

THS88 High Pressure Dew Point Transmitter



Operation manual



- 1. Features**
- 2. Security considerations**
- 3. Installation**
- 4. Connection**
- 5. Software operation step**
- 6. Maintenance and exception processing**

THS88 High Pressure Dew Point Transmitter Operation manual

1. Features

1.1 THS 88 is based on capacitive humidity sensor and RTD PT100 platinum resistance sensor design. It has temperature compensated and linear correction with high precision and stability. Furthermore, various physical quantity is capable to program by the software. With RS485 and MODBUS RTU communication interface will be easy to monitoring.

1.2 Application

Monitoring for industrial process/ air conditioning/ environmental ventilation control

Environmental monitoring for building/ factory/ clean room/ Lab.

Monitoring for storeroom/ crisper/ agriculture/ food industry

Dew point measuring in hospital/ pharmaceutical industry/ textile industry.

THS88 High Pressure Dew Point Transmitter Operation manual

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 explosion-proof area.

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

EYC-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.
- 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 electric 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.

CE

EN 61326-1:2013

CISPR11:2009+A1:2007+A2:2010

Immunity

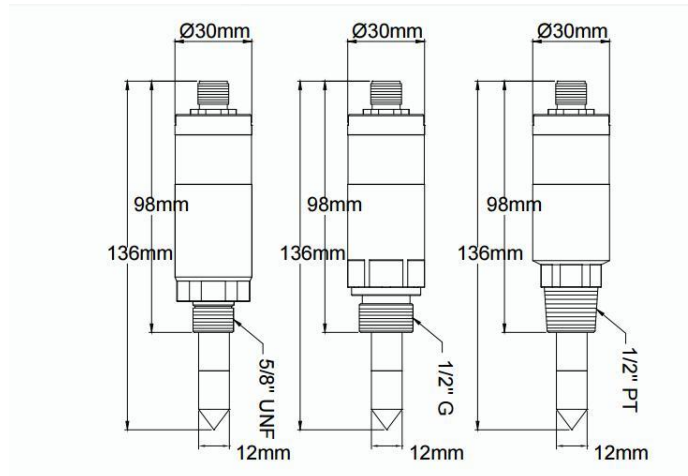
EN61326-1:2013

IEC 61000-4-2:2008 , IEC 61000-4-3:2006+A1:2007/A2:2010 , IEC 61000-4-8:2009)



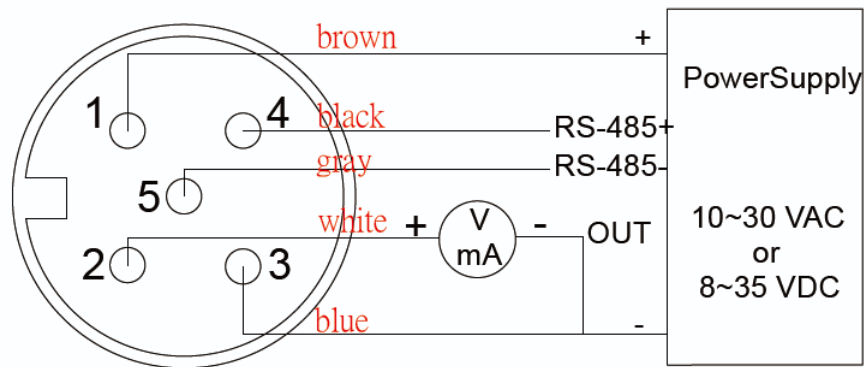
THS88 High Pressure Dew Point Transmitter Operation manual

3. Dimension



※ standard – PVC-5PIN 2M waterproof cable

4. Connection



M12 connector

THS88 High Pressure Dew Point Transmitter Operation manual

5. Software and calibration operation step

5.1 Application Program statement.....	7
5.2 Setting RS-485 connection.....	8
5.3 Scan RS-485 connection	11
5.4 Setting RS-485 ModBus Protocol.....	16
5.5 Display and save data.....	18
5.6 Choose parameter of Output.....	24

THS88 High Pressure Dew Point Transmitter Operation manual

5.1 Application Program statement

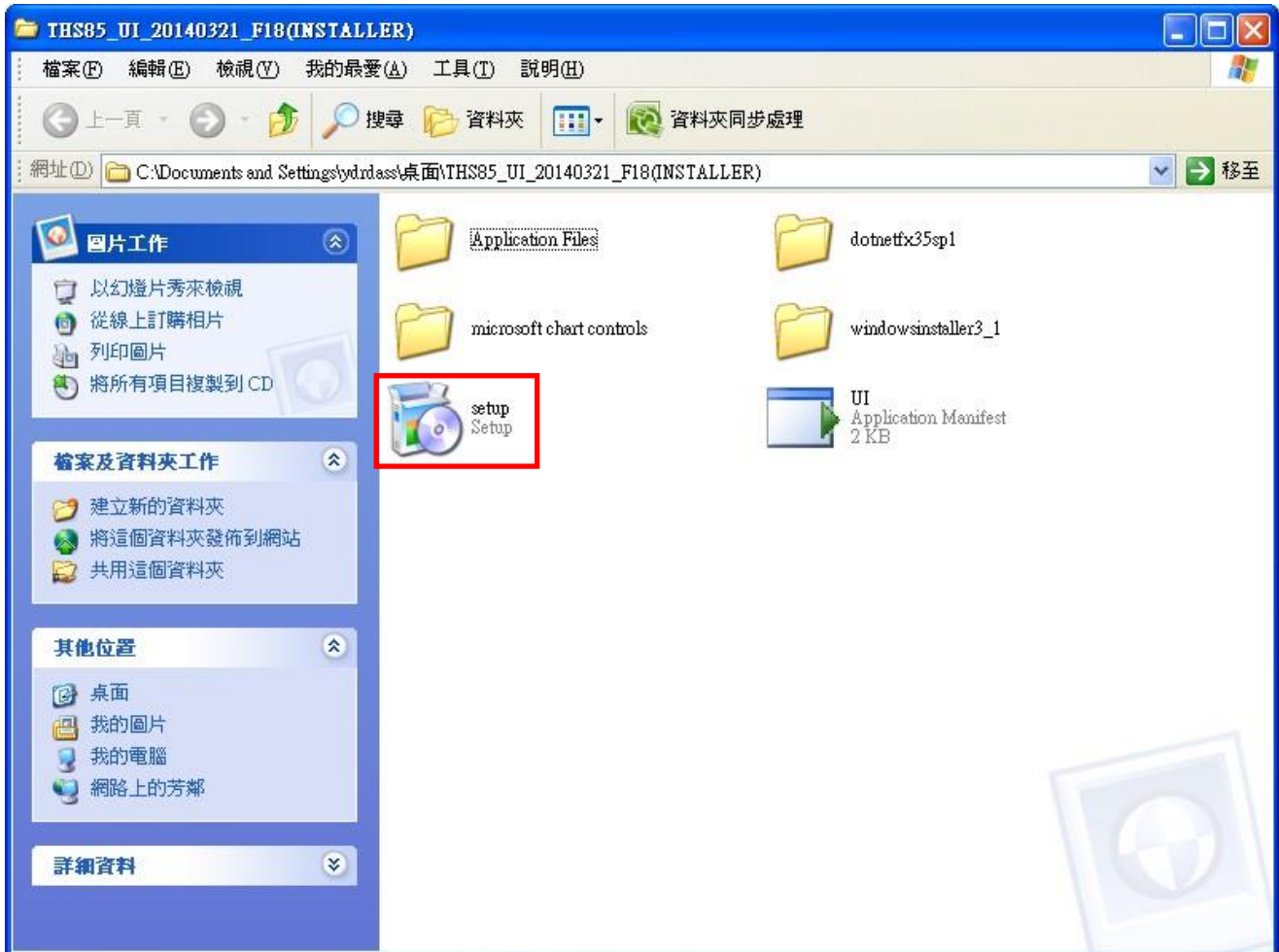
1. Free installation program : THS_UI_F19D.exe

