

ATO Multi Channel Temperature Data Logger User Manual

Statement: thank you for using our instrument, the description of this specification may not be all the contents of the instrument, we have the right to improve and improve the performance, function, internal structure, appearance, accessories, packaging, etc. of this product without further explanation! The resulting instructions and equipment inconsistent confusion, but our company contact.

I. OVERVIEW

Multi-channel temperature recorder has been widely used in various industries with its rich display screen, flexible operation mode and powerful recording, operation, control and management functions. This product absorbs the advantages of various domestic and foreign data recorders, and applies the latest display technology, microelectronics technology, data storage and communication technology. It is a fully functional, easy to operate, accurate and reliable, high cost-effective product.

This product is displayed in the configuration color LCD touch screen. It can receive multi-channel temperature signal and realize the functions of multi-channel temperature display, recording, overrun monitoring, report generation, data communication and so on.

this product mainly uses 32-bit core processor ,8 G memory card storage, can save a lot of temperature data.

Data from a memory card can be quickly transferred to a computer via a U disk. The built-in memory card has a capacity of 8 G or more to 32 bytes, recording all channels data at a time of up to 1 second.

II. Functional characteristics

1. pen and paper records are not required, the daily maintenance workload is very small and the operating cost is low;

2. use high brightness touch color LCD screen, resolution 800*480. Backlight, clear picture;

The 3. uses a 32-bit ARM microprocessor, which enables simultaneous implementation of multiple channels (up to 64 channels within the instrument host)

and more) signal acquisition, recording, display and alarm;

4. use 8 G large memory card to store historical data, power loss never lose data;

5. a wider range of values showing the volume of work data shows a 6-digit value :-999,99~1999.99;

5. has a red alarm display indicating the lower, lower, upper and upper limits of each passage.

6. Alarm ;8-way relay alarm output (customized products);

7. display accuracy is high, the basic error is $\pm 0.5\% F \cdot S 0.6^{\circ}\text{C}$;

8. equipped with standard USB2.0 interface. Can use the mouse keyboard easy to operate, output historical data transfer fast

Convenient ;(optional)

9. standard serial communication interface, RS485 and RS232C; with dual isolation

10. Supports standard ModBus RTU communication protocols, in addition to supporting our data management software

Other configuration software;

III. TECHNICAL INDICATORS

show

Five-inch color touch LCD digital display screen, bar picture screen, real-time (historical) curve screen, alarm display screen a total of four basic pictures.

classification	YP5000	
number of channels	8/16/24/32/40/48/56/64 Optional	
K	-100~1370	precision $\pm 0.5\%+0.6^{\circ}\text{C}$
J	-100~1200	precision $\pm 0.5\%+0.6^{\circ}\text{C}$
T	-100~400	precision $\pm 0.5\%+0.6^{\circ}\text{C}$
S	300~1768	precision $\pm 0.5\%+0.6^{\circ}\text{C}$
R	300~1768	precision $\pm 0.5\%+0.6^{\circ}\text{C}$
N	0~1300	precision $\pm 0.5\%+0.6^{\circ}\text{C}$
B	250~1820	precision $\pm 0.5\%+0.6^{\circ}\text{C}$
E	-30~1000	precision $\pm 0.5\%+0.6^{\circ}\text{C}$
resolution ratio	0.1°	
clock	1 sec ~999 sec (set)	
communication interface	standard configuration USB、RS232 apolegamyRS485	
Power Supply Voltage	AC85~265 V frequency 50 Hz/60Hz<5 W	

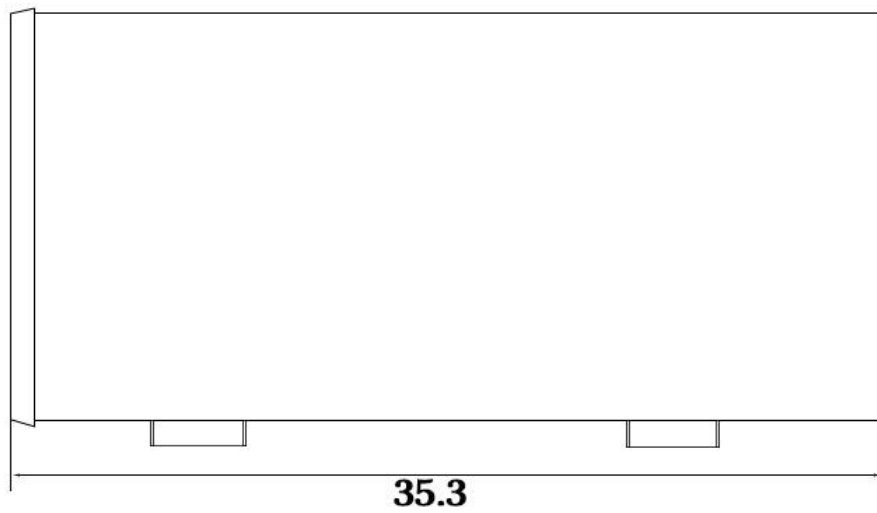
Other special features can be customized.

