



Operation Manual

eYc FTE120

OEM Air Velocity Transmitter



eYc FTE120



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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.

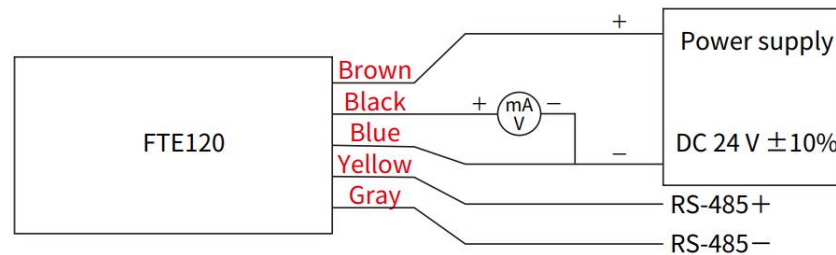
Do not use this product in a situation where human life may be affected.

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.
- 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.

I. Connection Diagram



II. RS-485 and Modbus

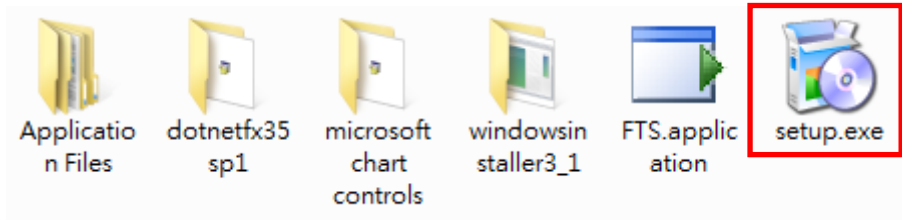
FTE120 integrate a RS-485 interface for digital communication as an option feature. Based on Modbus protocol makes the general convenience on PLC, HMI and PC connection. For Modbus protocol information please download the file from website. Besides the PLC, HMI application, the user software provide 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

III. Software and calibration operation step

1. Portable application: eYc-FTE120-UI-20211008-1.0.0 (EXE) .rar
2. Installation program: eYc-FTE120-UI-20211008-1.0.0 (INSTALLER).rar
(※Please contact us to download installation program when free program doesn't execute.)
 - a. Operating System requirements: above Windows XP SP2
 - b. Decompress installation program and click Setup to install

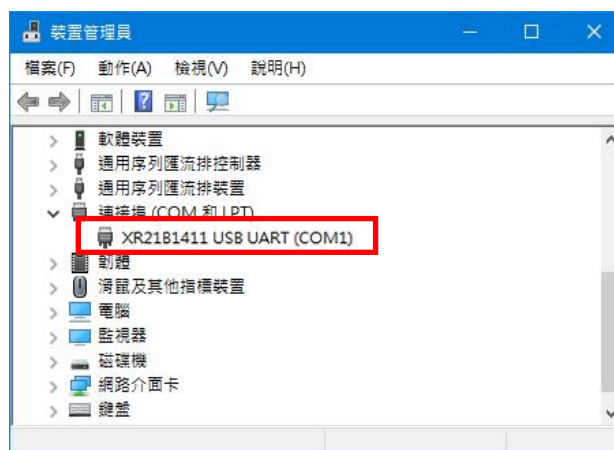


- c. Navigate to program and click FTE120



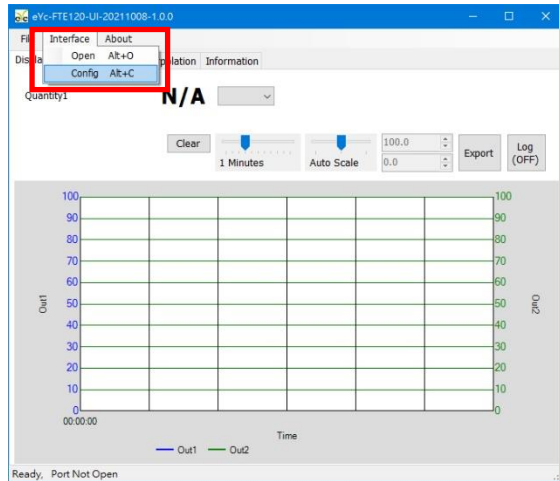
1. Hardware connection: Connect the FTE120 to PC through USB to RS-485 converter
2. Check the COM port number from Device Manager in Computer Management. e.g.

