUFaLAX\\_mLOyalJ\\_/view?usp=sharing](https://drive.google.com/file/d/1IEbW4dFDktfI08locUFaLAX_mLOyalJ_/view?usp=sharing))
  - b. Click Setup to install



3. Other application program requirements: above Microsoft Office 2003

## Setting RS-485 connection

1. Connect product to PC via RS-485 cable
2. Execute "THS UI"
3. Click "Interface> Config"



4. Select the corresponding values of com port as following:
  - a. Port : Check Come Port
  - b. Baud Rate
  - C. Data Frame
  - d. Timeout
  - e. Retry
  - f. Station ID(Default 1)

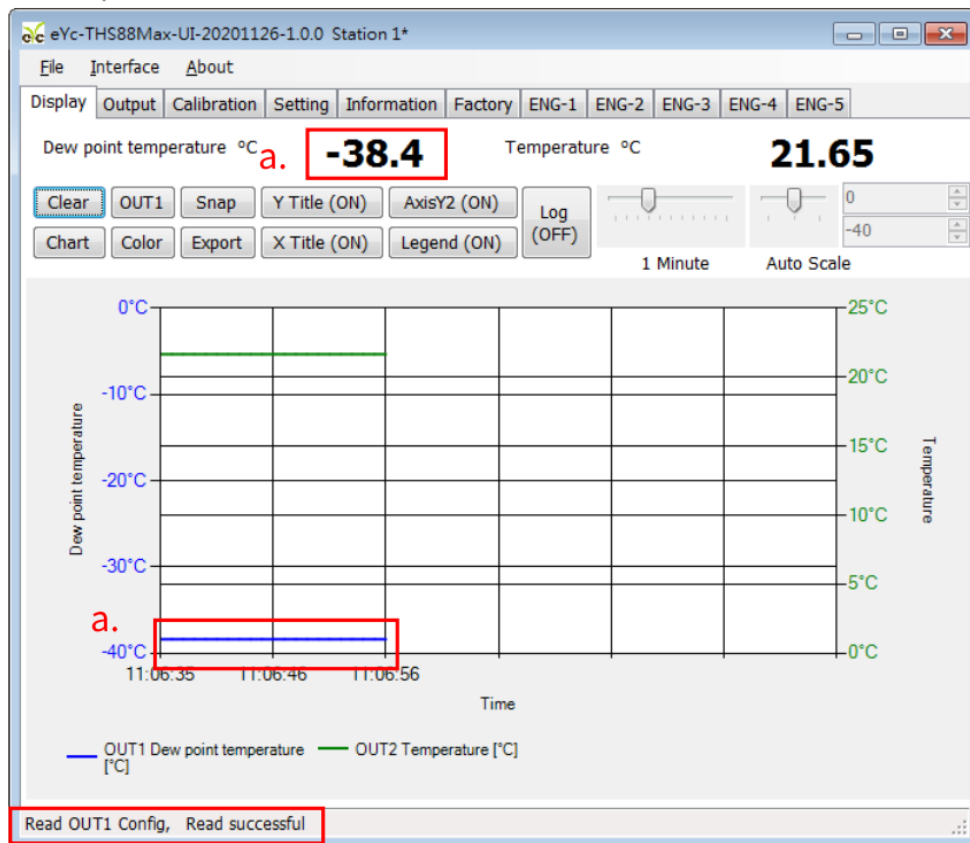
**Industrial Dew Point Transmitter**

The screenshot shows a software window titled "Interface" with a close button in the top right corner. The window contains several configuration options, each with a red rectangular box highlighting its value and a letter label to its right:

- PORT**: A dropdown menu showing "COM1" (labeled **a.**)
- BAUD RATE**: A dropdown menu showing "9600" (labeled **b.**)
- DATA FRAME**: A dropdown menu showing "None-8Bit-1Stop" (labeled **c.**)
- TIMEOUT**: A slider control set to "250 ms" (labeled **d.**)
- RETRY**: A slider control set to "2 times" (labeled **e.**)
- STATION ID**: A text input field containing the number "1" (labeled **f.**)

Below these settings is a table with three columns: "Station ID", "Baud Rate", and "Data Type". The table body is currently empty. At the bottom of the window are three buttons: "Scan", "Apply", and "Cancel".

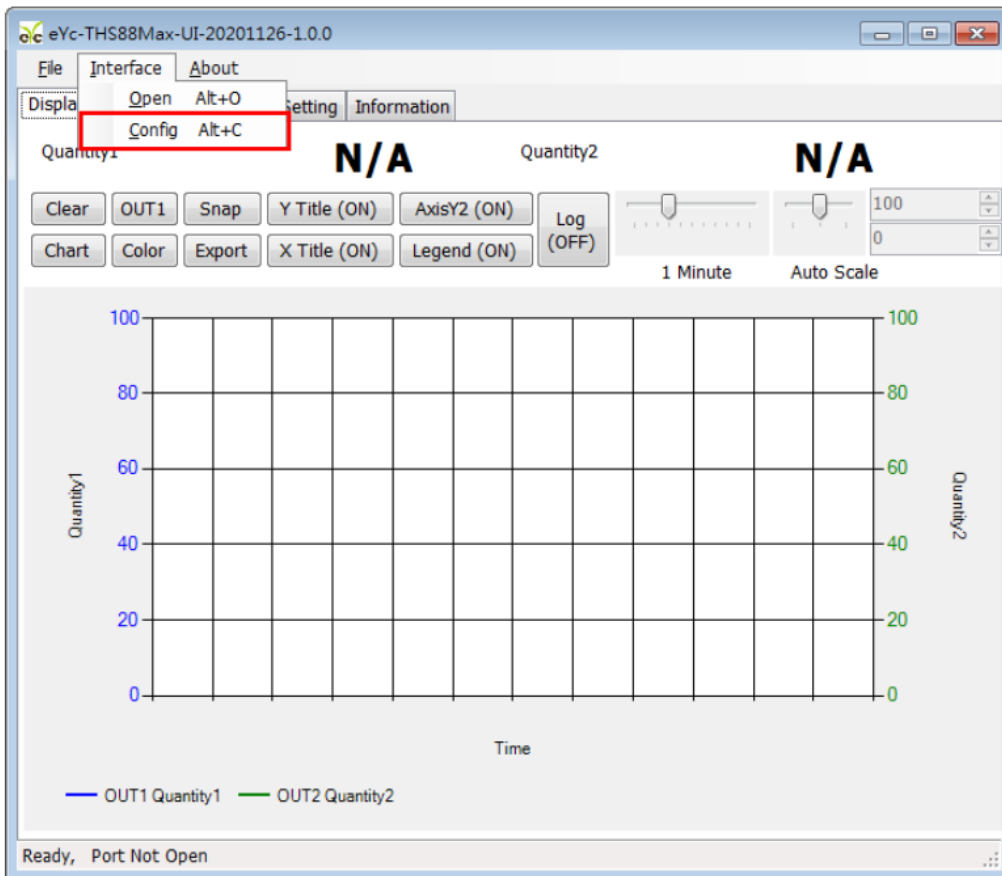
5. Click "Apply"
6. Connect successfully
  - a.** Show value and trend chart of Dew point temperature
  - b.** Show "Open Port, Read successful"



#### Scan RS-485 connection

\* Use scan function to connect when forgetting the connection information or having more facilities.

