



Monitoring and controlling system manual

[MODEL]

Revise

Date	Revision version	Change Contents	Editor
2016-01-25	00	Initial release	
2016-01-26	01		

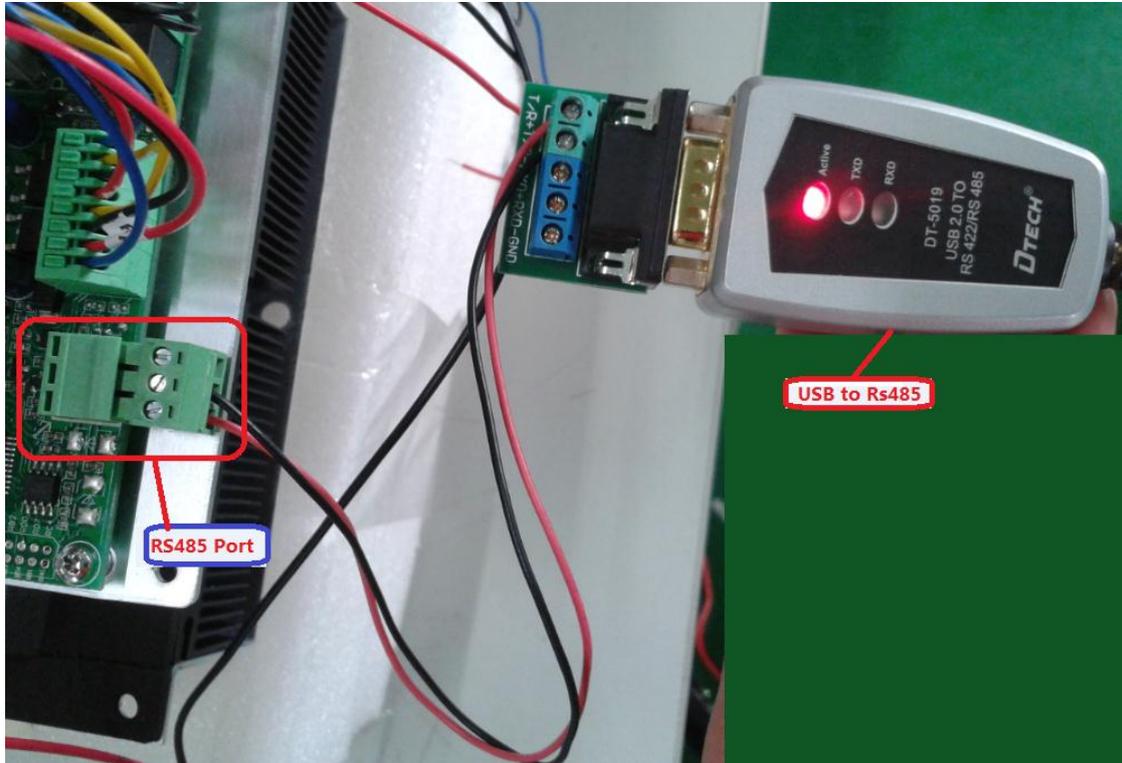
P&N TECHNOLOGY

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P&N TECHNOLOGY

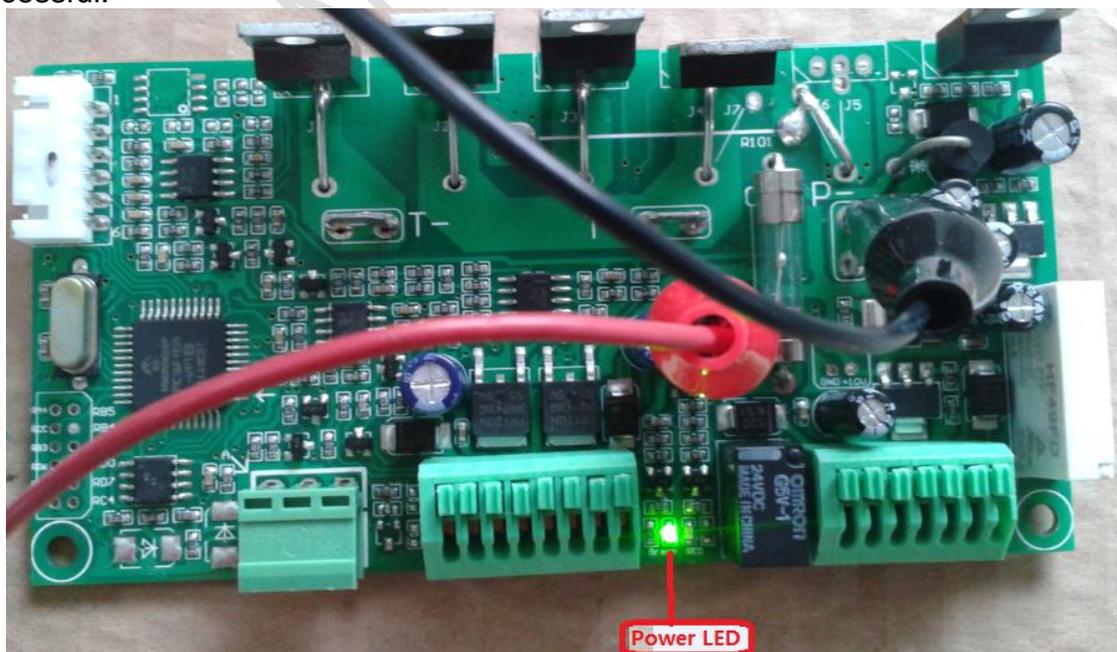
I、 Connecting line

