华知科
WASITES®

Multiple Temperature Logger

WT-Y01/Y03

User's manual

V1.2

Foshan HZK Electronic Technology Co. , Ltd

Thank you for purchasing our products, in order to ensure that the user can use this product correctly, please read this product manual carefully before use, and check the packing list against this manual to confirm the product and accessories. If there is any inconsistency, please contact our company or agent.

— Representations

The warranty period of the instrument is 2 year from the date of purchase. During the warranty period, the instrument will not be repaired free of charge due to malfunctions caused by abnormal use. After the instrument exceeds the warranty period, our company can provide paid maintenance. Instrument repair should be carried out by our authorized professional technicians.

If you want to know the news about the appearance or function improvement of our instruments, you can follow our official public number or our authorized platform to get it without prior notice.

For sales service, please contact your local dealer.

— Caveat

1. Please use a suitable power supply and connect the wires correctly;

2. Please make sure the instrument is connected to the power supply when the power is switched off;

3. Do not open the shell of the instrument by yourself;

4. Do not use the instrument in explosive, corrosive environment;

5. Please keep the instrument away from interference sources.

Packing List

Main unit x1; Adapter & power cord x1; User's manual x1; Certificate of Conformity/Warranty card x1; Y01:Type K TC wire x10 ,Y03:PT100 x10.

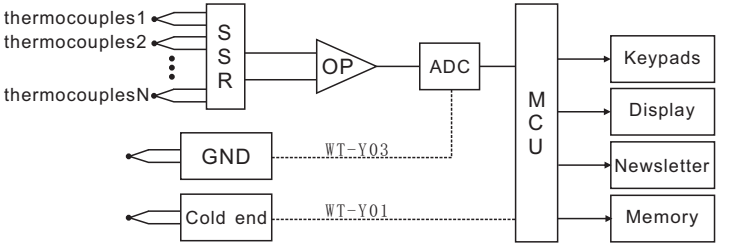
Instrument Description

The multiple temperature logger adopts 32-bit high-speed CPU for data processing, adopts 3.2-inch industrial display, supports K, J, E, T, N, S, R, B-type thermocouple input, there are curves and bar graphs of two kinds of display, the user can be more intuitive to read each parameter, the instrument has a perfect function to meet the needs of production, laboratory and R & D measurement.

This instrument is widely used in lighting appliances, electric tools, household appliances, motors, electric heating appliances medicine, petroleum, chemical, metallurgy, electric power and other industries, scientific research units and other fields, as well as production lines, laboratories and quality inspection departments of production enterprise.

It can be customized with various measurement functions according to different needs to meet more complex application scenarios.

Basic Principle



The components of the instrument are shown in the figure.

1.WT-Y01 selects the corresponding channel signal by the photoelectric switch selector, the signal is amplified by the signal amplifier, and then the analogue signal is converted into data signal by the AD converter, and then transmitted to the MCU for data processing. The cold end compensation circuit carries out room temperature measurement to get the cold end temperature value. The measured signal and the cold end temperature value are processed by the single-chip microcomputer for data processing, and the correct measured temperature value is shown on the display.