1. Connect the product to PC via RS-485 cable
2. Execute "THS UI"
3. Click "Interface> Config"



4. Select the corresponding values of com port as following:

- a. Port :
- b. RS-485

Interface

PORT **COM1**

BAUD RATE 9600

DATA FRAME None-8Bit-1Stop

TIMEOUT 250 ms

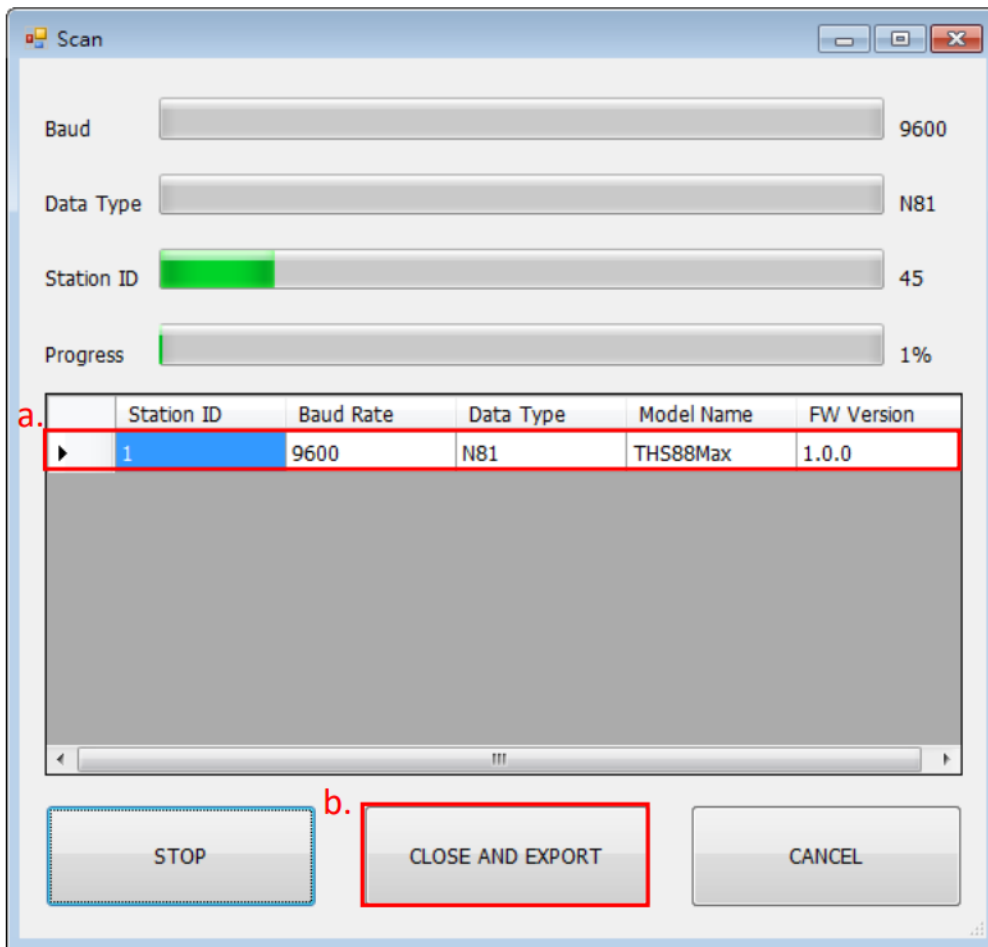
RETRY 2 times

STATION ID 1

Station ID	Baud Rate	Data Type
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Scan Apply Cancel

5. Click “Scan” to execute connection facilities
6. Scan connection facilities and set up
  - a. Select Station ID
  - b. Click “CLOSE AND EXPORT”