As shown in the figure below, please turn "USB RS485" connected to the temperature control panel of the RS485's A and B line.



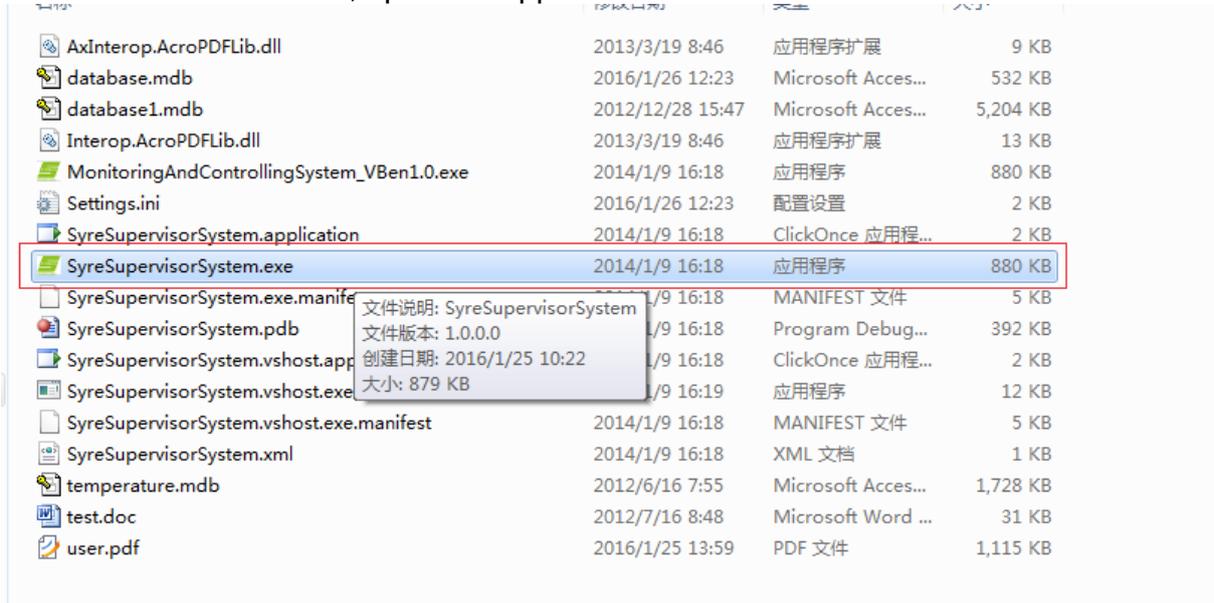
II、 Open the power supply

Open the power which connected to the temperature control plate, then the Temperature control board's green light will be flashing, indicates that the system connect electric is successful.