IV. Instrument dimensions:

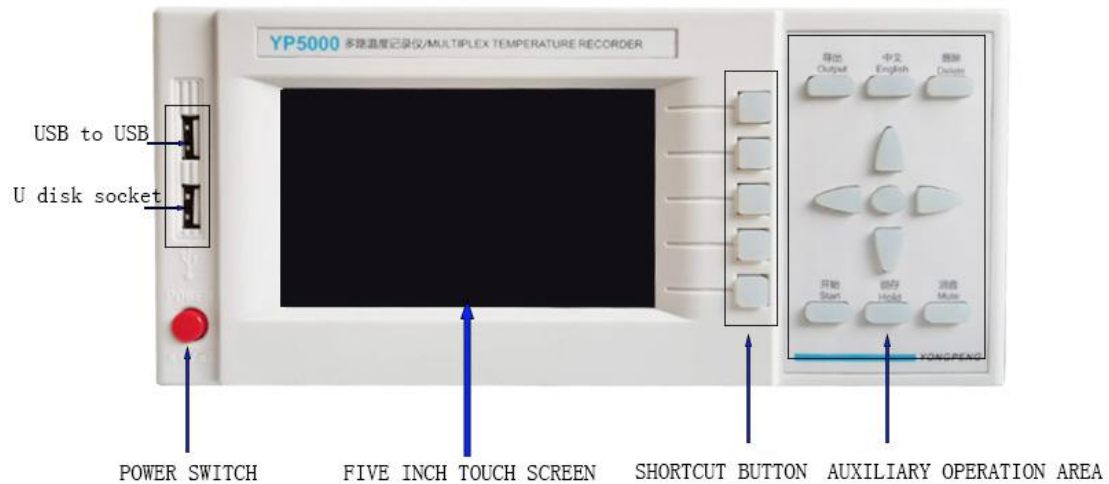
Positive:(mm)



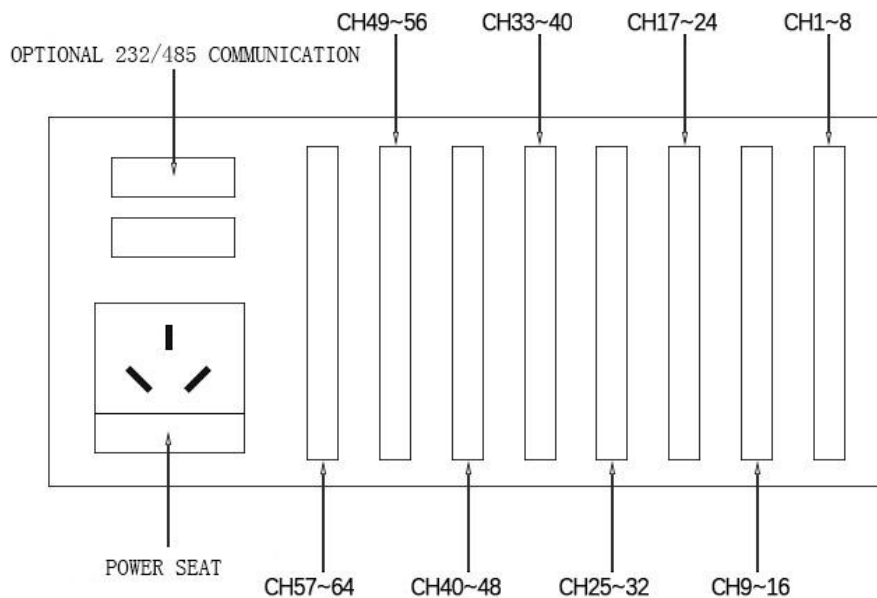
side:



V. Presentation of Panel Functions :



Front panel and function: to the right and left keys can operate each large page to switch different pictures. Pressing up and down can move five main pages to the right of the screen. Other keys are shortcut keys, can be used as necessary.back panel