(※Please use installation program when free program doesn't execute)

2. Installation program : THS_UI_F19D(INSTALLER).rar

a. Operating System requirements : above Windows XP

b. Click Setup to install

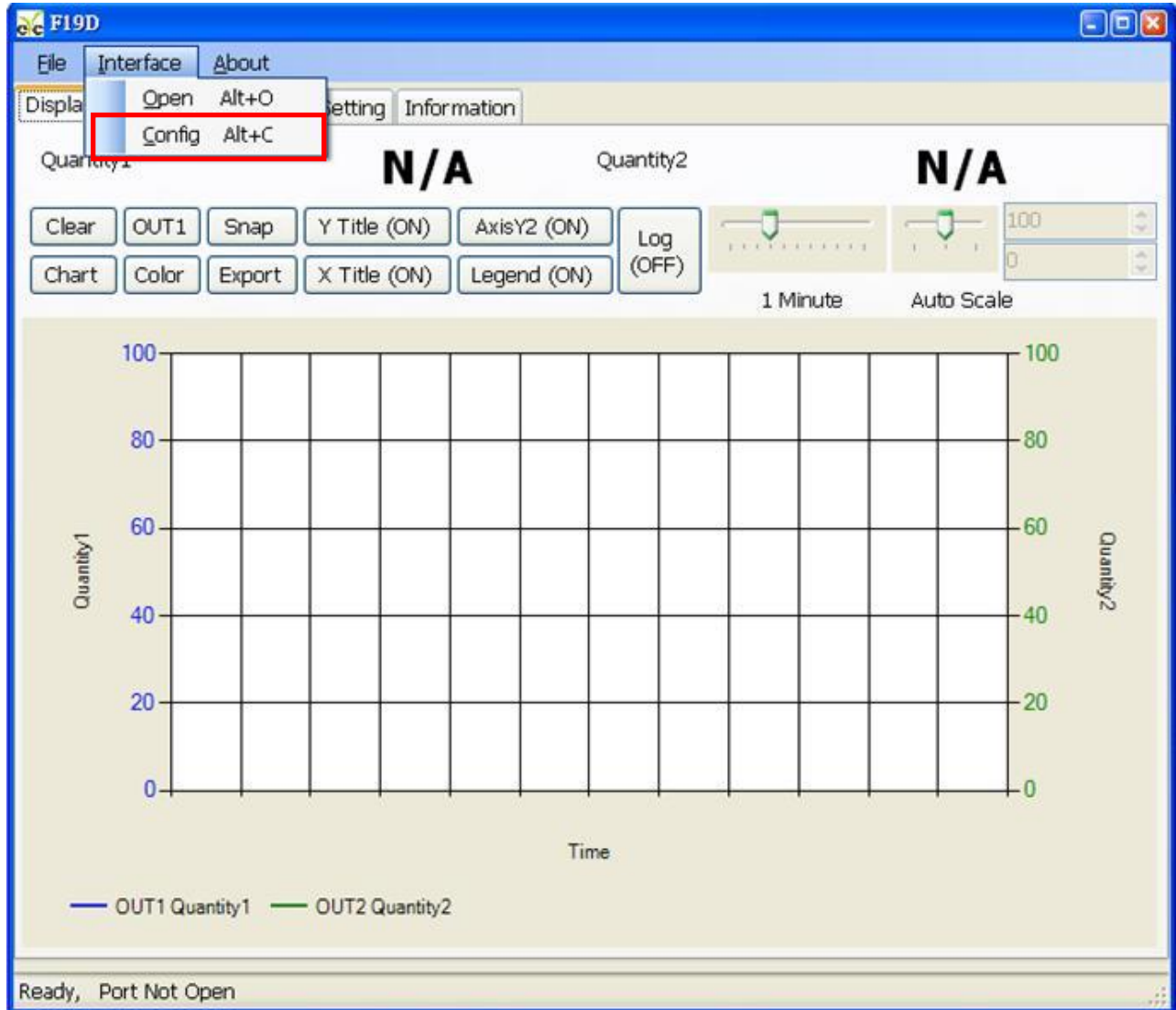


3. Other application program requirements : above Microsoft Office 2003

THS88 High Pressure Dew Point Transmitter Operation manual

5.2 Setting RS-485 connection

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



THS88 High Pressure Dew Point Transmitter Operation manual

4. Select the corresponding values of com port as following :
 - a. Port : Check Come Port
 - b. Baud Rate
 - c. Data Frame
 - d. RS-485
 - e. Station ID(Default 1)

Interface

PORT a. COM5

BAUD RATE b. 9600

DATA FRAME c. None-8Bit-1Stop

TIMEOUT 250 ms

RETRY 2 times

Physical Interface

RS-232 d. RS-485

STATION ID e. 1

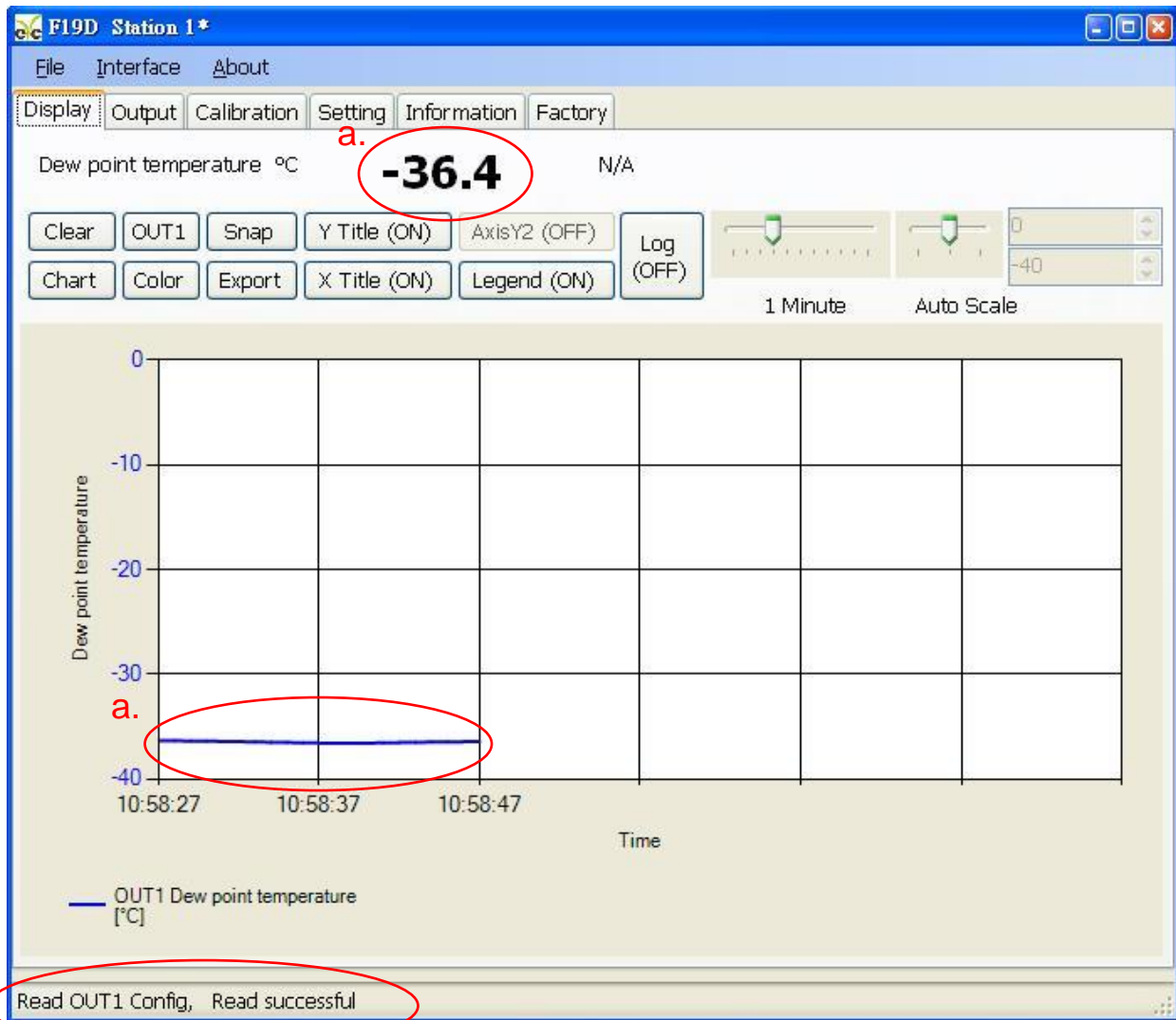
Station ID	Baud Rate	Data Type
------------	-----------	-----------