7. Click “Apply”

Interface

PORT COM1

BAUD RATE 9600

DATA FRAME None-8Bit-1Stop

TIMEOUT 250 ms

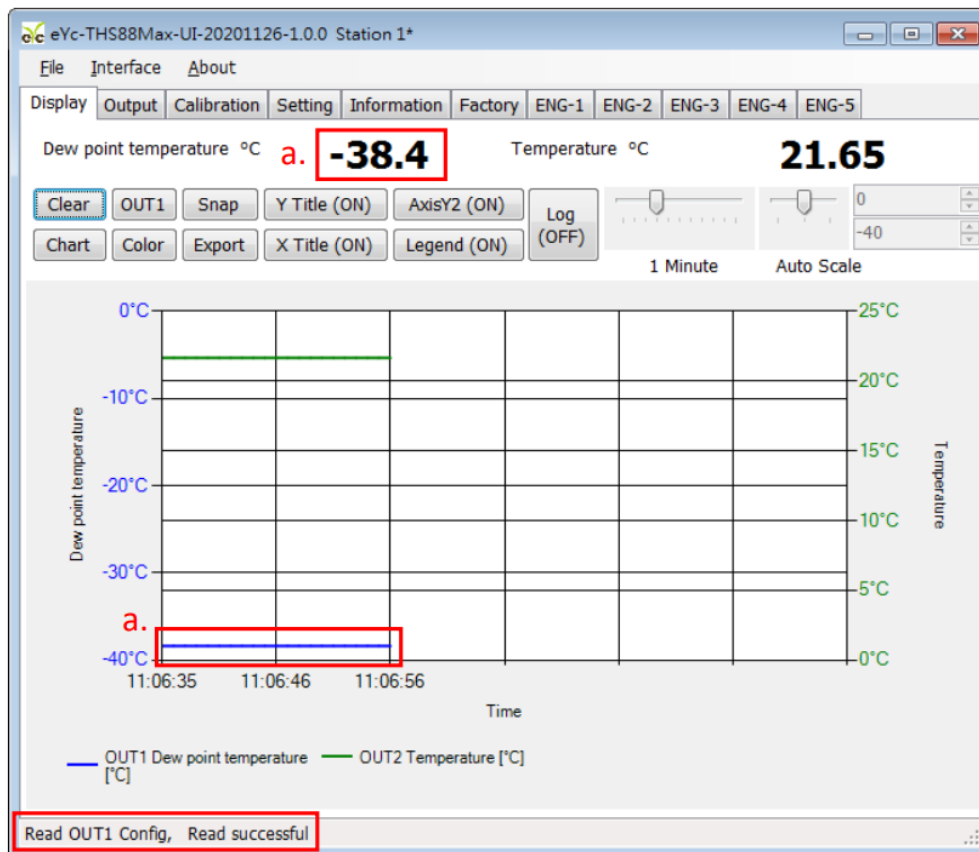
RETRY 2 times

STATION ID 1

	Station ID	Baud Rate	Data Type
▶	1	9600	N81

Scan Apply Cancel

8. Connect successfully
  - a. Show values and trend chat Dew point Temperature
  - b. Show "Open port, Read successful"



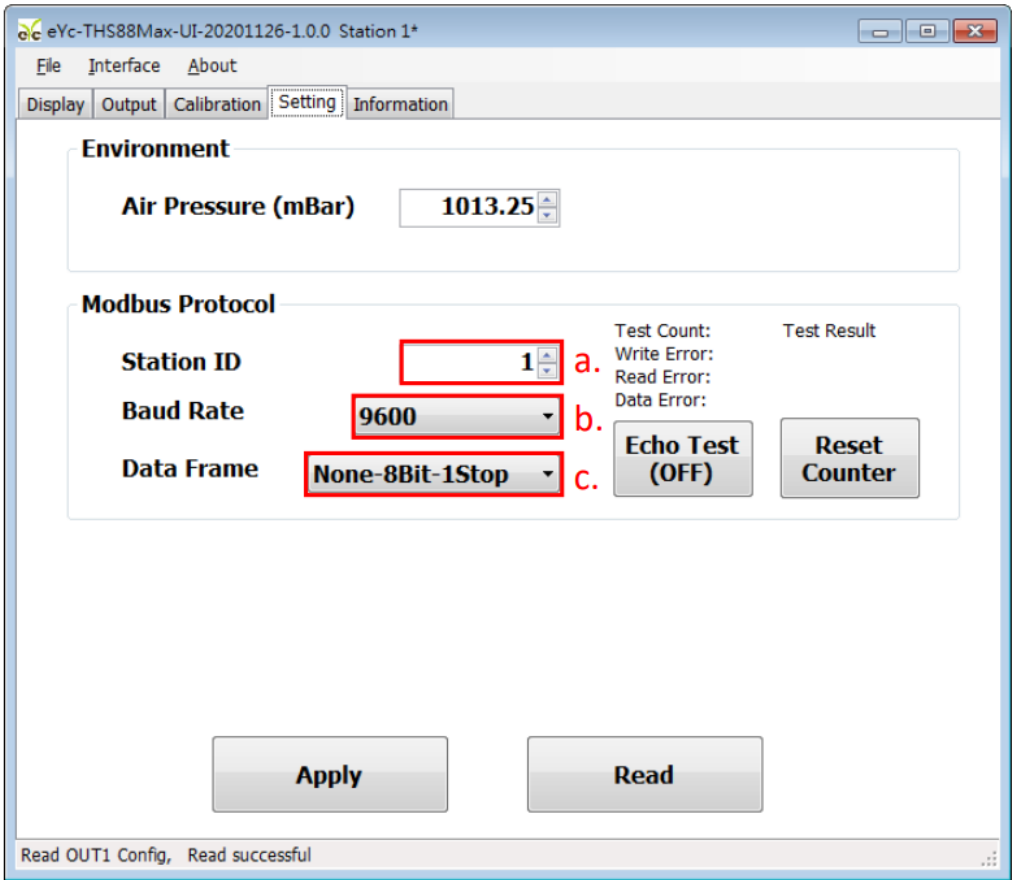
### Setting RS-485 Mod Bus Protocol

1. Setting RS-485 connection step as step 5.1
2. Click "Setting"

The screenshot shows the eYc-THS88Max-UI-20201126-1.0.0 Station 1\* interface with the Setting tab selected. The top menu bar includes File, Interface, and About. Below it, a tab bar shows Display, Output, Calibration, Setting, and Information. The main display area is divided into two sections: Environment and Modbus Protocol. The Environment section shows Air Pressure (mBar) as 1013.25. The Modbus Protocol section shows Station ID as 1, Baud Rate as 9600, and Data Frame as None-8Bit-1Stop. There are buttons for Echo Test (OFF) and Reset Counter. The status bar at the bottom shows 'Read OUT1 Config, Read successful'.

3. Select Mod bus Protocol parameter

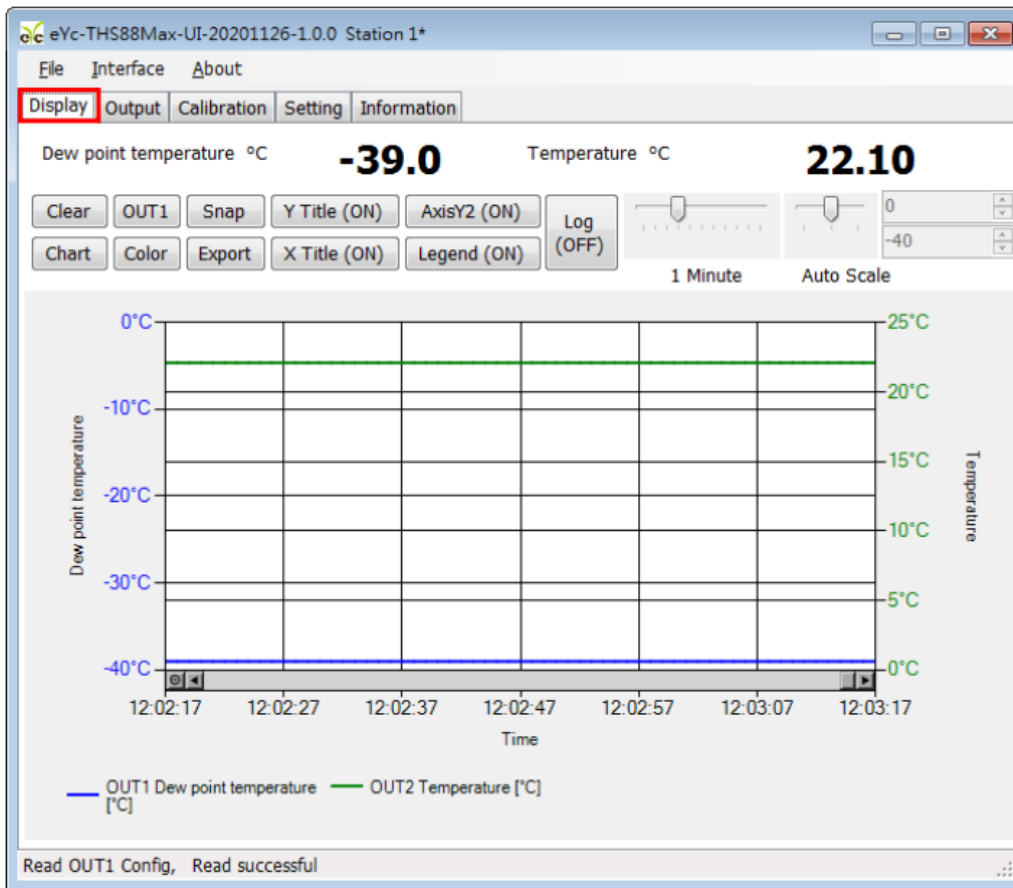
- a. Station ID : 1 ~247
- b. Baud Rate : 9600, 19200, 38400, 57600, 115200
- c. Data Frame: None-8Bit-1Stop, None-8Bit-2Stop, Even-8Bit-1Stop, Even-8Bit-2Stop, Odd-8Bit-1Stop, Odd-8Bit-1 Stop