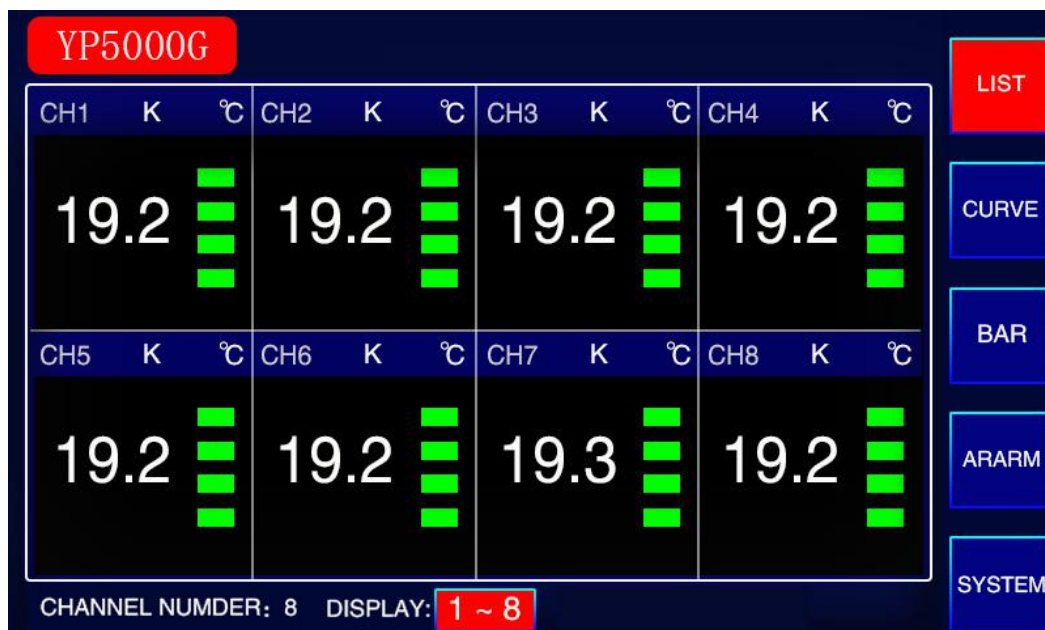


• After the instrument is connected to the power supply, the system boot interface is displayed. Boot system completed, into the real-time numerical display interface. The following respectively

on the instrument keyboard operation, each operation display screen, each parameter setting screen to introduce.



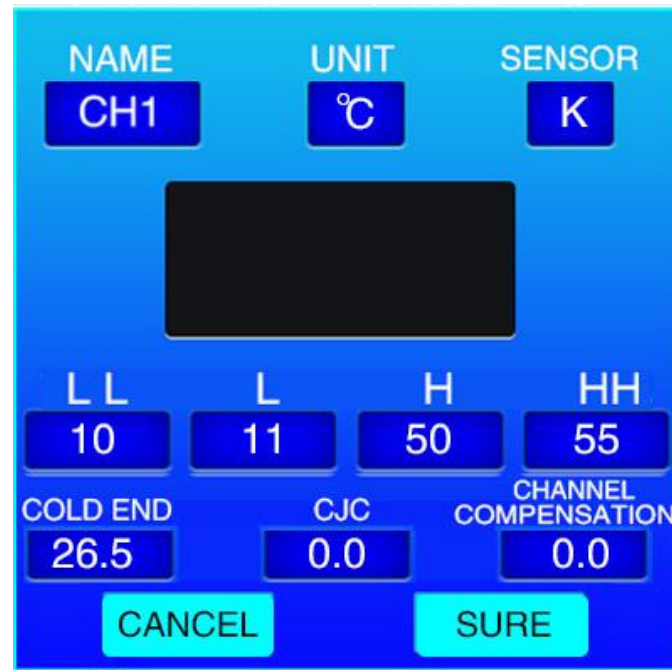
1.Valuepage:



This page mainly shows the number of channels, measured values and alarm signs three parts. Alarm signs from top to bottom in turn for the upper upper limit alarm, upper limit alarm, lower limit alarm, lower limit alarm. when the value is normal, the alarm sign is green, when the alarm value is exceeded, the

corresponding alarm sign will change from green to red (or: when the alarm appears, the corresponding alarm sign will change from green to red) the alarm value can also be set in the parameter setting.

The numerical interface shows the real-time values of multiple channels, can touch the click screen single channel numerical setting parameters, pop up the following paGe