Scan Apply Cancel

5. Click "Apply"

THS88 High Pressure Dew Point Transmitter Operation manual

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

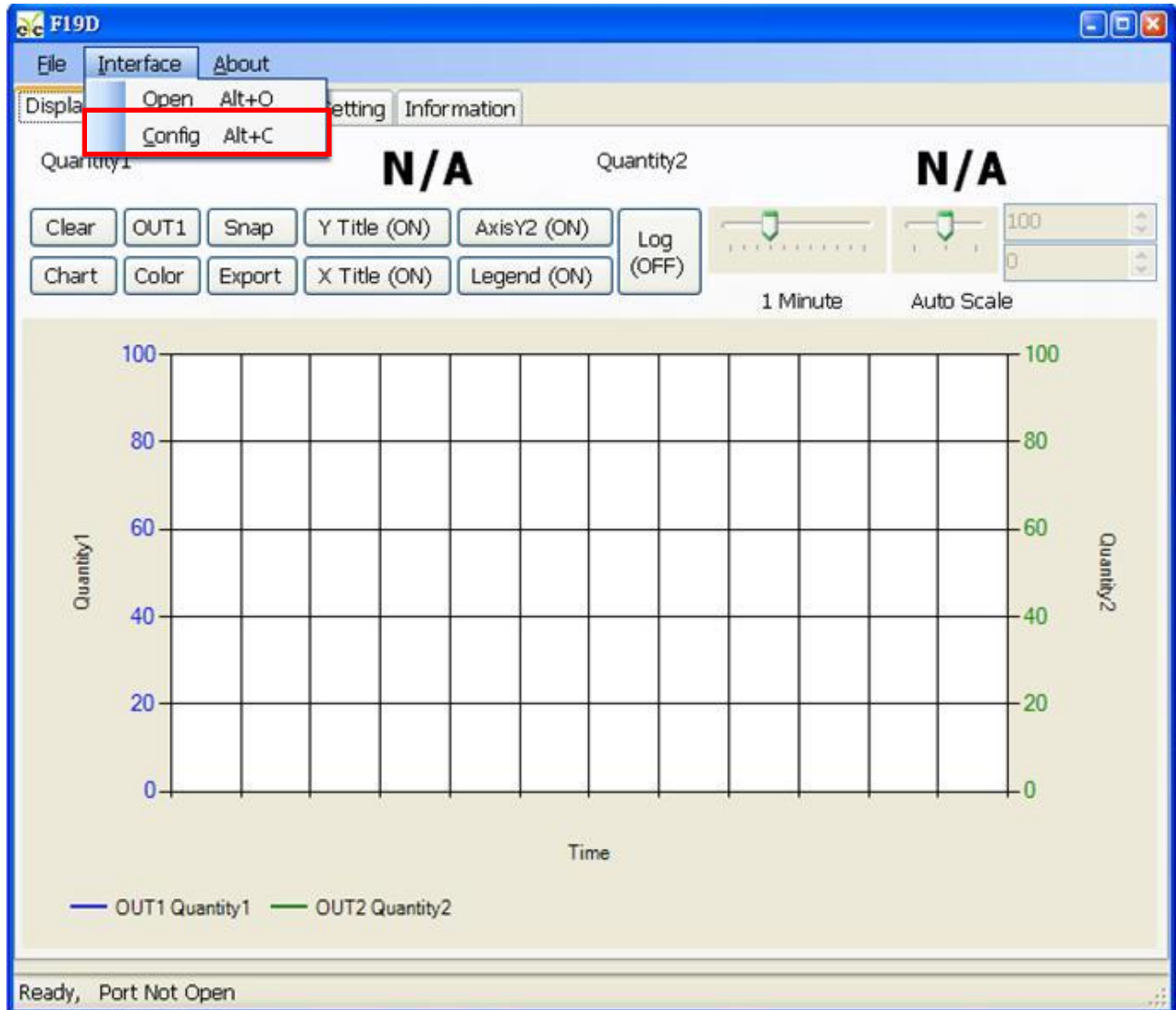


THS88 High Pressure Dew Point Transmitter Operation manual

5.3 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”