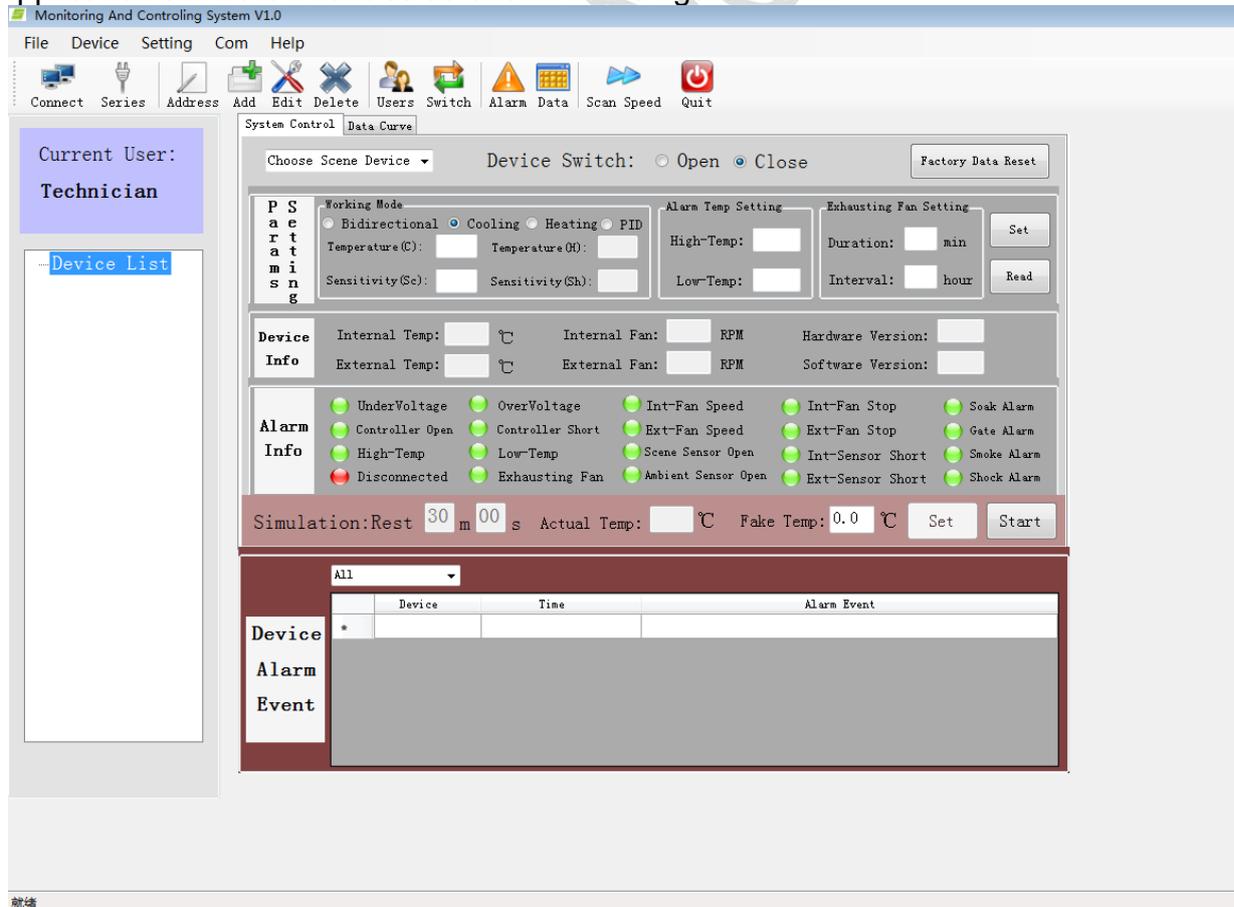


III、 Start the software

Double-click the icon file, open the application.



Application software interface as shown in the figure below.



IV、 Add equipment



Click the icon  ,enter the add dialog of equipment, as shown in the figure below.

Add Device

Device Addr: 1

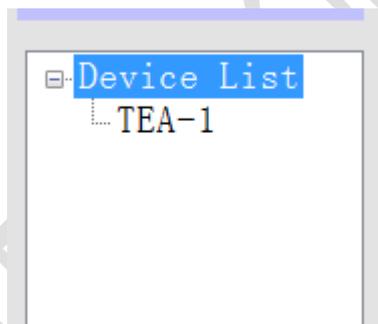
Device Name: TEA-1

Serial Port: COM3

BautRate: 9600

Add Cancel

‘Device Addr’ you can choose, ‘Device Name’ you can customize, after finished click the ‘Add’, at this time you can see the number of type list ‘Device List’, a new item ‘TEA-1’ shown in the figure below.



V、 Serial port setting



Click on the icon  ,enter the ‘Serial port setting’ dialog, choose ‘Serial port’, said you currently use ‘USB to Rs485’ in COM port.