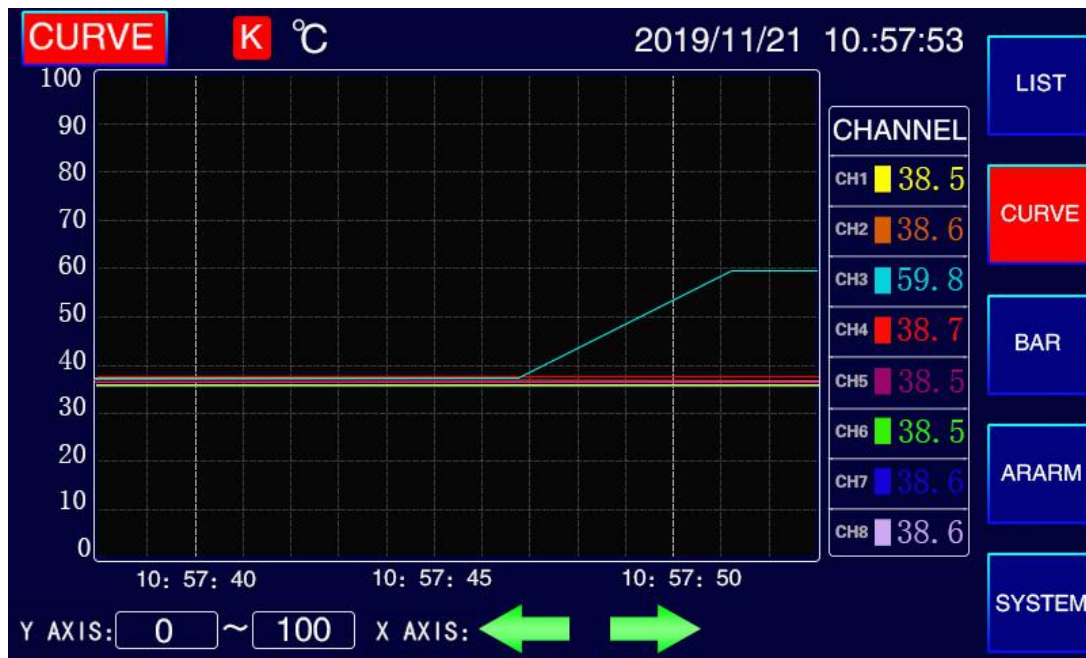


parameter setting page: lower limit, lower limit, upper limit, upper limit, cold end compensation, channel compensation can all set the value through this bullet window. After setting up, click OK button to exit the pop-up window, click cancel button to restore the value of click enter. the middle black area displays real-time values. (Note: The name, unit, type are set uniformly on the system page, only show here)

2. curve interface:

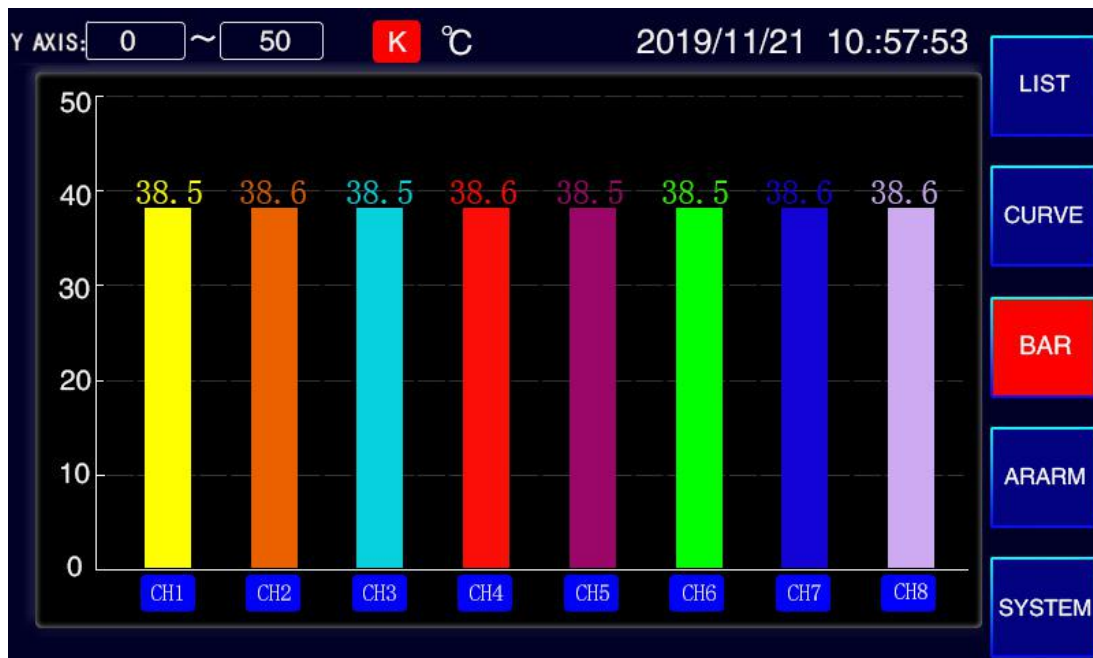
The current curve record only retains the display data of a single screen, which can be viewed by changing the temperature range of the display by changing the value of the Y axis, or by dragging the X axis time period by the direction key. The time scale in recall mode can not be changed and is determined by the interval between records stored in memory cards

History curve screen memory card records for long-term data preservation, generally set a longer recording interval; record interval from 1 second to 9999 seconds to select, the recording interval of each channel is consistent. According to the need of production process, setting the interval of memory card record reasonably, taking into account the contradiction between record interval and time, can accurately reflect the change of process parameters. (Set Record Interval Time)(Set Record Interval Time at the System Settings button to enter the System Parameter Test Select Set Record Interval Time, described later)



3. column chart page:

Column diagram interface: the Y axis measuring range can be set by itself, each channel is represented by different colors, and the measured values are displayed above the column of each channel.



4. Alarm Page

Display all alarm data, display up to 2000 sets of alarm data.

The screenshot shows the 'ARARM' page with a date and time of 2019/11/21 10.:57:53. The main content is a table with the following data:

NO	START TIME	END TIME	ALARM MESSAGES
1	2019/11/21 09:22:15	2019/11/21 09:22:20	CH1 HH

Navigation buttons include LIST, CURVE, BAR, ARARM, and SYSTEM. At the bottom, there are buttons for LAST PAGE, NEXT PAGE, and PAGE 1 / 1.

5. system

This page system parameter setting, export data page. Mainly used to set system date, system time, storage interval time, language, unit of measurement, baud rate, buzzer, address, measurement speed setting.