THS88 High Pressure Dew Point Transmitter Operation manual

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

- a. Port :
- b. RS-485

Interface

PORT a. COM5

BAUD RATE 9600

DATA FRAME None-8Bit-1Stop

TIMEOUT 250 ms

RETRY 2 times

Physical Interface

RS-232 b. RS-485

STATION ID 1

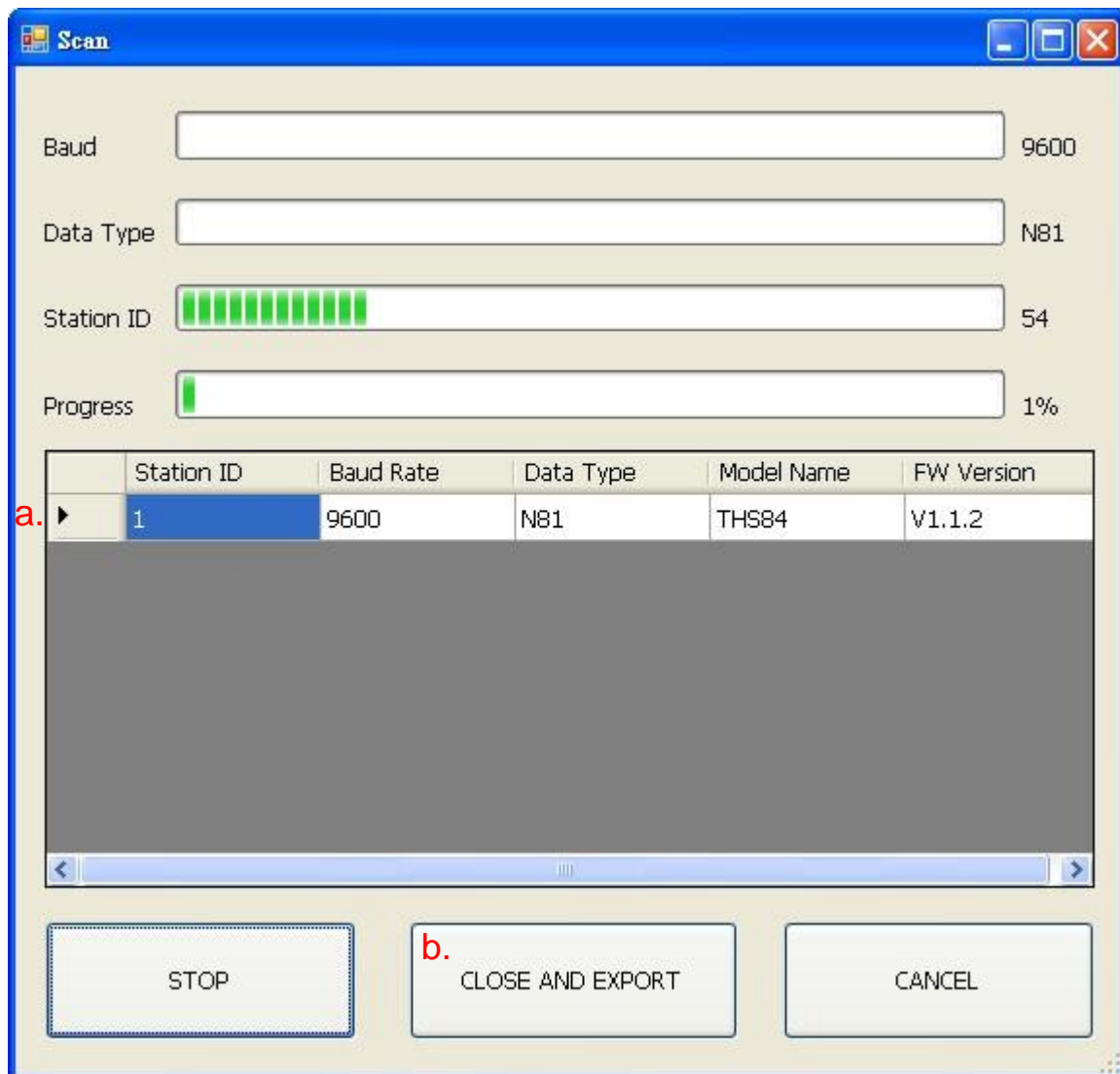
Station ID	Baud Rate	Data Type
------------	-----------	-----------

Scan Apply Cancel

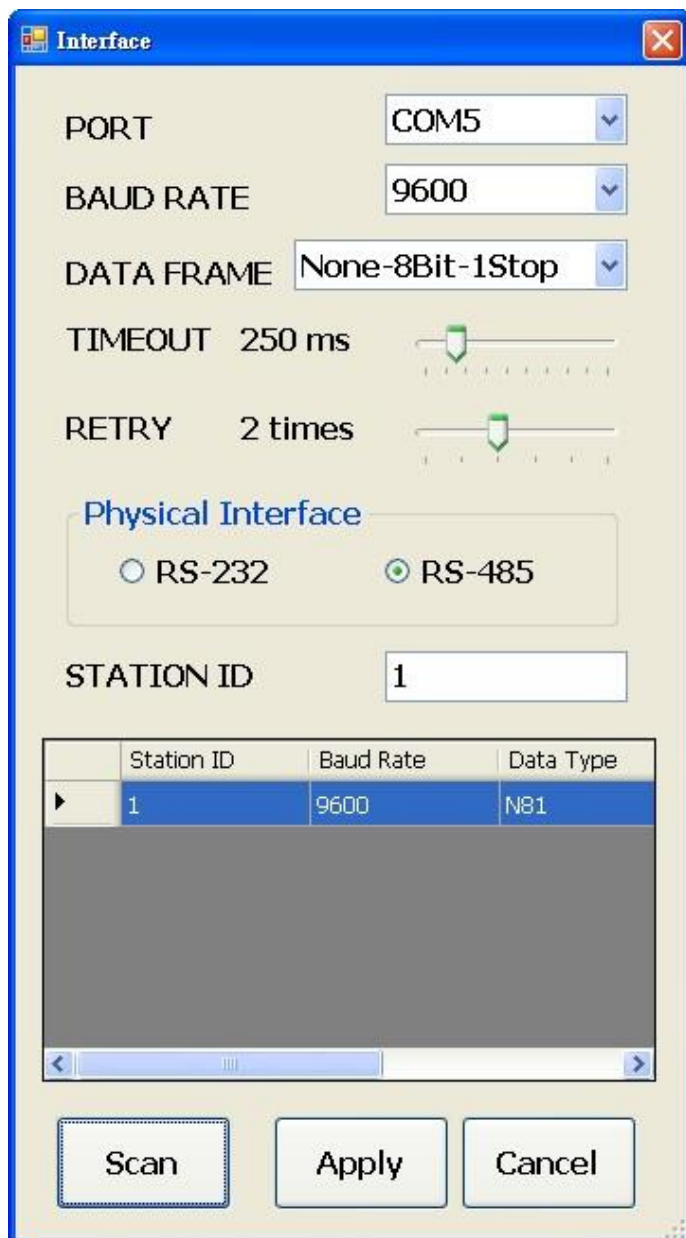
5. Click "Scan" to execute connection facilities