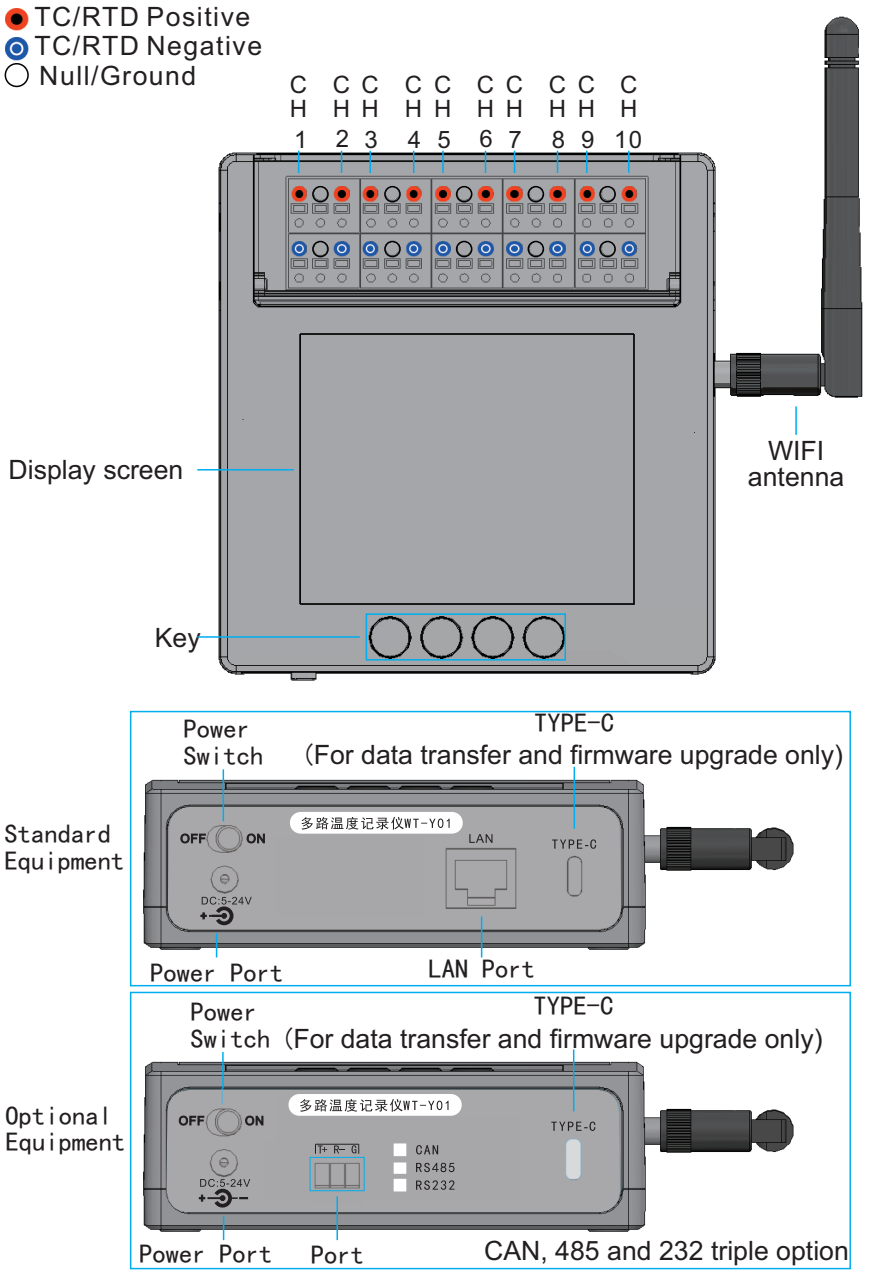
2. WT-Y03 selects the corresponding channel signal by the photoelectric switch selector, amplifies the signal through the signal amplifier, and converts the analog signal into a data signal by the ADC converter according to the reference signal coming back from the ground terminal, and then transmits it to the MCU for the data reprocessing, and finally displays it in the display after the data processing by the single-chip microcomputer;

Keypads, communication, memory can be set on the display of data, storage to be analyse. Can also be connected to the computer through the communication interface directly from the computer for data analysis.

Technical Indicators

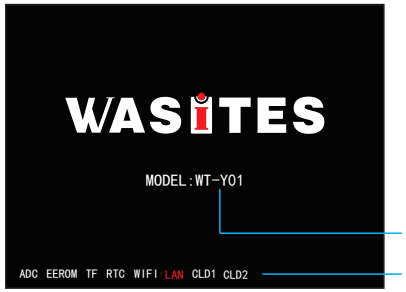
Display Mode	3.2' TFT True Colour LCD Industrial Display
Display Forms	Real-time list values, real-time bar charts, real-time graphs
Records search	Queries can only be analysed in computer software.
Number of channels	10 channels
Transducers type	TC : K J E T N S R B , RTD : Pt100
Basic accuracy	0.2°C + 2 words (without thermocouple error)
Measurement range	−200～1820℃(based on thermocouple indexing range)
Cold End Compensation	Accuracy:0.5℃
Resolution	0.1℃
Correction	Independent error correction per channel Y = kx + b (x = measured value)
Number of files	64 (circular records)
File size	One file can record 130K groups (regardless of the number of channels)
USB drive port	Export record file, the second into a USB flash drive function (the instrument is a USB flash drive)
Recording time	Total length of recording = recording interval x 97 days.
Sampling rate	Fast:0.1S per channel, slow:1S per channel.
Channel-to-Channel Isolation	AC/DC 350V High Voltage Banding Measurement
Alarm tone	One way buzzer sound (sound at any alarm, can be set to mute)
Recording interval	Any setting from 1-9999 seconds
Communication interface	LAN, WIFI and USB as standard (CAN, RS485 or RS232 optional).
Power	DC5-24V <2W
Thermocouple	One 2 metre type K thermocouple per channel is standard.
Size	123.0mm x 116.0mm x 37.0mm
Weight	560g
Usage environment	5～40℃,20%～80%RH (no condensation)

