Operation Manual

eyc-tech FTS34/35

Air Velocity Transmitter



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I. 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-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.

CE

Emissions

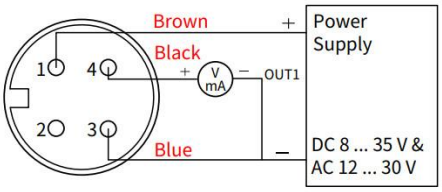
EN 61326-1：2006 EN 55011：2009/A1：2010

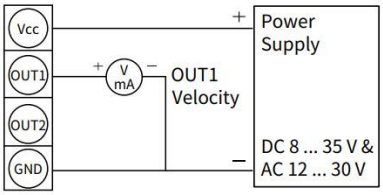
Immunity

EN 61326-1：2006 EN 61000-4-2：2009 EN61000-4-3：2006/A2：2010 EN61000-4-8：2010

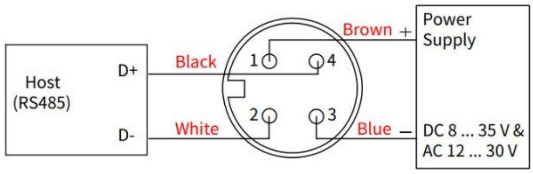
II. Connection

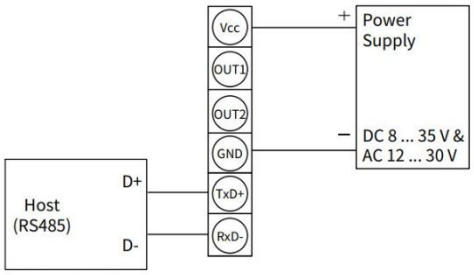
1.Analog diagram



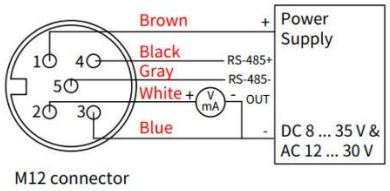


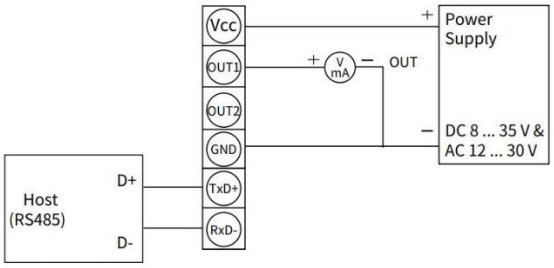
2.RS-485 diagram



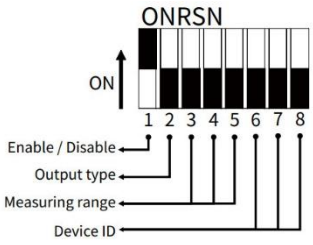


3.Analog + RS-485 diagram





III. DIP Switch



For FTS34 / 35 products, the setting status of DIP switch will be read by software while power on, and this reading action will not happen later on. Thus in order to read the DIP switch status again by software, the user must to reboot again if re-setting the DIP switch. The function of DIP Switch_2 to 8 only be effective while setting the DIP Switch_1 as “On” .

1.DIP switch active / deactivate :
Set the DIP switch as On/ Off

STATUS	ON	OFF
DIP Switch 1	▮	▯

2.The type for analog output :
Analog output type for Out1 & Out2

STATUS	0 ... 10 V	4 ... 20 mA
DIP Switch 2	▮	▯

3. Setting the output measuring range :
Set the maximum value for analog output (The output physical type must be “Air Flow Velocity”) ※Only switch wide to small range

DIP Switch 3	DIP Switch 3	DIP Switch 5	Range (m/s)
▯	▯	▯	1
▮	▯	▯	2
▯	▮	▯	5
▮	▮	▯	10
▯	▯	▮	15
▮	▯	▮	20
▯	▮	▮	40
▮	▮	▮	N/A

4.Setting the device ID :
Set the slave device ID for modbus RTU.