THS88 High Pressure Dew Point Transmitter Operation manual

6. Scan connection facilities and set up
 - a. Select Station ID
 - b. Click "CLOSE AND EXPORT"



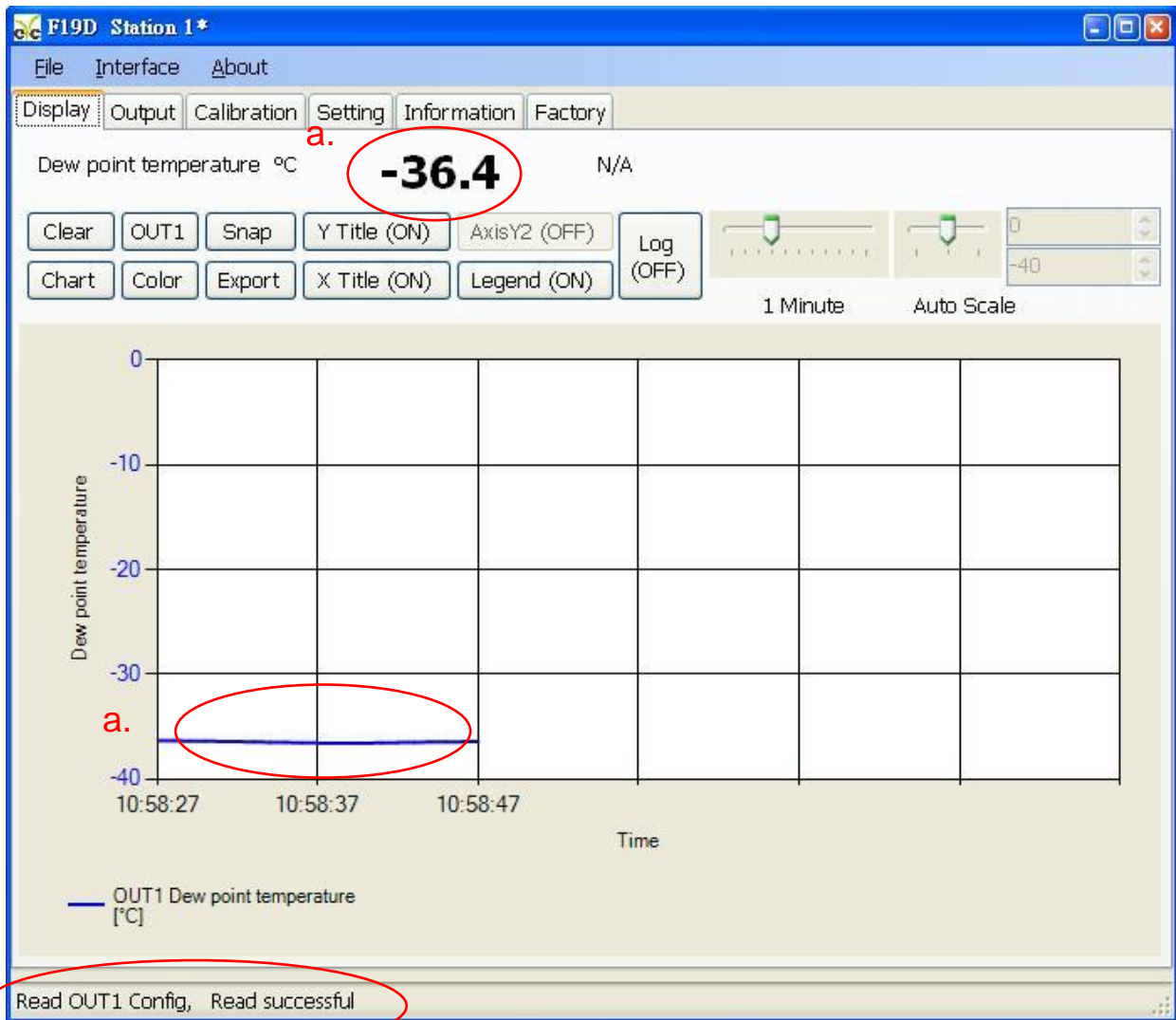
THS88 High Pressure Dew Point Transmitter Operation manual



7. Click "Apply"

THS88 High Pressure Dew Point Transmitter Operation manual

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



THS88 High Pressure Dew Point Transmitter Operation manual

5.4 Setting RS-485 ModBus Protocol

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

The screenshot shows the 'F19D Station 1*' software interface. The 'Setting' tab is selected and highlighted with a red box. The interface is divided into three main sections:

- Environment:** Air Pressure (mBar) is set to 1013.25.
- Modbus Protocol:** Station ID is 1, Baud Rate is 9600, and Data Frame is None-8Bit-1Stop. There are also buttons for Echo Test (OFF) and Reset Counter.
- Dew Point Auto Calibration:** Calibration Interval (min) is 1, and Under -70°C Interval (min) is 1.

At the bottom of the interface, there are 'Apply' and 'Read' buttons. A status bar at the very bottom indicates 'Read OUT1 Config, Read successful'.

THS88 High Pressure Dew Point Transmitter Operation manual

3. Select Modbus 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-2Stop

The screenshot shows the 'F19D Station 1*' software interface. The 'Setting' tab is active. Under the 'Modbus Protocol' section, the following parameters are configured: Station ID is 1 (labeled 'a.'), Baud Rate is 9600 (labeled 'b.'), and Data Frame is None-8Bit-1Stop (labeled 'c.'). To the right, there are test counters for Write Error, Read Error, and Data Error, along with 'Echo Test (OFF)' and 'Reset Counter' buttons. The 'Environment' section shows Air Pressure (mBar) at 1013.25. The 'Dew Point Auto Calibration' section shows Calibration Interval (min) and Under -70°C Interval (min) both set to 1. At the bottom, there are 'Apply' and 'Read' buttons. A status bar at the very bottom indicates 'Read OUT1 Config, Read successful'.

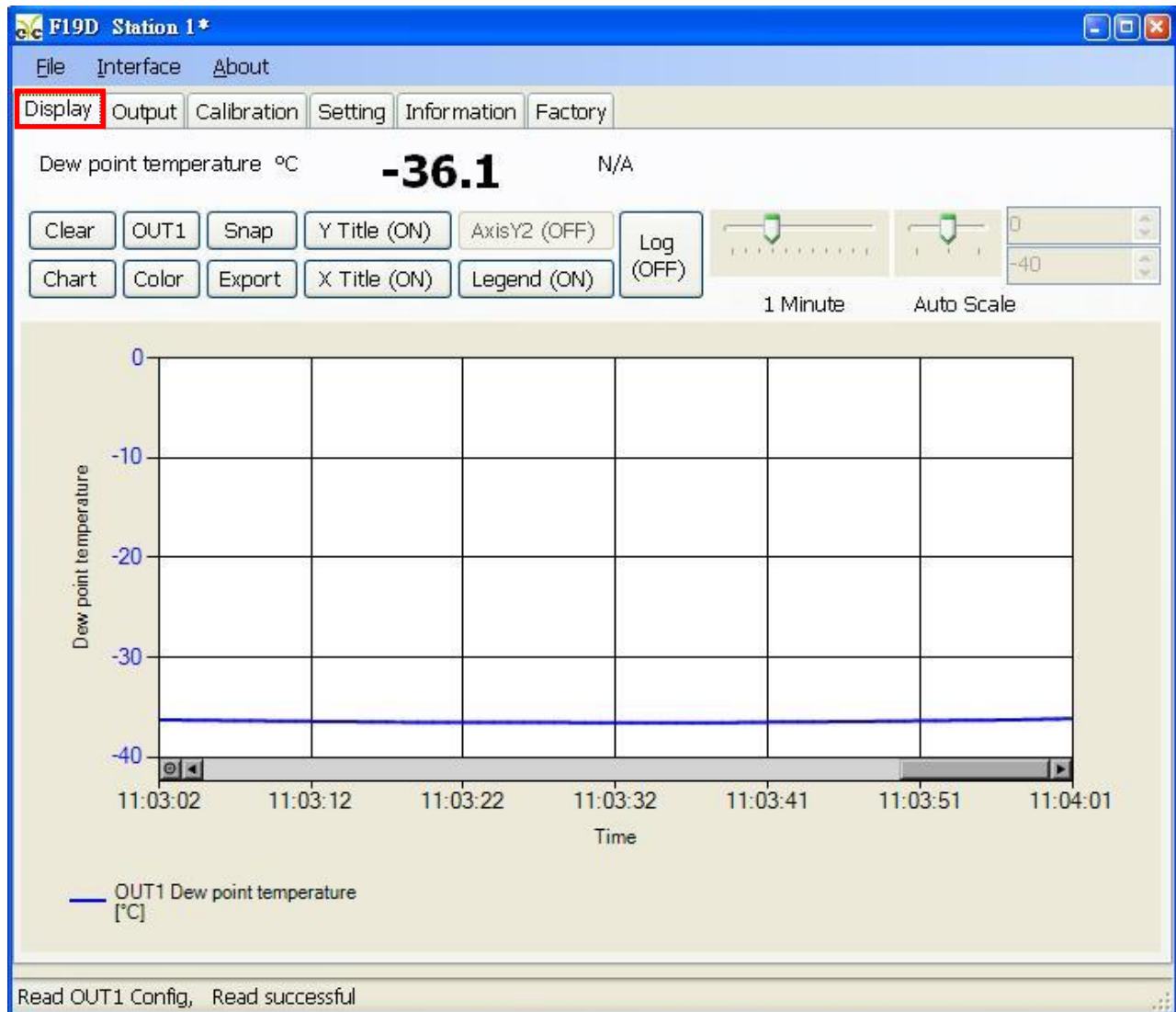
4. Click "Apply"