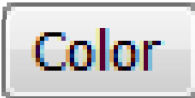






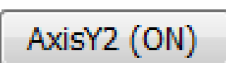
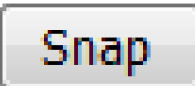
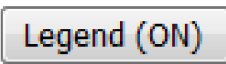


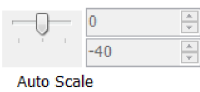
- 4. Click “Apply”
- 5. Execute connection as step 5.2 or 5.3 again

**Display and save data**

- 1. Show Data Click ” Display”



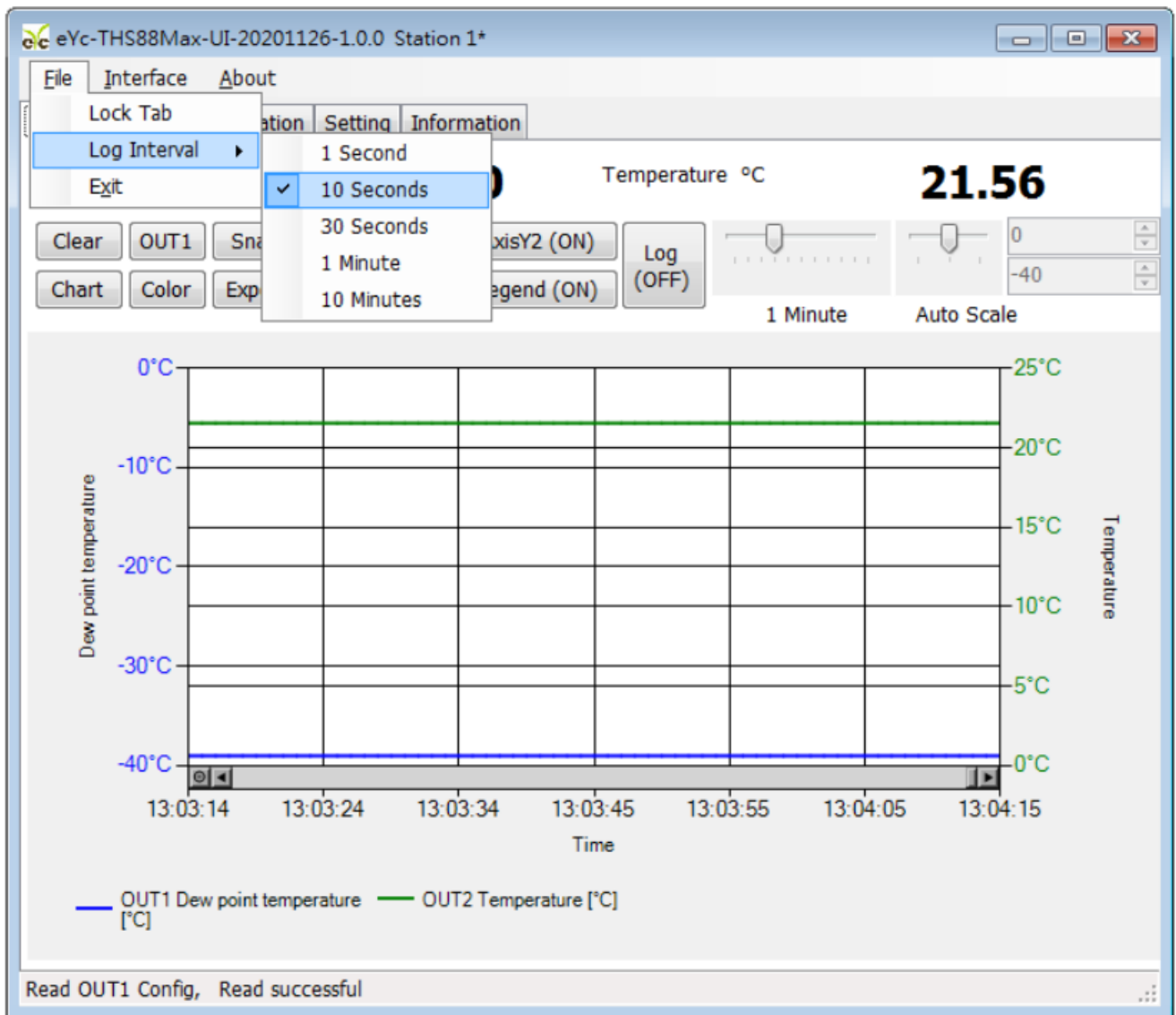
## 2. Icon function statements

	Clear the chart records		Save the data measuring when the system start connecting before clicking the Export icon
	Change the chart style		Show/Not show the statement of Y axis
	Select the OUTPUT channel		Show/Not show the statement of X axis
	Set line color chosen from OUTPUT		Show/Not show the statement of Y secondary axis
	Snap chart		Show/ Not show chart
	Show/Not show measuring data		
 1 Minute	Adjust time range of X axis		
 Auto Scale	Adjust time range of Y axis		