COM1 in illustration



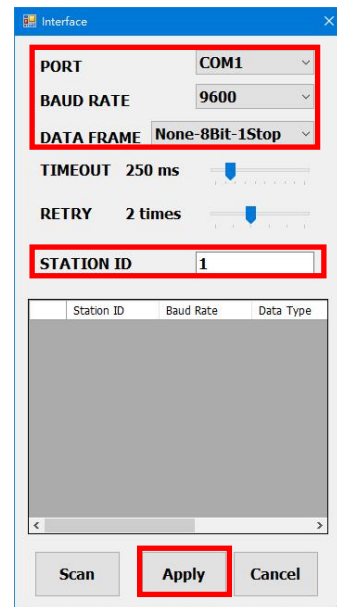
3. Open the FTE120 UI

- (1). Go to function **Interface**
- (2). Click **Config**



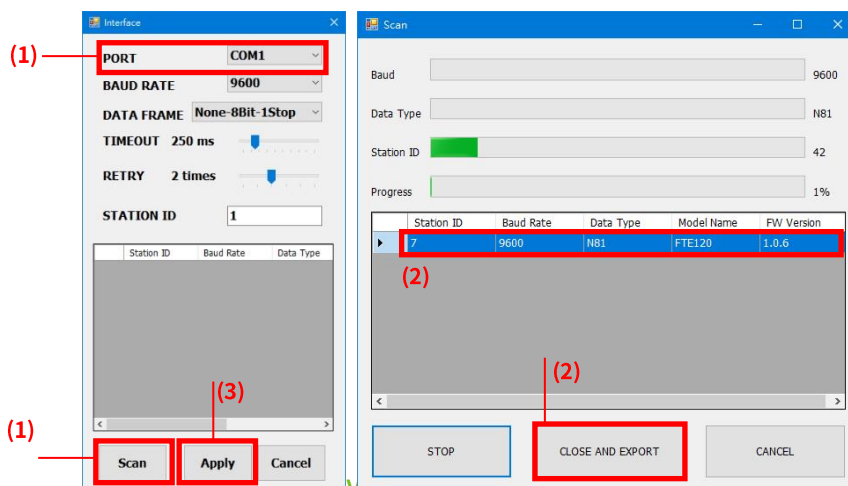
4. Connection method - If known station number ID:

- (1). Setting **COM PORT**
- (2). Setting **BAUD RATE**
- (3). Setting **DATA FRAME**
- (4). Setting **Station ID**
- (5). Click **Apply** for connection



5. Connection method - If unknown station number ID (Scan RS-485):

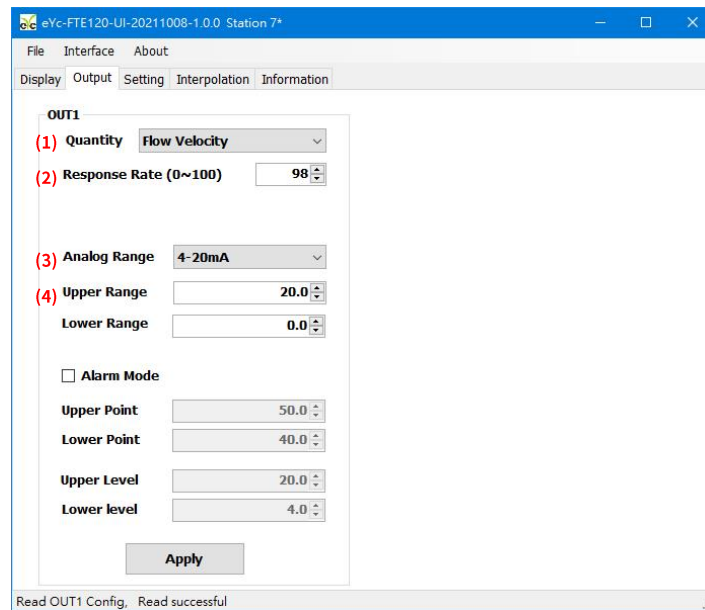
- (1). Setting **COM PORT**, click **Scan** for scan devices
- (2). Choose the device and click **Close and Export**
- (3). Click **Apply** for connection



6. Setting on analog output

In **Output** tab, OUT1 group, the output1 related setting could be found:

- (1) Quantity: Flow Velocity
- (2) Response rate (0 ... 100)
100: Filter OFF, 90: Filter = 60 sec., 80: Filter = 120 sec., etc.
- (3) Analog type: 4 ... 20 mA (Current) / 0 ... 10 V (Voltage)
- (4) Measuring range: Upper and Lower



7. Setting Process Parameters \ Offset Adjustment \ Modbus Protocol

There are 3 groups in setting tab. The description of each item as below.

Process Parameters:

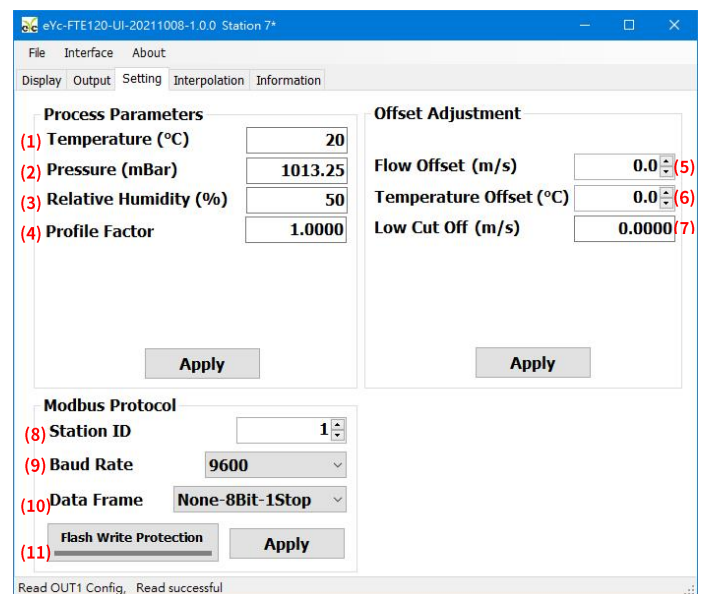
- (1) Temperature of normal condition
- (2) pressure of working condition
- (3) Relative Humidity of working condition
- (4) Profile factor of gas speed