Appearance and Function



Operation Guide

Power on + Switch

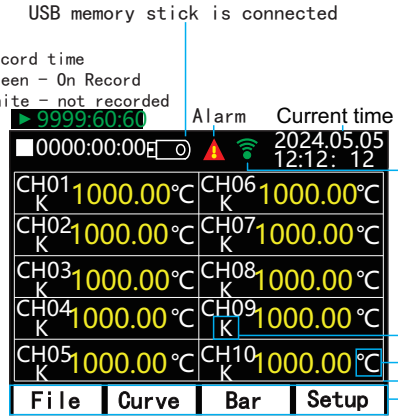


Turn on the power supply as well as turn on the switch, the instrument turns on and checks the LOGO, model number and hardware function. The function of normal work shows white, otherwise the function shows red.

Instrument type

Hardware Detection

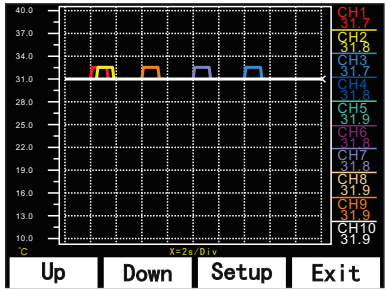
Enter the main interface after the detection is completed.



Connected to hosts
Connected to wired network
Connectionless
Connected to hosts
Internet search
Connectionless

TC type:K J E T N S R B
Unit:℃/℉/K
Measured values for each channel
Current Key Functions

Main interface + Curve



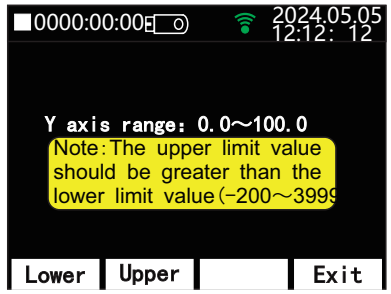
Press Curve in the main interface to enter the curve interface. The curve interface displays a graph of the real-time data that is not saved.

Press Up key or Down key to realize curve up shift or down shift.

Press Setup key to enter Y-axis setting interface.

Press Exit to return to the main interface.

Curve Interface + Setup



Press Setup in the curve interface to enter the Y-axis setting interface.

Press the Lower key to enter the numeric keyboard to set the lower limit value.

Press the Upper key to enter the numeric keyboard to set the upper limit value.

Press Exit to return to curve interface.

Numeric keypad

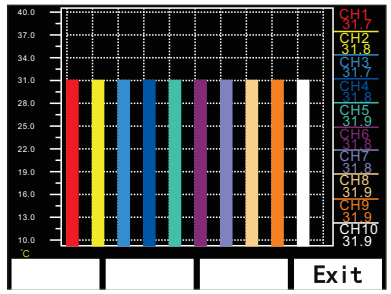
Cancel modification and return

Confirm changes and return

Confirm, Down, Left and Right Keys

Note: When focusing on the bottom row, you can't return to the first row with the down key, you can return to the rightmost part of the previous row by pressing the left key in the bottom left corner, or press the right key in the bottom right corner to return to the top left corner.

Main interface + Bar



Press the Bar key in the main screen to enter the Bar Graph screen. The bar graph interface shows the real-time display bar graph saved without logging as well as the real-time temperature values.

Press the Exit key to return to the main interface.