5. Execute connection as step 5.2 or 5.3 again

THS88 High Pressure Dew Point Transmitter Operation manual

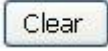
5.5 Display and save data


1. Show Data : Click ” Display”

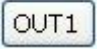



THS88 High Pressure Dew Point Transmitter Operation manual

2. Icon function statements


 Clear the chart records


 Change the chart style


 Select the OUTPUT channel

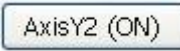
 Set line color chosen from OUTPUT

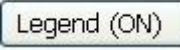
 Snap chart


 Save the data measuring when the system start connecting before clicking the Export icon


 Show/Not show the statement of Y axis

 Show/Not show the statement of X axis

 Show/Not show the statement of Y secondary axis

 Show/ Not show chart

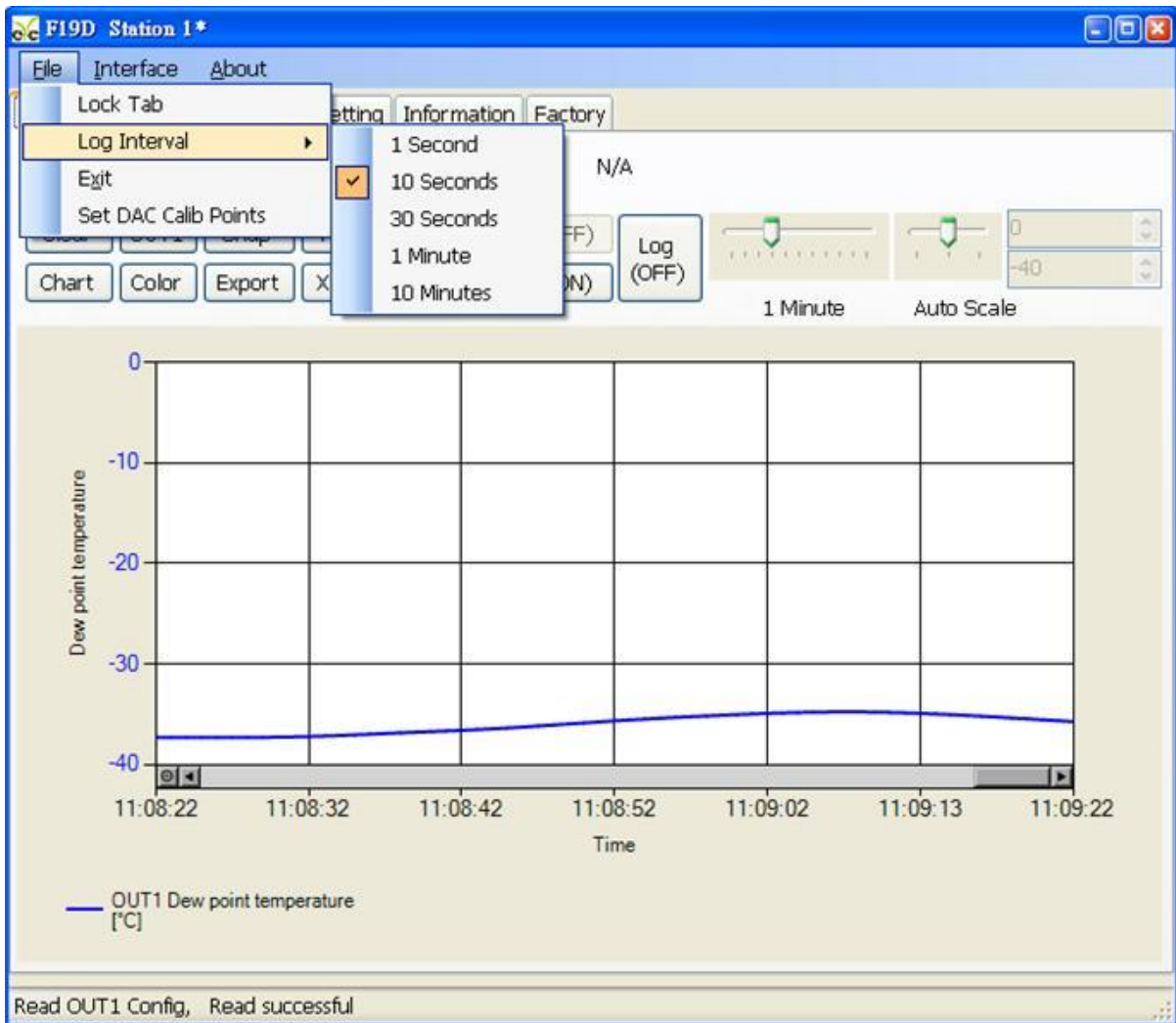
 Show/Not show measuring data


1 Minute Adjust time range of X axis


Auto Scale Adjust time range of Y axis

THS88 High Pressure Dew Point Transmitter Operation manual

3. Setting time interval of record
 - a. File > Log Interval
 - b. Select time interval of record



THS88 High Pressure Dew Point Transmitter Operation manual

4. Save/Log measuring data

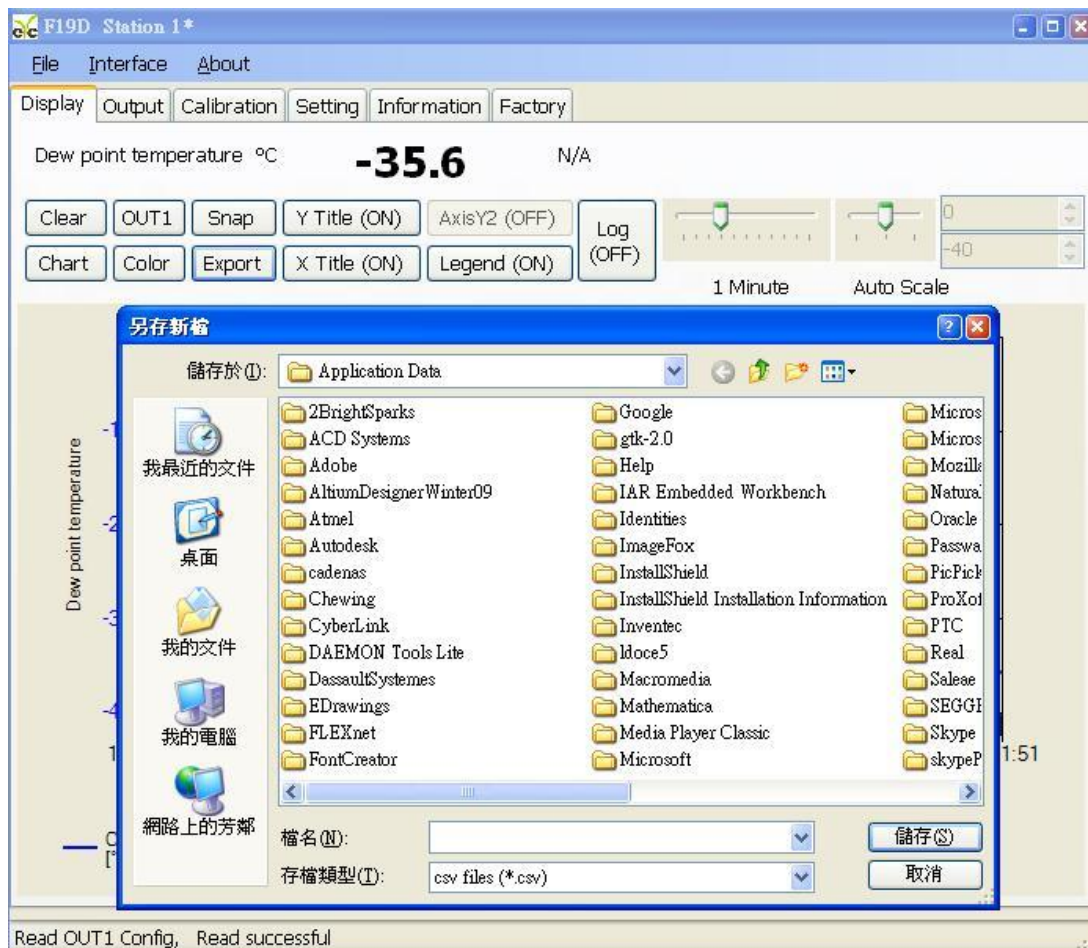
a. Log measuring range : Save the data measuring when the system start connecting before clicking the Export icon