DIP Switch 6	DIP Switch 7	DIP Switch 8	Device ID
▯	▯	▯	1
▮	▯	▯	2
▯	▮	▯	3
▮	▮	▯	4
▯	▯	▮	5
▮	▯	▮	6
▯	▮	▮	7
▮	▮	▮	8

1.Zero Button

This button allows the user to set the current air velocity to “Zero”, it is required to press the button for 3 ... 5 seconds, and the air velocity adjusted to “Zero” after release this button.



2. RS-485 & Modbus

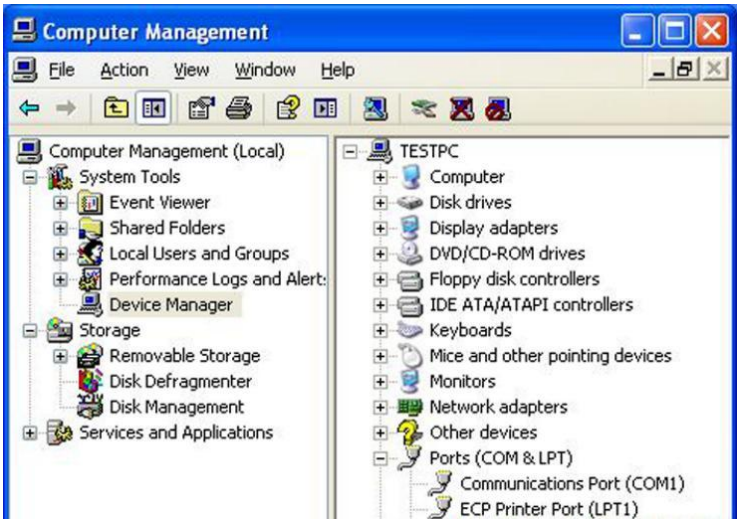
FTS34/35 integrate a RS-485 interface for digital communication as an option feature. Based on Modbus protocol makes the general convenience on PLC, HMI and PC connection. For Modbus protocol information please download the file from website. Besides the PLC, HMI application, the user software provide the device setting and data logging function, it also can free download from website.

Technical data：

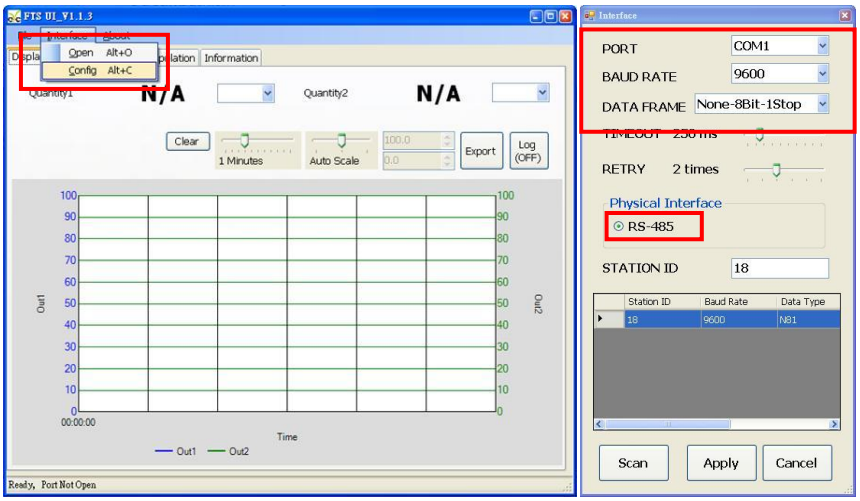
- Max. network size：32 transmitters
- Communication：with COM-Port (Serial interface) of PC
- Max. network expansion：1200 m(3937 ft) total length, at 9600 Baud
- Transmission rate：9600 / 19200 / 38400 / 57600 / 115200 Baud
- Parity：None, Even, Odd
- Data length：8 bit
- Stop bit：1 or 2 bit
- Factory default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

IV. Software and calibration operation step

User may download the configuration software on eyc-tech web site. Please decompress the application prior to execute it. Operating System requirements：above Windows 10

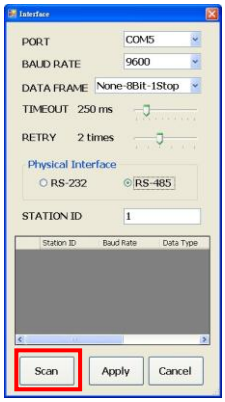
1. Hardware connection：Connect the FTS34/35 to PC by USB to RS-485 converter.
2. Check the COM port number from Device Manager in Computer Management.
3. 