### 3. Setting time interval of record

a. File> Log Interval

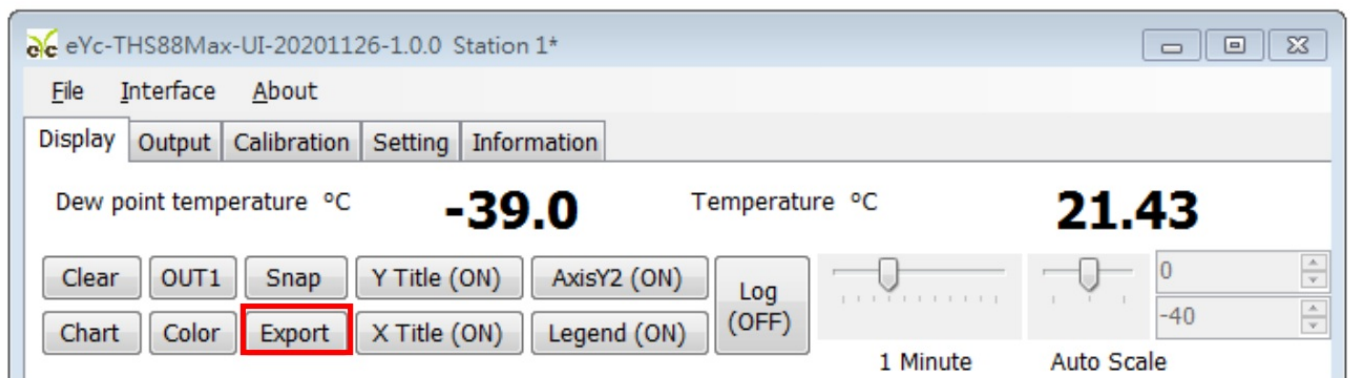
b. Select time interval of record



#### 4. Save/Log measuring data

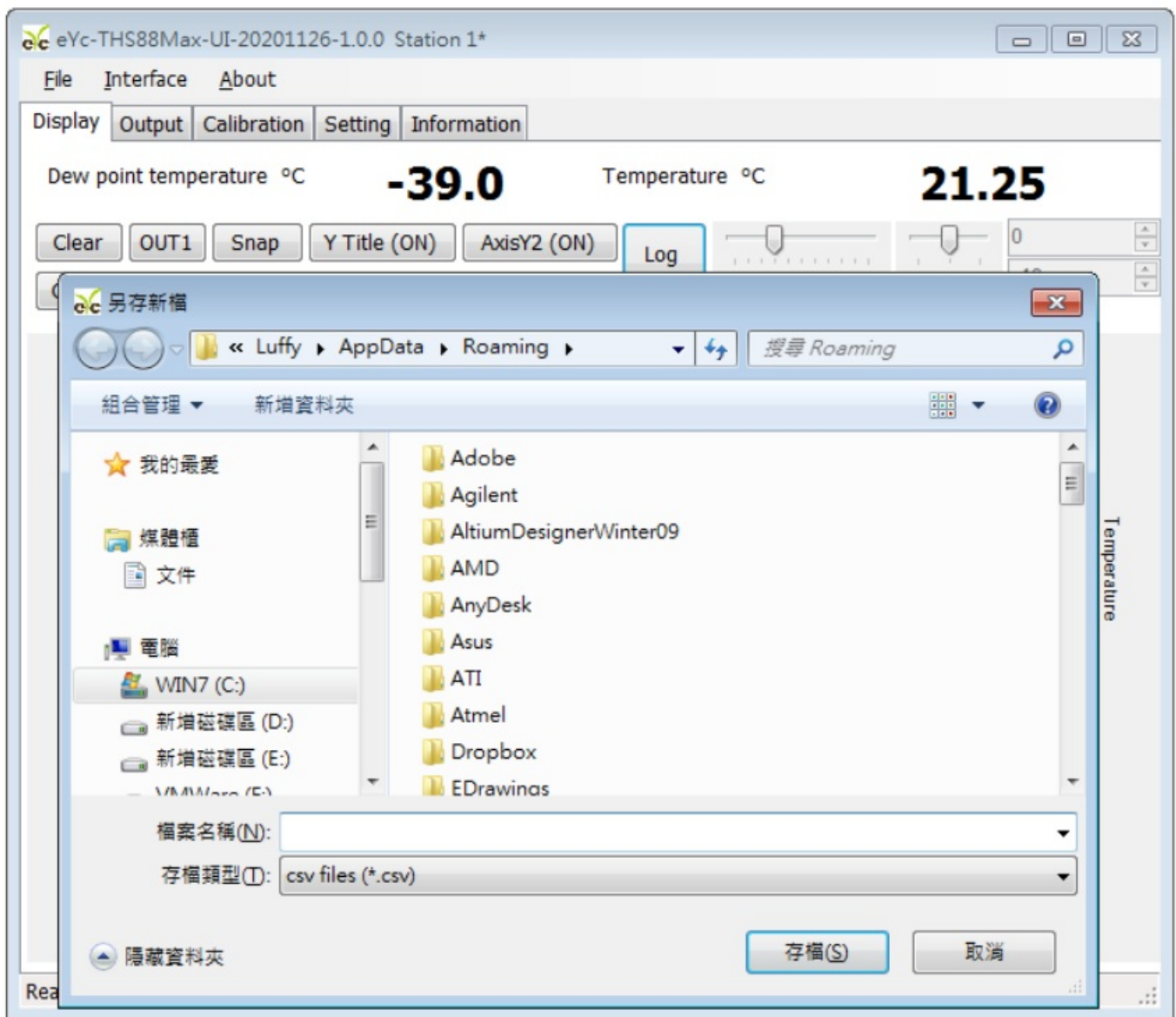
- a. Log measuring range: Save the data measuring when the system start connecting before clicking the Export icon

##### a-1. Click Display> Export



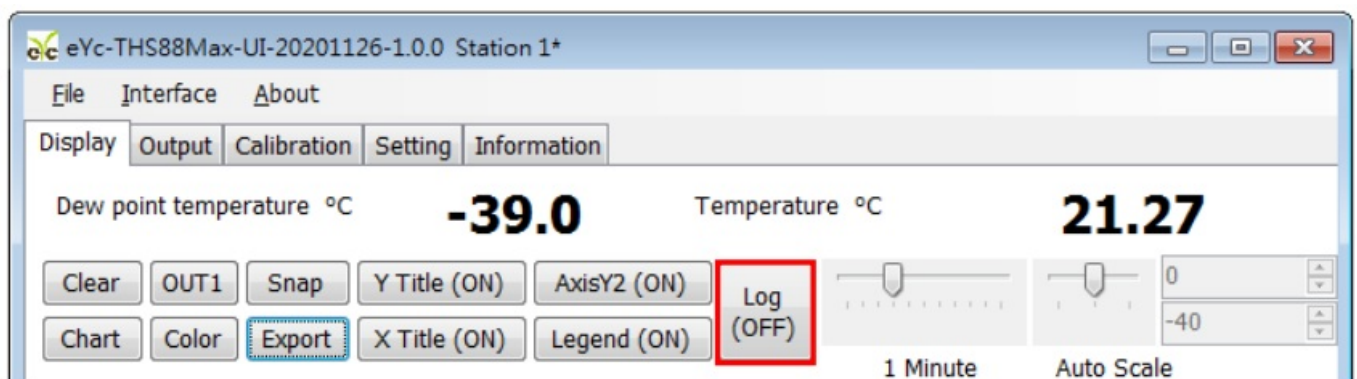
##### a-2. Appoint path and Key in file name> save

- \*1. If file name is some as the path name, the original file will be over write .



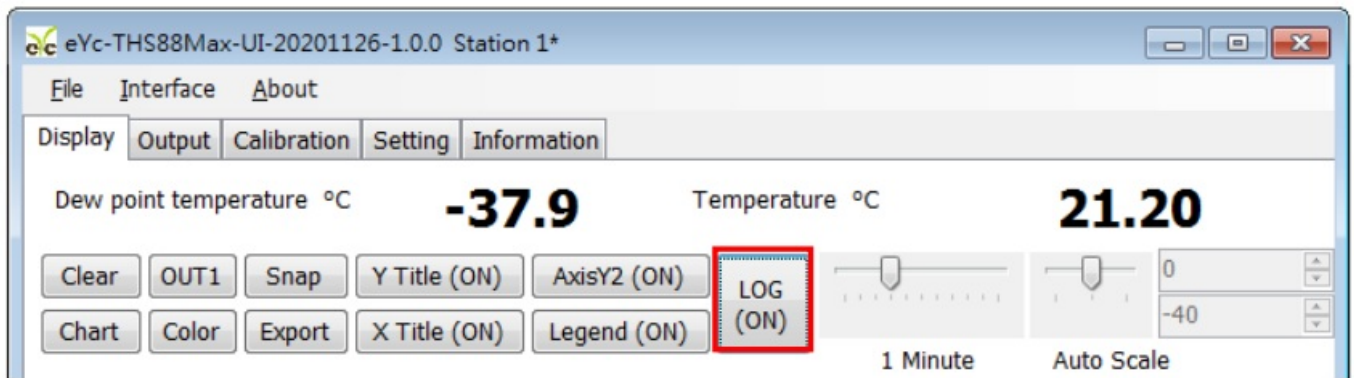
b. Log measuring data Log the data which is on from start or off

b-1. Display> Log(OFF)