a-1. Click Display > Export



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

註 1. 指定路徑、檔名相同時會覆蓋原檔案資料



THS88 High Pressure Dew Point Transmitter Operation manual

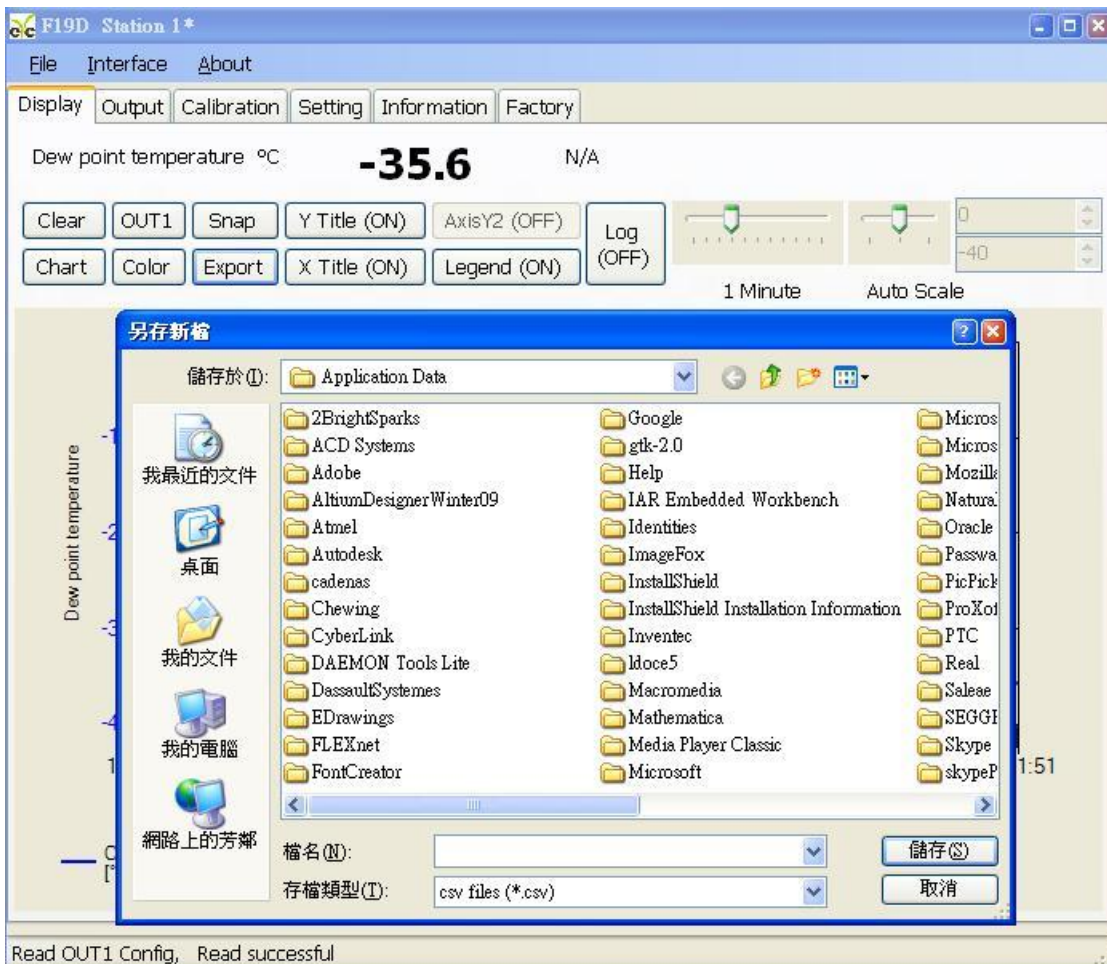
b. Log measuring data : Log the data which is on from start or off

b-1. Display > Log(OFF)

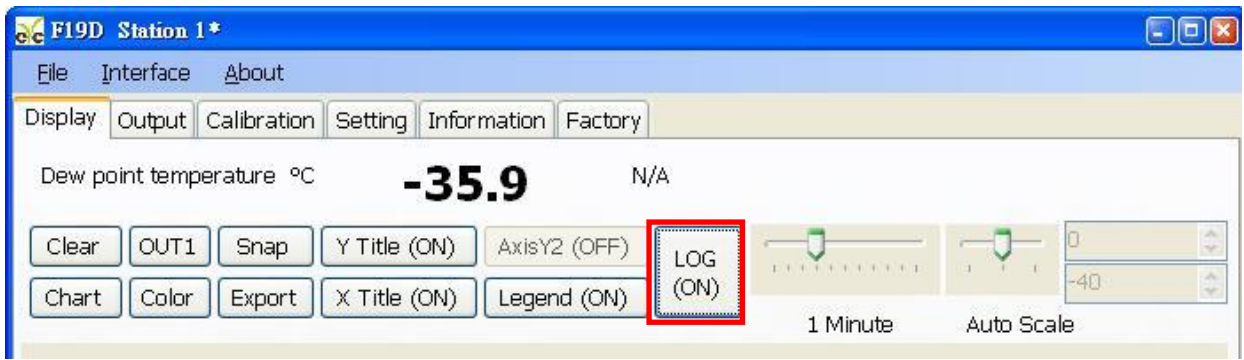


b-2. Appoint path and Key in file name > save > Log (ON)

※1. If file name is some as the path name, the original file will be covered.