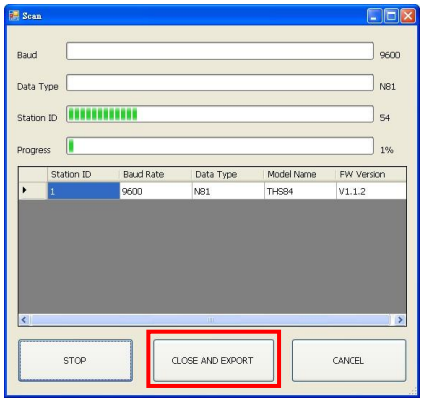
4. Open the FTS UI, go to function "Interface", click item "Config" and then setting COM port, BAUD rate and data format, pressed "Scan" bottom for scan devices and "Apply" for connection.



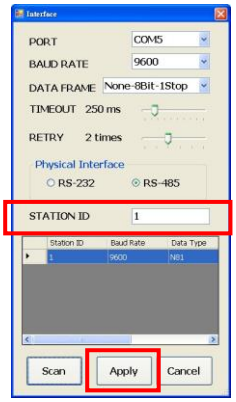
5. Scan RS-485 connection

   Open the UI, go to function "Interface", click item "Config" and then setting COM port, BAUD rate and data format, pressed "Scan" bottom for scan devices and "Scan" for connection.





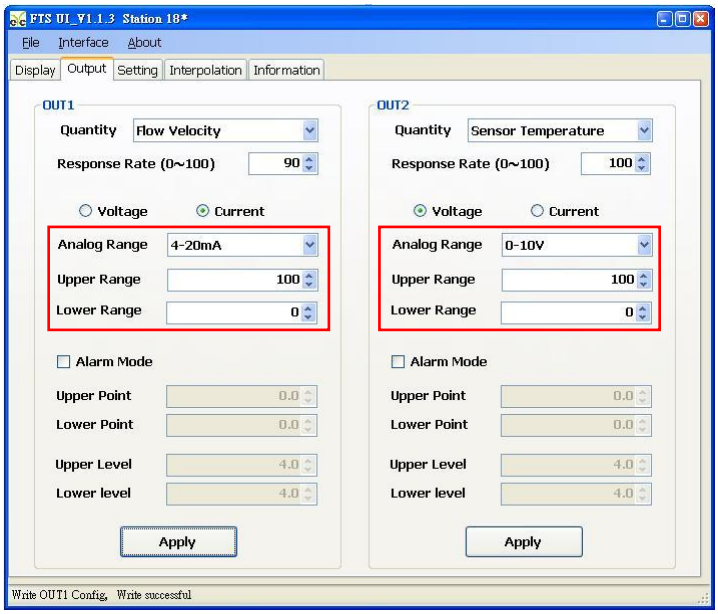
Select Station ID and click "CLOSE AND EXPORT"



Click Apply

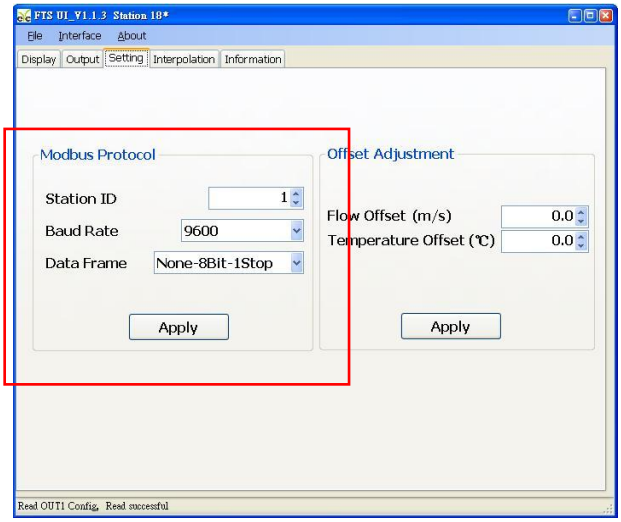
6. Setting on analog output

   - Quantity：Flow Velocity, Temperature
   - Response rate：0 ... 100, 100：filter off, 90：filter = 60 second, 80：filter = 120 second, etc.
   - Analog type：0 ... 20 mA / 4 ... 20 mA / 0 ... 1 V / 0 ... 5 V / 1 ... 5 V / 0 ... 10 V / 2 ... 10 V
   - Range for Upper and Lower