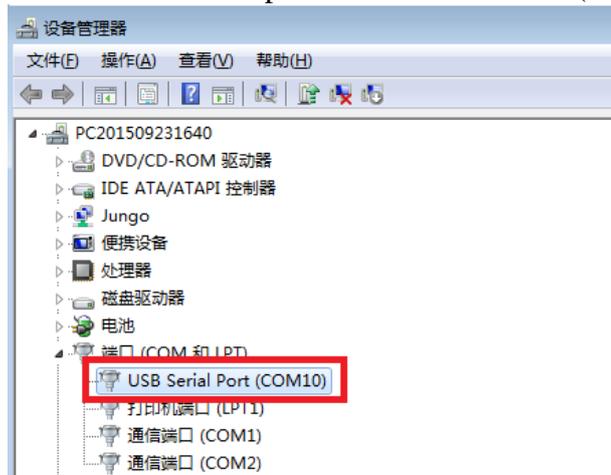
Serial Port Setting

Serial Port: COM10

BautRate: COM2

Yes Cancel

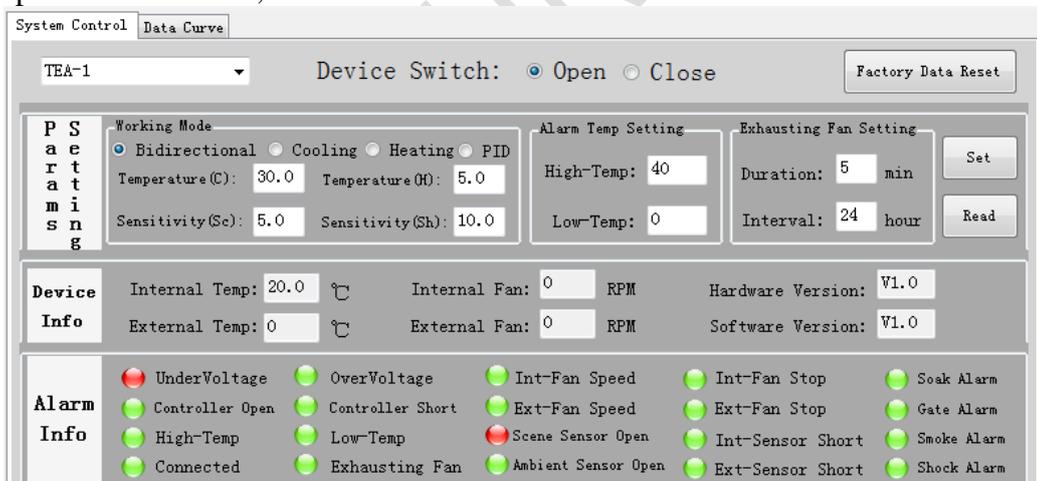
You can check the ‘USB to Rs485’ in COM port via ‘DevManView’(see below picture)



If there are multiple of ‘USB Serial Port’ in the ‘DevManView’, then please remove the USB Port wanted of ‘USB Serial Port’, then plug it again, during this progress, you can find the ‘USB Serial Port’ belonged to which COM Port.

VI、 Connection communication

Click on the icon  , make the icon become  , If normal communication, then the software will read temperature control panel information, information is divided into: Parameter Settings, Equipment information, Alarm information.



Parameter Settings: you can modify the parameter values you want by setting the parameter (Refer to VIII).

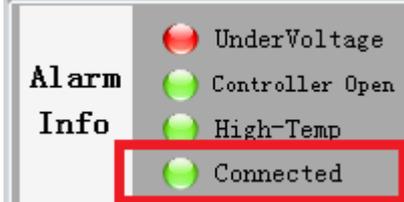
Equipment information: temperature, fan speed, etc.

Alarm information: If showing red, it says this information is flipped or alarmed, and the alarm information will record to the database, as shown in the figure below:

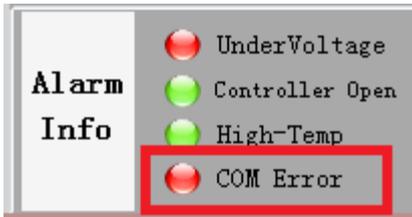
All			
Device	Device	Time	Alarm Event
Alarm	TEA-1	2016/01/26 13:09:19	Interval Sensor Open!
Event	TEA-1	2016/01/26 13:09:19	lack voltage alarm!
	TEA-1	2016/01/26 13:06:05	communication disconnected!

The following is a communication failure status, and handling methods.