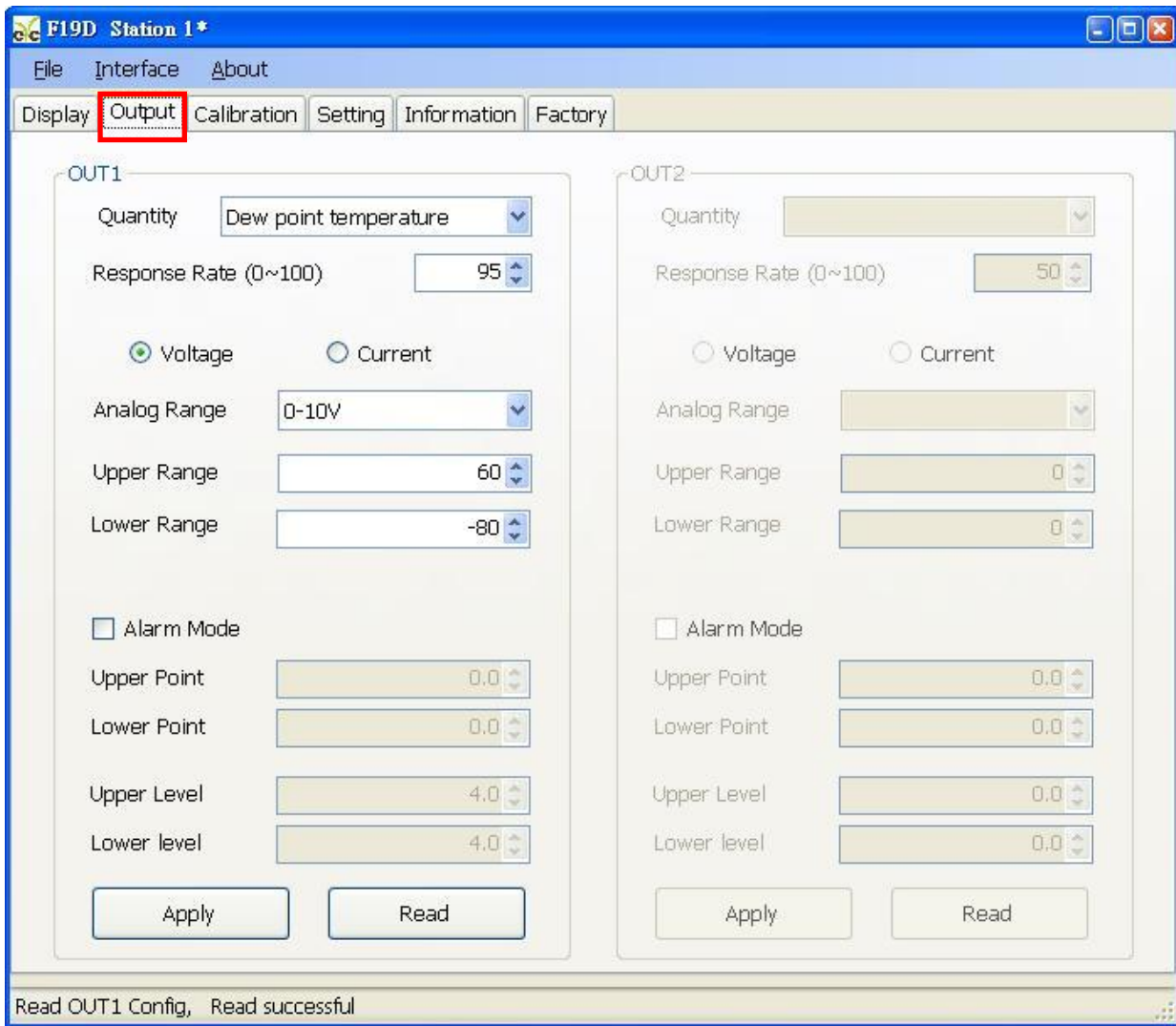
THS88 High Pressure Dew Point Transmitter Operation manual



THS88 High Pressure Dew Point Transmitter Operation manual

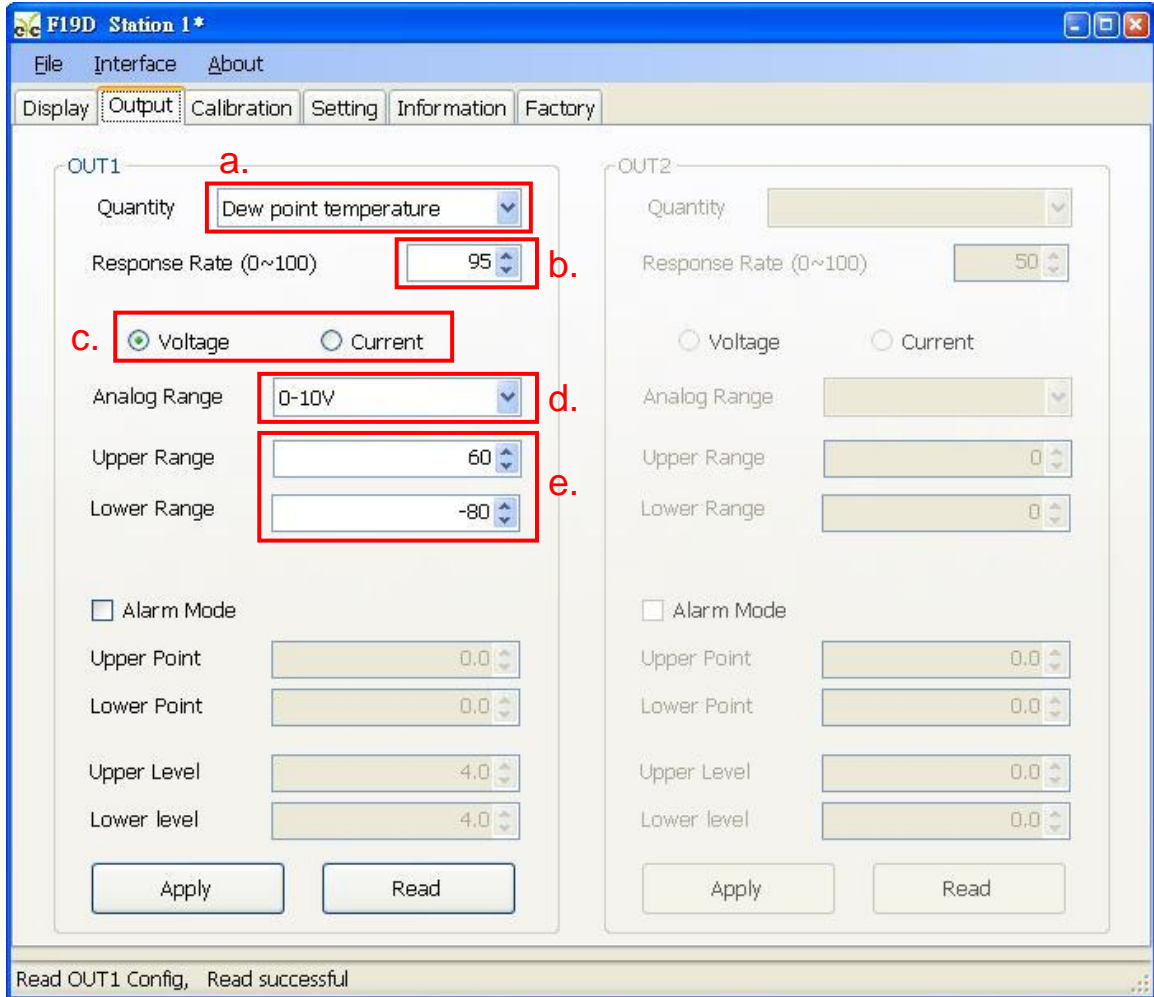
5.6 Choose parameter of Output

1. Click “Output”



THS88 High Pressure Dew Point Transmitter Operation manual

2. Select relative parameters from Output1
 - a. Output Style
 - b. Responding time
 - c. Voltage or current Output
 - d. Voltage or current analog range
 - e. Upper and Lower point of Output



3. Click "Apply"

THS88 High Pressure Dew Point Transmitter Operation manual

6. 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 :

1) 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) Sensor maintenance

Do not damage sensor surface during maintenance process.

3) Troubleshooting

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

2. Troubleshooting :

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