The screenshot shows the 'SYSTEM EXPORT' page with the following parameters:

- TIME: 2019/11/21 10.:57:53
- LANGUAGE: ENGLISH
- BUZZER: open
- UNITS: °C
- ADDRESS: 1
- SENSOR: K
- MEASURING SPEED: 1 s
- BAUD RATE: 9600
- RECORD INTERVAL: 1 s

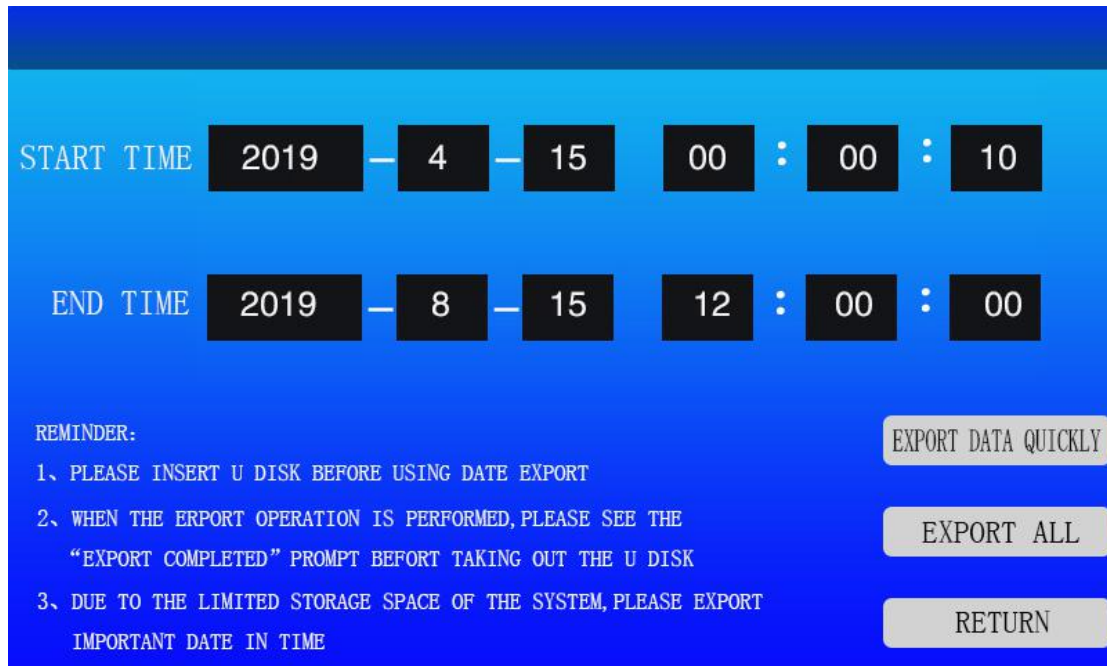
At the bottom, it displays: NUMBEL: 8 CHANNELS, Shenzhen Yongpeng instrument Co.,Ltd.

Navigation buttons include LIST, CURVE, BAR, ARARM, and SYSTEM.

Click Export Data to enter the Export page (see below)

6.ExportData

Page



Fast export data: can choose time period to export data, high efficiency export speed.

All export data: directly export all saved data on disk, can not choose the time period.

return: go back to the system settings page.

