

# Monitoring and controling system manual

[ MODEL ]



### Revise

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



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### 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.

🚳 AxInterop.AcroPDFLib.dll	2013/3/19 8:46	应用程序扩展	9 KB
🕙 database.mdb	2016/1/26 12:23	Microsoft Acces	532 KB
🕙 database1.mdb	2012/12/28 15:47	Microsoft Acces	5,204 KB
🚳 Interop.AcroPDFLib.dll	2013/3/19 8:46	应用程序扩展	13 KB
MonitoringAndControllingSystem_VBen1.0.exe	2014/1/9 16:18	应用程序	880 KB
Settings.ini	2016/1/26 12:23	配置设置	2 KB
SyreSupervisorSystem.application	2014/1/9 16:18	ClickOnce 应用程	2 KB
SyreSupervisorSystem.exe	2014/1/9 16:18	应用程序	880 KB
SyreSupervisorSystem.exe.manife 文件说明: SyreSupervi	sorSystem 1/9 16:18	MANIFEST 文件	5 KB
SyreSupervisorSystem.pdb 文件版本: 1.0.0.0	1/9 16:18	Program Debug	392 KB
□ SyreSupervisorSystem.vshost.app 创建日期: 2016/1/25 1	.0:22 L/9 16:18	ClickOnce 应用程	2 KB
I SyreSupervisorSystem.vshost.exe 大小: 879 KB	l/9 16:19	应用程序	12 KB
SyreSupervisorSystem.vshost.exe.manifest	2014/1/9 16:18	MANIFEST 文件	5 KB
📄 SyreSupervisorSystem.xml	2014/1/9 16:18	XML 文档	1 KB
🕙 temperature.mdb	2012/6/16 7:55	Microsoft Acces	1,728 KB
🖷 test.doc	2012/7/16 8:48	Microsoft Word	31 KB
🕗 user.pdf	2016/1/25 13:59	PDF 文件	1,115 KB

Application software interface as shown in the figure below.





### IV、 Add equipment

Click the icon	Add ,	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	]

'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.

Dev	rice	Li	st	
T	EA-	1		

### V、 Serial port setting

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

com setting		
	Serial Po	rt Setting
	Serial Port:	COM1
	BautRate:	COM10 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 <sup>Connect</sup>, make the icon become <sup>Disconnect</sup>, If normal communication, then the software will read temperature control panel information, information is divided into: Parameter Settings, Equipment information, Alarm information.

ystem Cont	rol Data Curve				
TEA-1	•	Device Switch:	◉ Open ○ Cl	ose Fa	ctory Data Reset
PS	Working Mode		Alarm Temp Settir	gExhausting Fan Se	etting
ae rt at	<ul> <li>Bidirectional C</li> <li>Temperature (C): 30.0</li> </ul>	ooling O Heating O PI Temperature(H): 5.0	High-Temp: 40	Duration: 5	min
mi sn g	Sensitivity(Sc): 5.0	Sensitivity(Sh): 10.0	Low-Temp: 0	Interval: 24	hour
Device	Internal Temp: 20.0	°C Internal F	an: <sup>O</sup> RPM	Hardware Version:	V1.0
Info	External Temp: 0	°C External F	an: <sup>O</sup> RPM	Software Version:	₹1.0
	😝 UnderVoltage (	) OverVoltage 🛛 🧲	)Int-Fan Speed	😑 Int-Fan Stop	😑 Soak Alarm
Alarm	😑 Controller Open (	🕑 Controller Short 🛛 🬔	Ext-Fan Speed	😑 Ext-Fan Stop	😑 Gate Alarm
Info	😑 High-Temp 🛛 🤇	🕘 Low-Temp 🛛 🧕	Scene Sensor Open	😑 Int-Sensor Short	😑 Smoke Alarr
	😑 Connected 🛛 🤇	🕘 Exhausting Fan 🛛 🤤	Ambient Sensor Open	😑 Ext-Sensor Short	😑 Shock Alarn

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:



	A11	•		
		Device	Time	Alarm Event
Device		TEA-1	2016/01/26 13:09:19	Interval Sensor Open!
201100		TEA-1	2016/01/26 13:09:19	lack voltage alarm!
Alarm		TEA-1	2016/01/26 13:06:05	communication disconnected!
Event	•			
2	*			

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



### 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 Users, enter the dialog box of 'Switch user', input character "8888888", click



'yes', then you can enter 'Engineer'. After entering the interface which indicated  $\Box_{TFA-1}^{PDevice List}$  it means you are 'Enginee' users.



switch user
Are you sure to switch to "Engineer"?
Password: ●●●●●●
Yes Cancel

### VIII、 Set the parameters

In 'Params Setting' as below picture

ΡS	Working Mode	Alarm Temp Setting	Exhausting Fan Setting
ae	• Bidirectional 💿 Cooling 💿 Heating 💿 PID	10	Set
at	Temperature(C): 30.0 Temperature(H): 5.0	High-Temp: 40	Duration: <sup>5</sup> min
mi sn g	Sensitivity(Sc): 5.0 Sensitivity(Sh): 10.0	Low-Temp: 0	Interval: 24 hour Read

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	30 m	00	s Actual	Temp:	20.0	С	Fake Temp:	25	°C	Set	Start
		_									

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	<sup>29</sup> m	58	s .	Actual	Temp:	25.0	°C	Fake	Temp:	25	°C	Set	Stop
											- L		

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



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