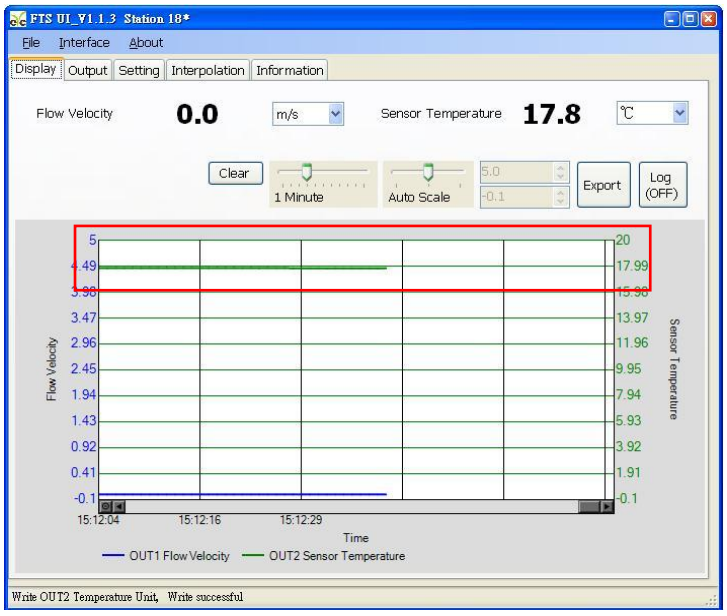
7. Setting on RS-485 and offset adjustment

- Station ID：1 ... 247
- Baud rate：9600 / 19200 / 38400 / 57600 / 115200
- Data Frame：None-8Bit-1Stop / None-8Bit-2Stop / Even-8Bit-1Stop / Even-8Bit-2Stop / Odd-8Bit-1Stop / Odd-8Bit-2Stop
- Flow Offset adjustment
- Temperature Offset adjustment

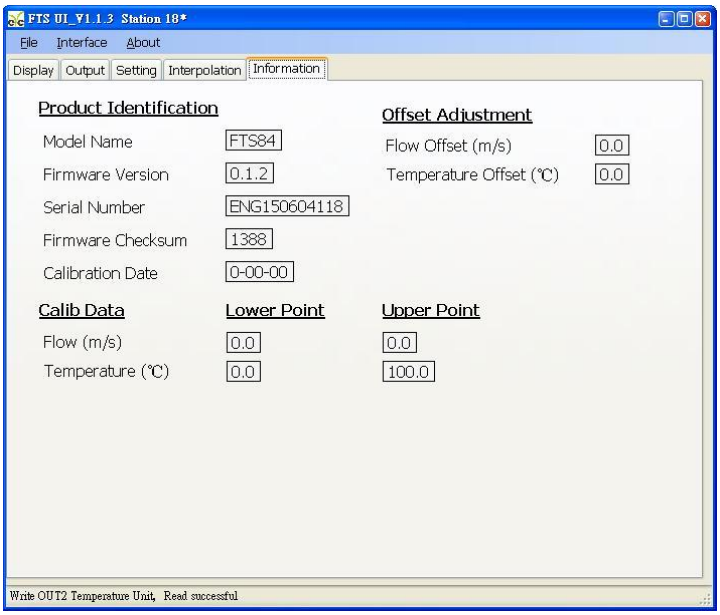


8. Data display and logging

- Flow velocity unit：[m/s], [ft/s], [km/h], [mph], [knot]
- Temperature unit：℃ / ℉
- Export file：*.CSV



9. Device information



V. 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
● No output ● Unstable output	● Disconnected wiring ● Loose wiring ● Power supply voltage ● Sensor damages	● Re-perform wiring ● Crew on terminal tightly or replace wires ● Replace the sensor
● Slow response to output ● Errow in output	● Moisture /condensation on the product ● Check installed location ● Check installed angle ● Check dust and contamination on the sensor	● 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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