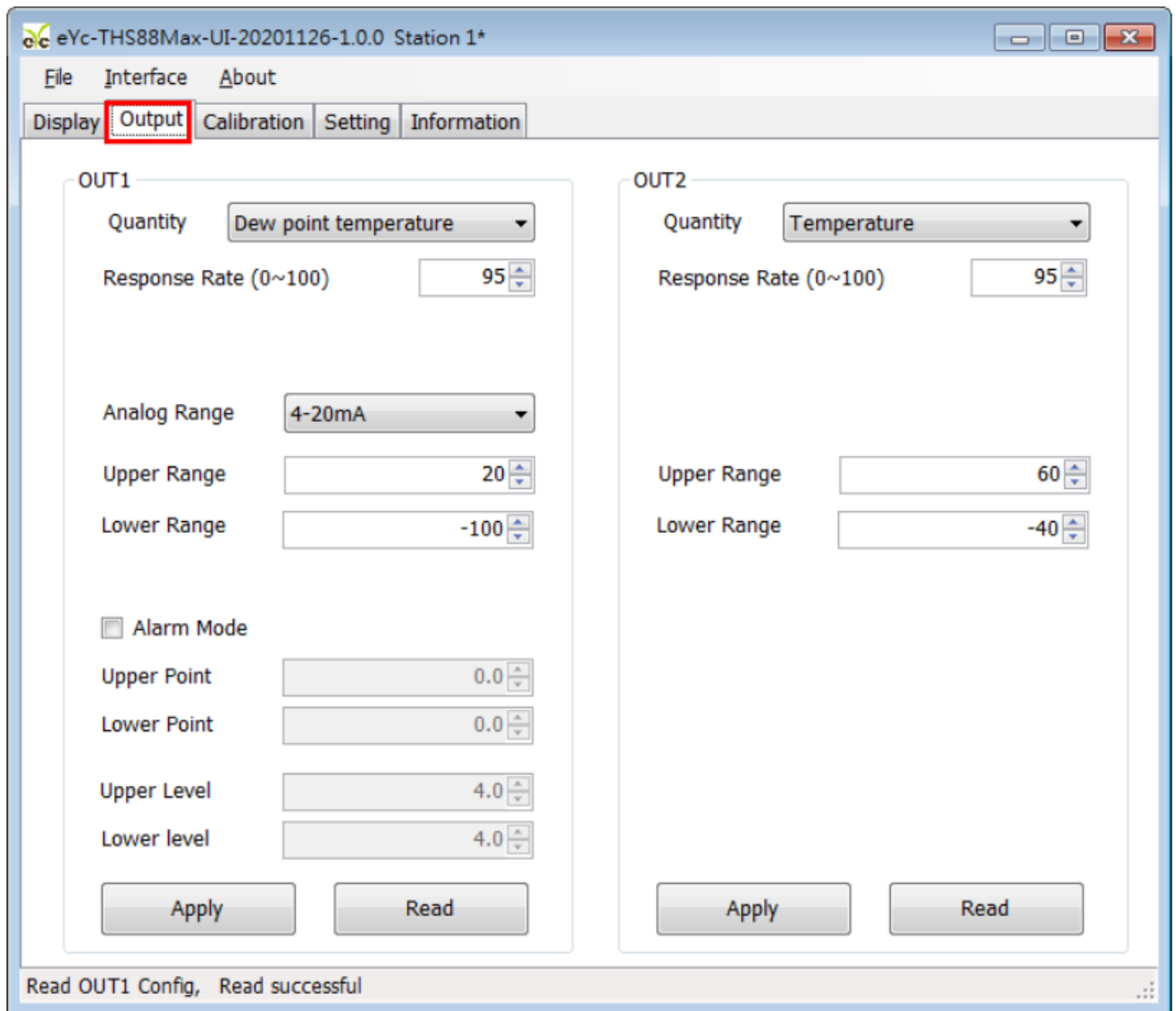
b-2. Appoint path and Key in file name> save> Log (ON)

\* 1. If file name is some as the path name, the original file will be over write .