U the page on the PC end after the disk export, save the format suffix as *. CSV

serial number	sampling time	CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
0	2019-11-23 15:00:00	24.9	25	24.8	24.6	24.7	24.7	24.8	25
1	2019-11-23 14:59:59	24.9	24.9	24.7	24.6	24.7	24.7	24.7	24.8
2	2019-11-23 14:59:58	24.9	24.9	24.7	24.6	24.7	24.7	24.7	24.8
3	2019-11-23 14:59:57	24.9	24.9	24.7	24.4	24.7	24.6	24.6	24.8
4	2019-11-23 14:59:56	24.8	24.9	24.7	24.4	24.6	24.6	24.6	24.7
5	2019-11-23 14:59:55	24.8	24.9	24.6	24.4	24.6	24.6	24.6	24.7
6	2019-11-23 14:59:54	24.8	24.8	24.6	24.4	24.6	24.6	24.6	24.8
7	2019-11-23 14:59:53	25	25	24.7	24.5	24.7	24.5	24.5	24.8
8	2019-11-23 14:59:52	25	25	24.6	24.4	24.6	24.6	24.6	24.7
9	2019-11-23 14:59:51	24.8	24.9	24.6	24.4	24.6	24.6	24.6	24.7
10	2019-11-23 14:59:50	24.8	24.9	24.6	24.4	24.6	24.6	24.6	24.7
11	2019-11-23 14:59:49	24.8	24.9	24.6	24.4	24.6	24.6	24.6	24.7
12	2019-11-23 14:59:48	24.9	24.9	24.6	24.6	24.6	24.6	24.6	24.7
13	2019-11-23 14:59:47	24.9	24.9	24.6	24.6	24.7	24.6	24.6	24.7
14	2019-11-23 14:59:46	24.9	24.9	24.6	24.6	24.7	24.7	24.7	24.8
15	2019-11-23 14:59:45	24.9	24.9	24.7	24.6	24.7	24.7	24.7	24.8
16	2019-11-23 14:59:44	25	24.9	24.7	24.6	24.7	24.7	24.7	24.8
17	2019-11-23 14:59:43	25	25	24.8	24.7	24.7	24.7	24.8	24.9
18	2019-11-23 14:59:42	25	25	24.8	24.7	24.7	24.7	24.8	24.9
19	2019-11-23 14:59:41	25	24.9	24.8	24.7	24.8	24.7	24.8	24.9
20	2019-11-23 14:59:40	25	24.9	24.7	24.7	24.8	24.7	24.8	24.9
21	2019-11-23 14:59:39	25	25	24.8	24.7	24.8	24.7	24.8	24.9
22	2019-11-23 14:59:38	25	25	24.8	24.7	24.7	24.7	24.7	24.8
23	2019-11-23 14:59:37	24.9	25	24.8	24.4	24.6	24.6	24.4	24.7
24	2019-11-23 14:59:36	24.8	24.8	24.6	24.4	24.6	24.5	24.7	24.8
25	2019-11-23 14:59:35	24.9	24.9	24.7	24.5	24.5	24.5	24.6	24.7
26	2019-11-23 14:59:34	24.8	24.8	24.6	24.4	24.6	24.6	24.6	24.7
27	2019-11-23 14:59:33	24.8	24.8	24.6	24.4	24.6	24.6	24.4	24.7
28	2019-11-23 14:59:32	24.8	24.8	24.6	24.6	24.6	24.4	24.6	24.7
29	2019-11-23 14:59:31	24.8	24.8	24.6	24.6	24.6	24.7	24.7	24.8
30	2019-11-23 14:59:30	25	25	24.8	24.5	24.7	24.7	24.7	24.8
31	2019-11-23 14:59:29	24.9	24.9	24.7	24.6	24.7	24.6	24.6	24.8
32	2019-11-23 14:59:28	24.9	24.9	24.8	24.6	24.7	24.7	24.7	24.8
33	2019-11-23 14:59:27	25	25	24.8	24.7	24.8	24.7	24.7	24.8
34	2019-11-23 14:59:26	25	25	24.8	24.7	24.8	24.7	24.7	24.8
35	2019-11-23 14:59:25	24.9	24.9	24.7	24.6	24.7	24.7	24.7	24.8
36	2019-11-23 14:59:24	24.9	24.8	24.6	24.6	24.6	24.6	24.6	24.8
37	2019-11-23 14:59:23	24.9	24.8	24.6	24.4	24.6	24.4	24.6	24.7
38	2019-11-23 14:59:22	24.9	24.9	24.6	24.4	24.6	24.6	24.6	24.7
39	2019-11-23 14:59:21	24.9	24.8	24.6	24.4	24.6	24.6	24.6	24.8
40	2019-11-23 14:59:20	25	25	24.8	24.7	24.8	24.7	24.7	24.8
41	2019-11-23 14:59:19	24	24	24.8	24.7	24.8	24.7	24.7	24.8

Each instrument will deliver U plates when it leaves the factory. The communication software is saved in the U disk, first open and install the driver software in the U disk, open the Yongpeng temperature recorder file in the software, select the correct COM port, and show the communication connection success at the lower left of the main interface of the software.

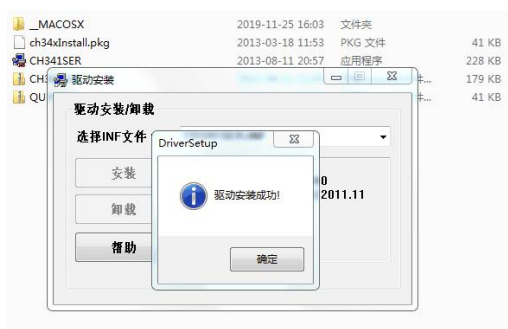
Computer software interface provides a wealth of display and analysis of data functions, can display file list, curve list, data list, real-time temperature list. also can print the graph shape.

1. find the driver software in the U disk (after installing the driver software, you can communicate with the instrument through the USB communication line in real time

名称	修改日期	类型	大小
驱动程序	2019-11-25 16:03	文件夹	
永鹏温度记录仪	2019-11-23 17:19	文件夹	
20191123	2004-01-01 0:00	Microsoft Office...	1,431 KB
dotNetFx40_Full_x86_x64	2019-11-22 14:16	应用程序	49,268 KB

Software operating instructions

名称	修改日期	类型	大小
_MACOSX	2019-11-25 16:03	文件夹	
ch34xInstall.pkg	2013-03-18 11:53	PKG 文件	41 KB
CH341SER	2013-08-11 20:57	应用程序	228 KB
CH341SER	2013-08-11 21:05	压缩(zippped)文件...	179 KB
QUDONG	2013-08-11 20:57	压缩(zippped)文件...	41 KB