Offset Adjustment:

- (5) Velocity offset
- (6) Temperature offset
- (7) Velocity cut off

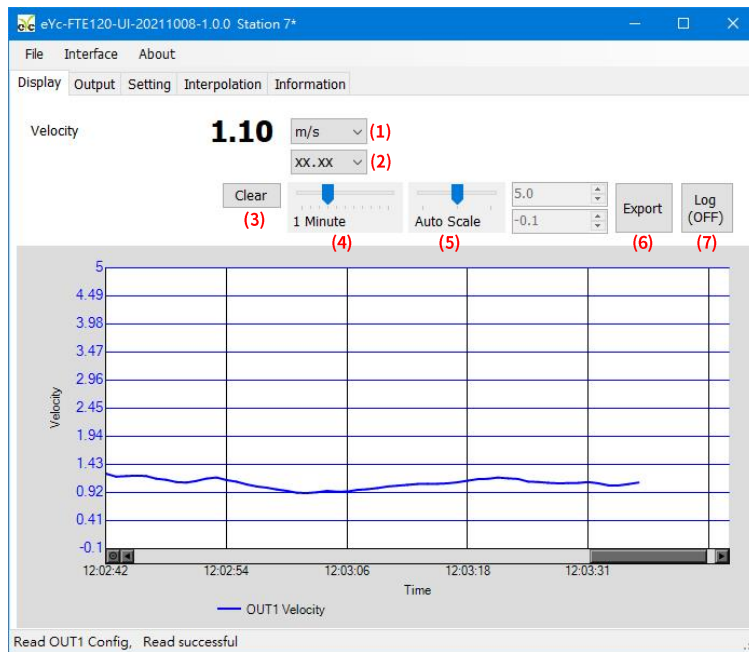
Modbus Protocol:

- (8) Station ID
- (9) Baud rate
- (10) Data frame
- (11) Flash memory write protect



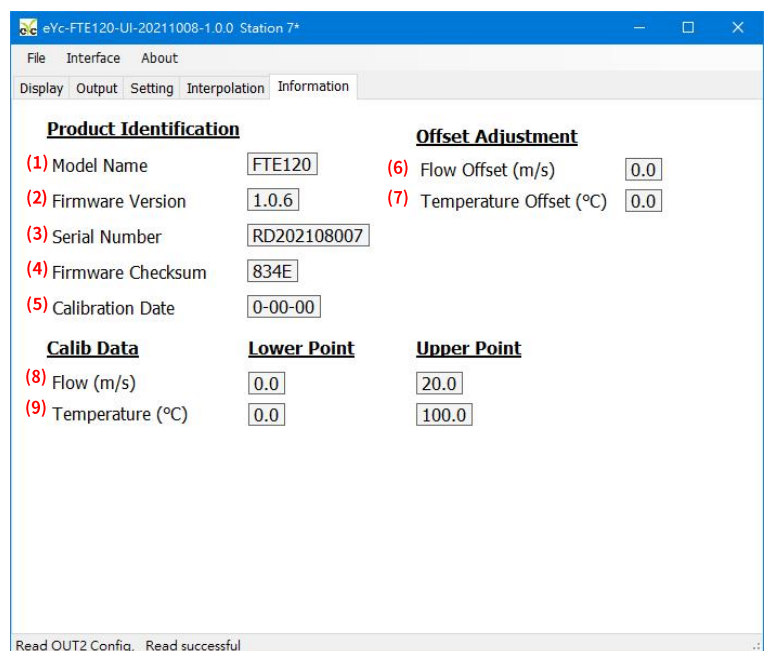
8. Data display and logging

- (1) Assign air velocity Uni : m/s 、ft/s
- (2) Display decimals
- (3) Clear measure plot chart
- (4) Time scale of plot
- (5) Vertical scale of plot
- (6) Export all logging data since device is connected
- (7) Start/Stop data logging



9. Device Information

- (1) Model name of device
- (2) Firmware version of device
- (3) Serial number of device
- (4) Firmware checksum
- (5) Calibration date
- (6) Flow offset
- (7) Temperature offset
- (8) Flow calibration range
- (9) Temperature calibration points



IV. 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	Cleck items	Soluations
<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 ● Errow in output 	<ul style="list-style-type: none"> ● Moisture /condensation on the product ● Check installed location ● Check installed angle ● 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 ● Align measurement head with flow direction ● Cleaning the filter ● Changing the filter ● Calibrate ● Replace the sensor

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