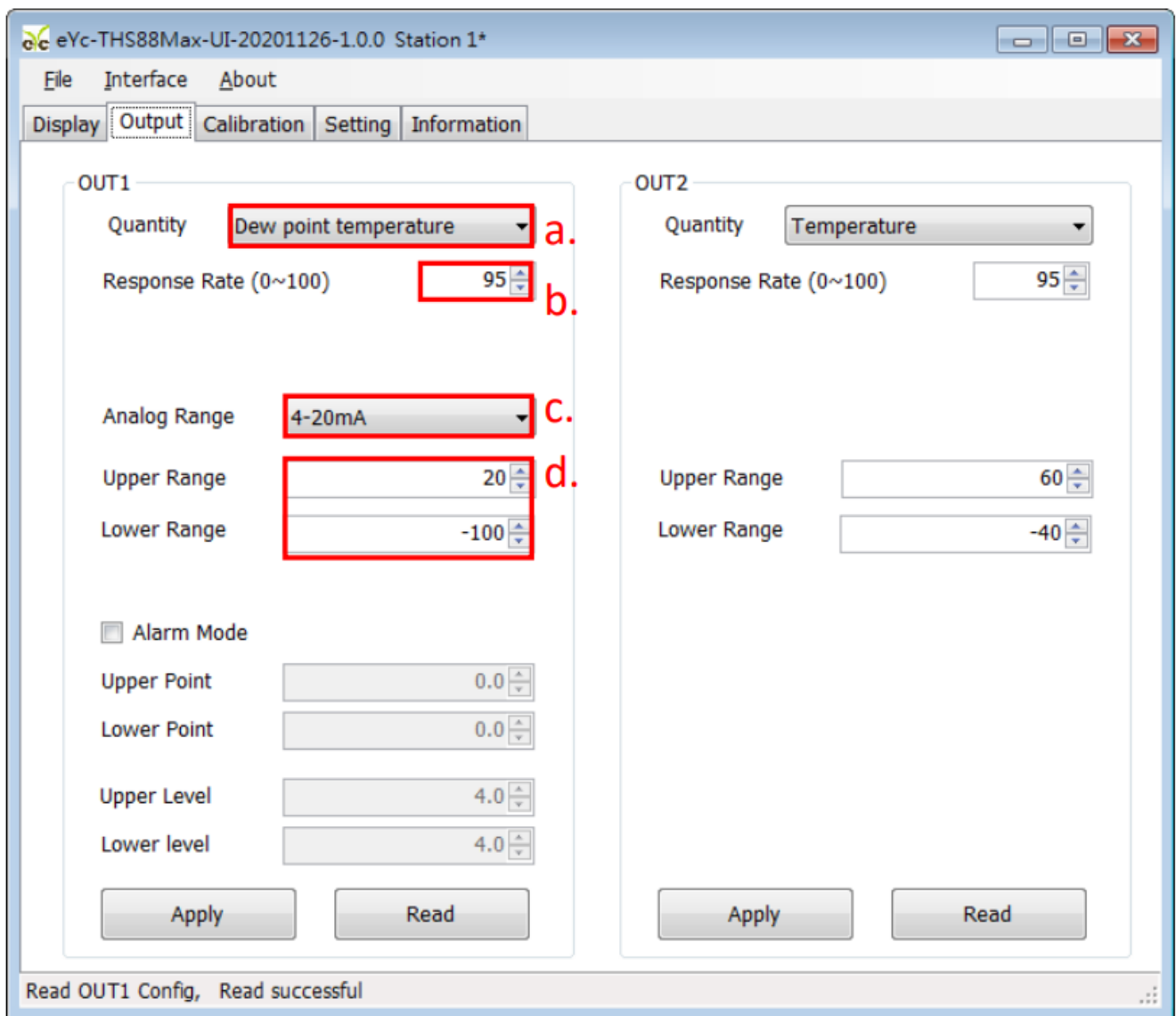
Choose parameter of Output

1. Click "Output"

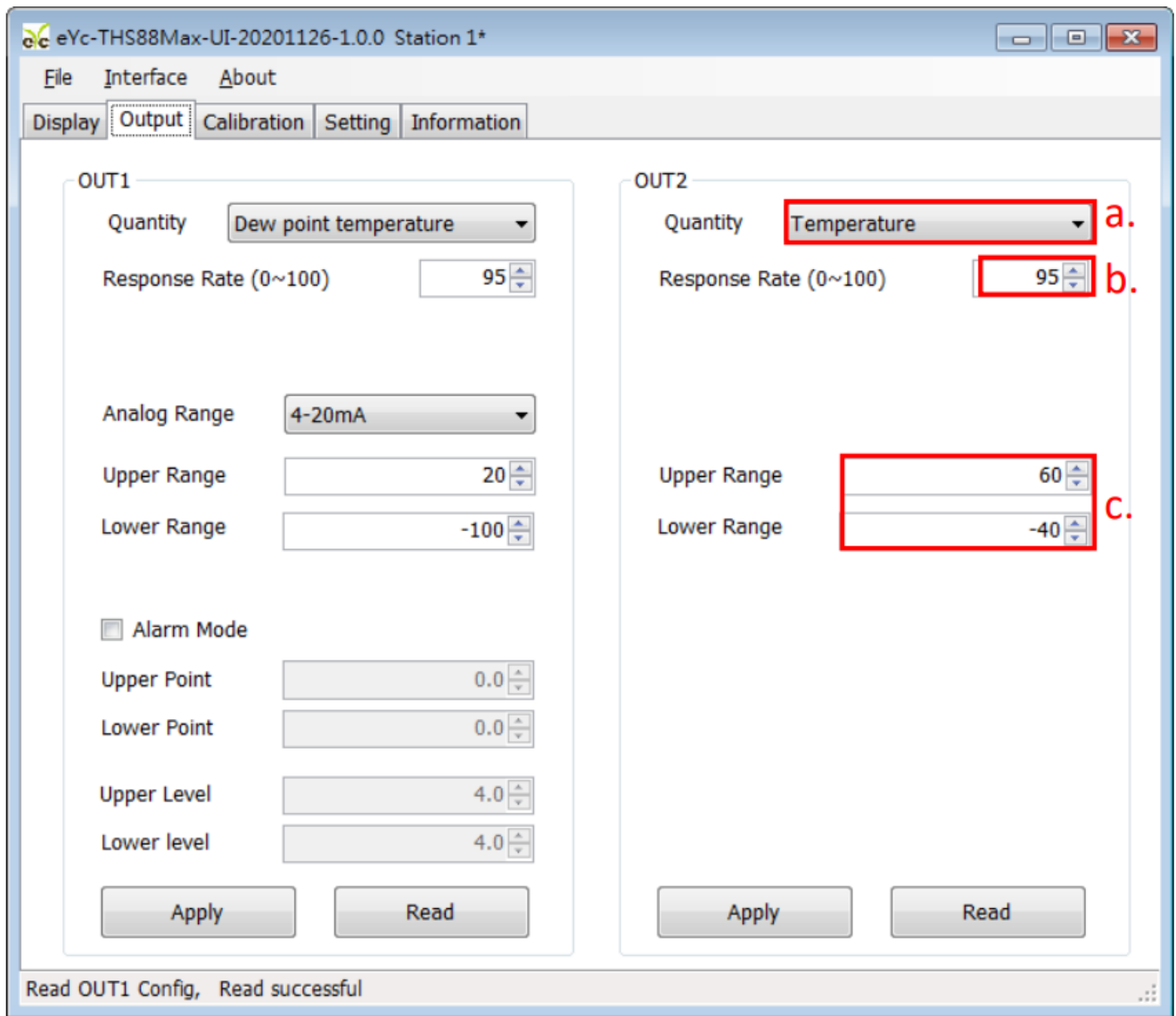


2. Select relative parameters of Output

- a. Measures
- b. Responding Rate
- c. Voltage or current analog range
- d. Upper and Lower point of Output