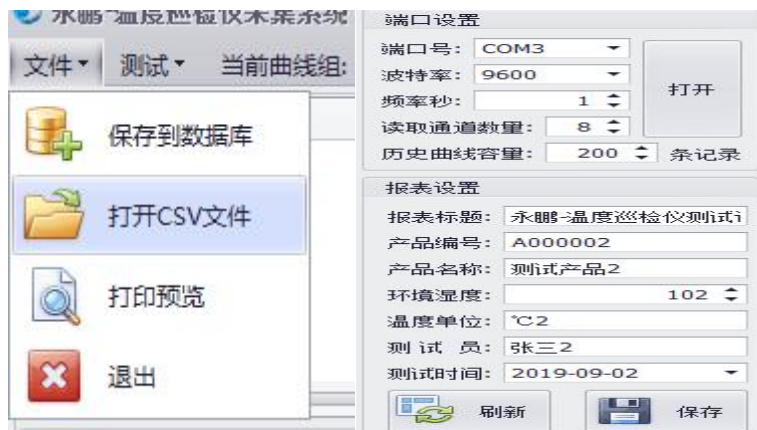
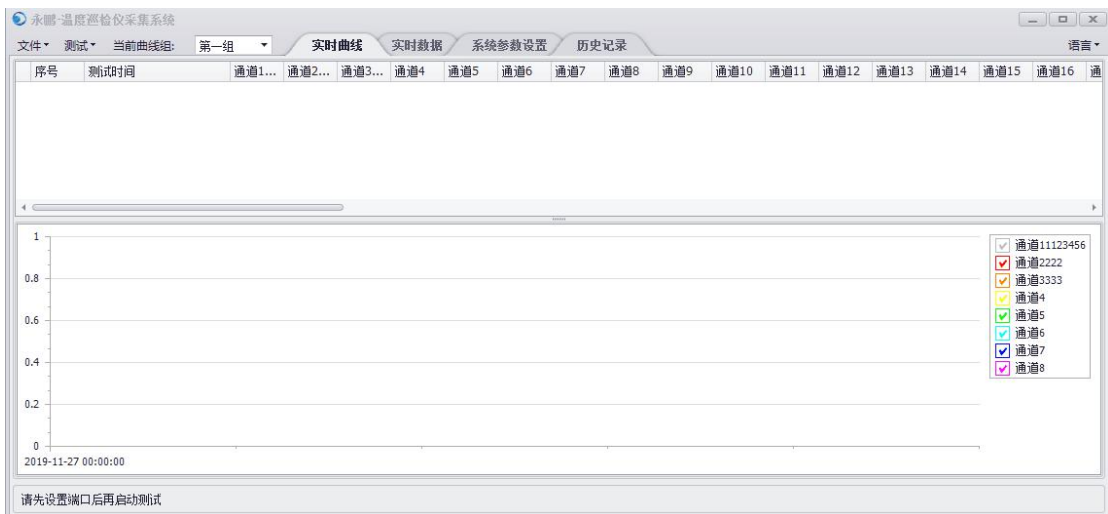


Follow the above steps to install the driver software first, show that after the installation is completed, press the OK button to exit the page.

2. click on the Yongpeng temperature recorder to select the application below, you can also right-click to send the desktop shortcut, after the operation can directly open the software from the desktop.

System.Data.SQLite.dll	2017-09-19 15:18	应用程序扩展	1,387 KB
TempLogger	2019-11-23 17:09	应用程序	353 KB
TempLogger.exe.config	2019-08-31 14:50	CONFIG 文件	1 KB
TempLogger.pdb	2019-11-23 17:09	PDB 文件	144 KB