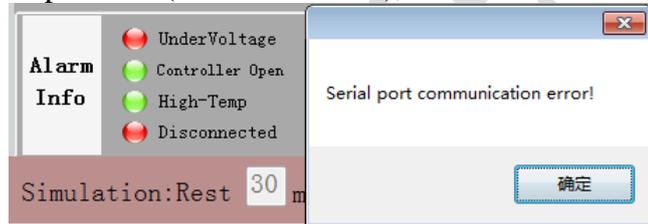
In communications, if communication is successful, then will prompt in the alarm information.



In the red box said communication success, if the communication failure, then in the warning bar will appear.



In the red box said communication error. At this point you need to check if the temperature control board is powered (If the LED flash), and whether the RS485 port is disconnected.



If apper

Said the USB is offline.

VII、 Switch the user

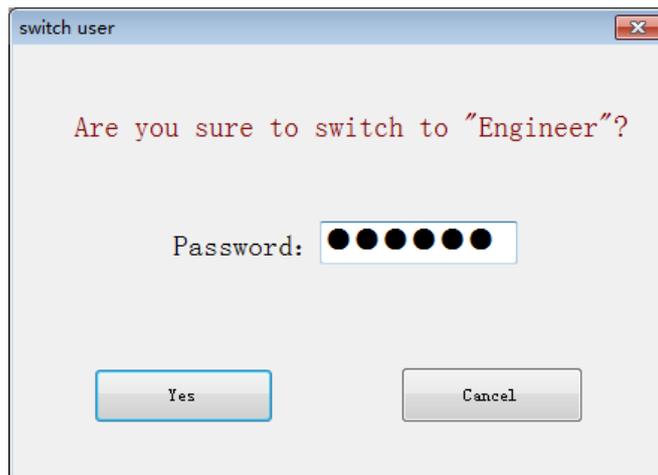
If you're an engineer or clear about the parameters of temperature control board, then this section will begin to enter engineer mode



Click on the icon , enter the dialog box of 'Switch user', input character "888888", click

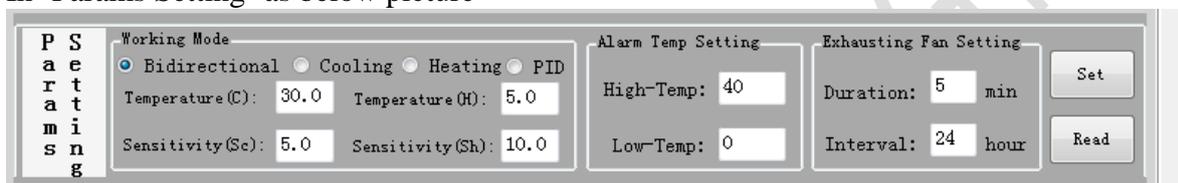


'yes', then you can enter 'Engineer'. After entering the interface which indicated it means you are 'Enginee' users.



VIII、 Set the parameters

In 'Params Setting' as below picture



Modify the parameters to the desired value, finally, click 'Set' button on the right to send the modified values to the temperature control board.

The following is a brief introduction for parameters:

Working Mode

Bidirectional: Desired temperature control board automatically switches the cooling and heating

Cooling: Desired temperature control board only heating but not cooling.

Heating: Desired temperature control board only cooling but not heating.

PID: Desired control mode is PID algorithm for temperature control.

Temperature(C): Cooling point temperature, when the ambient temperature is higher than the value of this edit box, thermostat begin cooling

Sensitivity(sc): During cooling, when the ambient temperature is below 'Temperature (C) - Sensitivity (sc)', stop cooling

Temperature(H): System hot spot temperature, when the ambient temperature is below the value of this edit box, the thermostat starts heating

Sensitivity(sh): During heating, when the ambient temperature is higher than 'Temperature (H) + Sensitivity (sh)', stop heating

Alarm Temp Setting

High-Temp: High temperature alarm, when the ambient temperature is higher than the value of this edit box, thermostat temperature warning appears

Low-Temp: Low temperature alarm, when the ambient temperature is below the value of this edit box, thermostat temperature warning appears

Exhausting Fan Setting

Duration: Hydrogen exhaust fan opening time

Interval: Hydrogen exhaust fan cycle

IX、 Simulation Test

In the following chart click the 'Start' button, enter the simulation tests

Simulation:Rest m s Actual Temp: °C Fake Temp: °C

After entering the simulation test, start the countdown 30 min, during this period, you can set the 'Fake Temp' to debug the temperature controller.

Simulation:Rest m s Actual Temp: °C Fake Temp: °C

Click 'Set' , and let 'Fake Temp' temperature set into the thermostat debugging.
Automatically exit simulation test countdown after 30min.