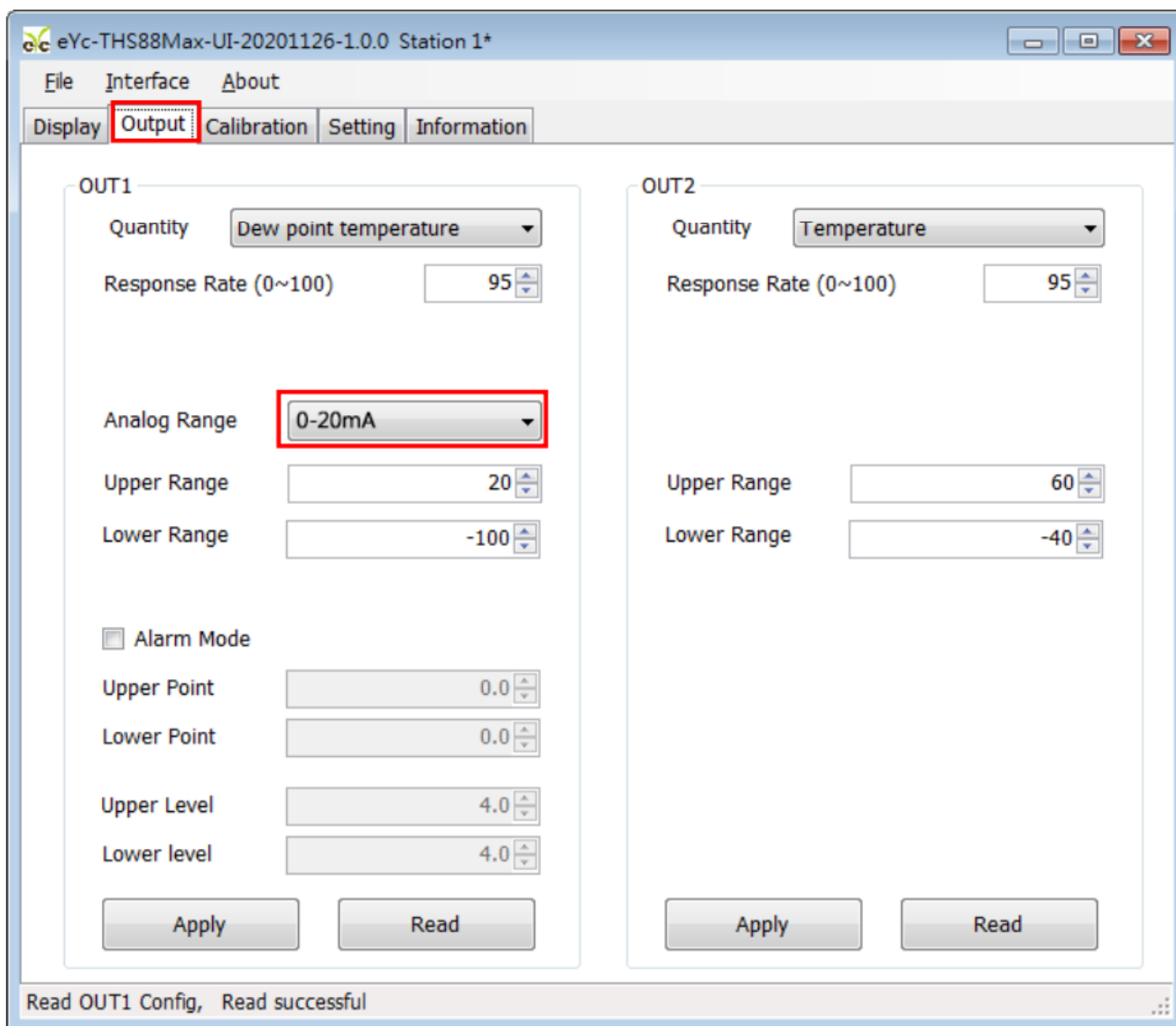
3. Click "Apply"
4. Select relative parameters of Output2
  - a. Measures
  - b. Responding Rate
  - c. Upper and Lower point of Output



5. Click "Apply"

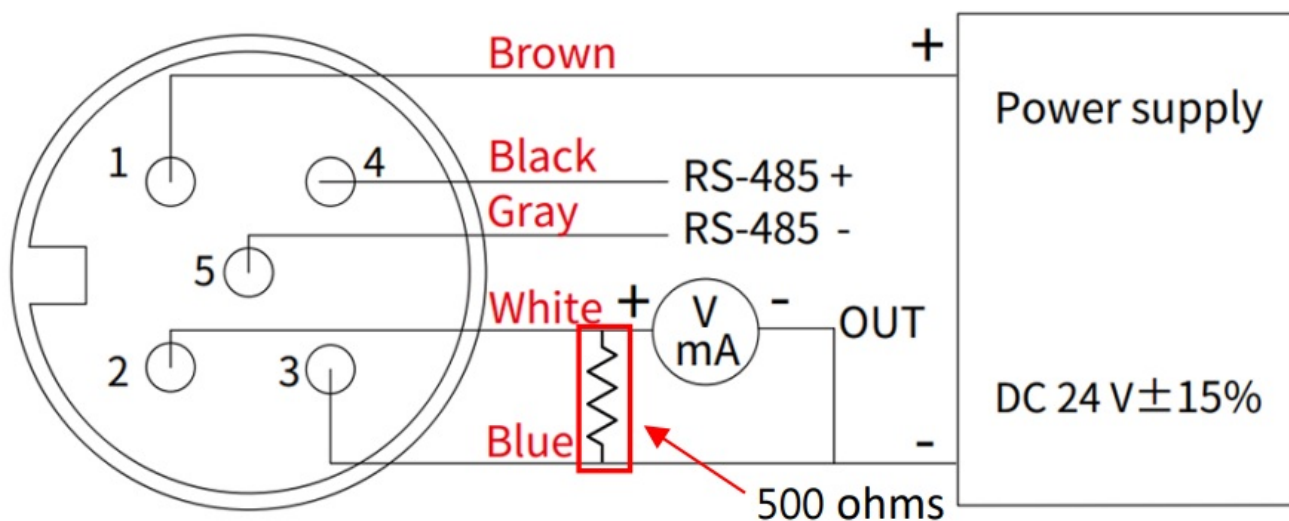
#### Convert 4-20mA to 0-IOV

1. Select Current to 0-20mA in UI.



2. Please Connect 500 ohms in parallel at the output.

#### M12 Connector



### 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:

- 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.

## 2. Troubleshooting

- Sensor maintenance

Do not damage sensor surface during the maintenance process.

- Troubleshooting

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

Problem	Cleek items	Solutions
<ul style="list-style-type: none"><li>• No output</li><li>• Unstable output</li></ul>	<ul style="list-style-type: none"><li>• Disconnected wiring</li><li>• Loose wiring</li><li>• Power supply voltage</li><li>• Sensor damages</li></ul>	<ul style="list-style-type: none"><li>• Re-perform wiring</li><li>• Crew on terminal tightly or replace wires</li><li>• Replace the sensor</li></ul>
<ul style="list-style-type: none"><li>• Slow response to output</li><li>• Error in output</li></ul>	<ul style="list-style-type: none"><li>• Moisture /condensation on the product</li><li>• Check installed location</li><li>• Check installed angle</li><li>• Check dust and contamination on the sensor</li></ul>	<ul style="list-style-type: none"><li>• Remove the sensor and filter. Dry power-off state sensor in clean air seasoning</li><li>• Refer to the section</li><li>• Align measurement head with flow direction</li><li>• Cleaning the filter</li><li>• Changing the filter</li><li>• Calibrate</li><li>• Replace the sensor</li></ul>



## CUSTOMER SUPPORT

**eyc-tech Measuring Specialist**  
**enhance your capability with sensor technology**  
**Air flow | Humidity | Dew point | Differential pressure | Liquid flow**  
**Temp. | Pressure | Level | Air quality | Signal meter**  
**Tel. :**

**Tel. : 886-2-8221-2958**  
**Web : [www.eyc-tech.com](http://www.eyc-tech.com)**  
**e-mail : [info@eyc-tech.com](mailto:info@eyc-tech.com)**



## Documents / Resources

 Operation Manual eyc-tech THS8MAX Industrial Dew Point Transmitter 	<a href="#">eyc-tech BASE-THS-001 Industrial Dew Point Transmitter</a> [pdf] Instruction Manual BASE-THS-001, BASE-THS-002, BASE-THS-003, BASE-THS-002-1, BASE-THS-001 Industrial Dew Point Transmitter, BASE-THS-001, Industrial Dew Point Transmitter, Dew Point Transmitter, Point Transmitter, Transmitter
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## References

- [eyc-tech](#) Taiwan measurement specialist, sensor manufacturer
- [User Manual](#)