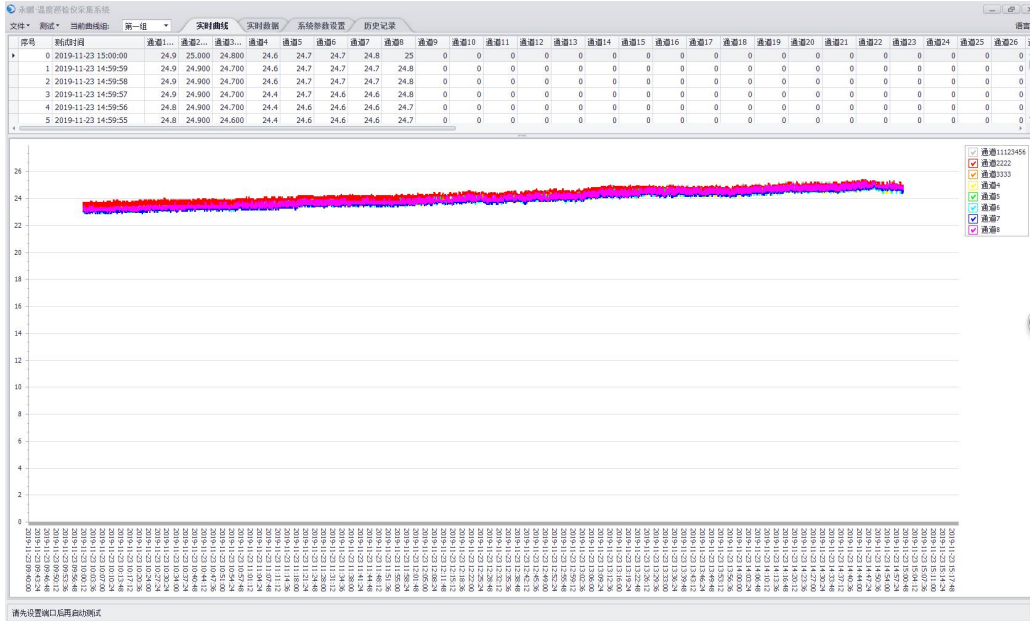
Access to the main page of the software



Data recorded with a U disk can be imported directly into the software. file suffix * imported. CSV

Can also enter, system parameter settings - port settings set COM port and the instrument directly connected to transport real-time measurement values.

numerical values and curve changes can be visualized.



参数设置

曲线分组	通道名称	颜色	报警下下限	报警下限	报警上限	报警上限	校正值
曲线分组:1	1 通道1	银灰色	8	10	500	1000	-20.5
	1 通道2	红色	0	0	0	20	0
	1 通道333	黄色	2	7	6	30	5
	1 通道4	绿色	0	0	300	300	0
	1 通道5	青色	0	0	500	500	0
	1 通道6	蓝色	0	0	500	500	0
	1 通道7	紫色	0	0	500	500	0
	1 通道8	品红色	0	0	500	500	0

通道ID: 1
 通道名称: 通道1
 曲线颜色: Silver
 下下限: 8
 报警下限: 10
 报警上限: 500
 上上限: 1000
 校正值: -20.5

写入参数
 读下下限 读下限
 读上上限 读上限
 读校正值

You can set the channel name, curve color, alarm parameters and correction values, set up and click the write parameters button

序号	测试时间	通道1	通道2	通道333	通道4	通道5	通道6	通道7	通道8	通道9	通道10	通道11	通道12	通道13	通道14	通道15
33	2019-10-01 19:49:00	28.2	28.200	28.200	28.2	28.2	28.2	28.2	28.2	0	0	0	0	0	0	0
34	2019-10-02 19:49:00	28.2	28.200	28.200	28.2	28.2	28.2	28.2	28.2	0	0	0	0	0	0	0
35	2019-10-03 19:49:00	28.2	28.200	28.200	28.2	28.2	28.2	28.2	28.2	0	0	0	0	0	0	0
36	2019-10-04 19:49:00	28.2	28.200	28.200	28.2	28.2	28.2	28.2	28.2	0	0	0	0	0	0	0
37	2019-10-05 19:49:00	28.2	28.200	28.200	28.2	28.2	28.2	28.2	28.2	0	0	0	0	0	0	0
38	2019-10-06 19:49:00	28.2	28.200	28.200	28.2	28.2	28.2	28.2	28.2	0	0	0	0	0	0	0
39	2019-10-07 19:49:00	28.2	28.200	28.200	28.2	28.2	28.2	28.2	28.2	0	0	0	0	0	0	0
40	2019-10-08 19:49:00	28.2	28.200	28.200	28.2	28.2	28.2	28.2	28.2	0	0	0	0	0	0	0
41	2019-10-09 19:49:00	28.2	28.200	28.200	28.2	28.2	28.2	28.2	28.2	0	0	0	0	0	0	0
42	2019-10-10 19:49:00	28.2	28.200	28.200	28.2	28.2	28.2	28.2	28.2	0	0	0	0	0	0	0
43	2019-10-11 19:49:00	28.2	28.200	28.200	28.2	28.2	28.2	28.2	28.2	0	0	0	0	0	0	0

Real-time files can be saved to the database, you can look through the database of historical data.

Verification conditions

project	Reference value or range	Reference value or range
ambient temperature °C	20	±5
ambient humidity%RH	45~75	
atmosKPa	86~106	
AC supply voltageV	220	±2%
AC supply voltageHz	50	±1%
Ac power supply waveform	Ac power supply waveform	$\beta = 0.05$
External magnetic field interference	Should be avoided	
sunniness	GOOD	
ventilate	Avoid direct exposure	

guarantee

The instrument shall be guaranteed for two years from the date of purchase. If the instrument is damaged by improper operation of the user during the warranty period, the maintenance fee and the expenses caused by the maintenance shall be borne by the user, and the instrument shall be responsible for the life-long paid after-sale.

The user shall not open the instrument housing without the written consent of the Company, which will affect the warranty of the instrument.

The instrument maintenance should be carried out by the professional and technical personnel authorized by our company; please do not change the internal components of the instrument without authorization when repairing, after the instrument maintenance, it is necessary to re-measure the calibration, so as not to affect the test accuracy. If the user blindly repairs, changes the instrument parts and causes the instrument damage, does not belong to the warranty scope, the user should bear the maintenance expense.



container loading list

One mainframe

A power cord

One manual

One certificate

One warranty card

One thermocouple line per channel