Note: This page is for viewing only, and the upper and lower limits are the same as the curve interface. If you want to modify the upper and lower limits, you can enter the Y-axis setting interface from the curve interface.

Main interface + ◯ File

Press File in the main interface to enter the file interface. The file interface displays the recorded files and the size of the real-time recorded files respectively. You can record 64 files, each file can record up to 60,000 data entries, and the 64 files can be recorded in an infinite loop.

Press the Rec button to start recording data, the recording time turns green and starts timing, and the record button turns into the stop button.

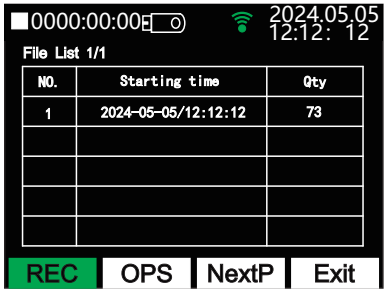
Press the OPS key to enter the file operation interface.

Press the NextP key to turn down the file list to one page, in which every 5 recorded files are one page.

Press Exit to return to the main interface.

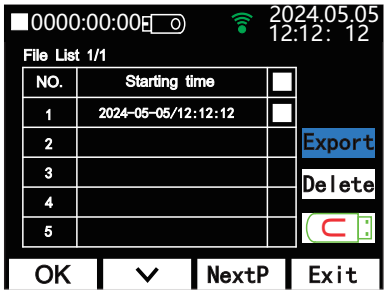
File interface + ◯ Stop

◯ Yes



After saving the file, the recording time is cleared to zero and turns white, and the red stop button turns into a green Rec button.

File interface + ◯ OPS



In the file interface, press the action key to enter the file operation interface.

After selecting the file, check the Export checkbox and press Confirm to enter the file export interface.

After selecting the file, check the Delete box and press Confirm to enter the file deletion interface.

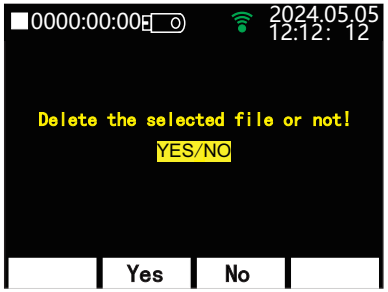
Check the Turn into USB flash disk in seconds checkbox and press Confirm to enter USB flash disk mode.

In the file export interface press the USB key to export the file to a USB disk (you need to connect the USB disk first).

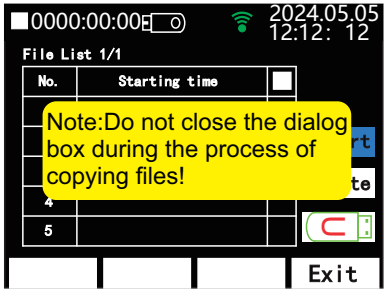
Press SD key to save the file to the internal SD card of the instrument.

When exporting, a progress bar will appear above the key, you can press the interrupt key to interrupt the file transfer.

Press exit to return to the file operation interface.



Press Yes to delete the file after entering the deletion interface, press No to exit without deleting.

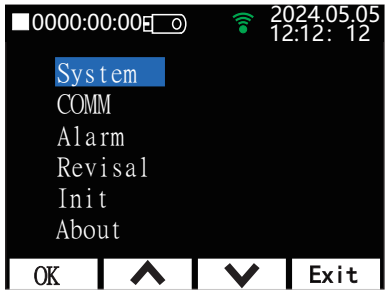


Check the box of USB disk in seconds and press to confirm that the instrument enters the USB disk mode.

At this time, the file disc of the instrument can achieve the function of USB disk, and the files in the file disc can be read through the TYPE-C port.

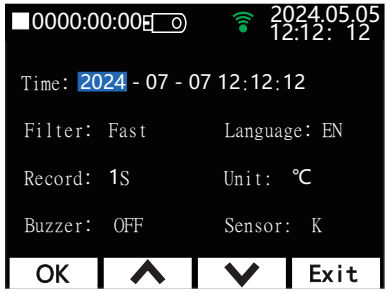
Press the Exit key to exit the USB disk function.

Main interface+Setup



Press Setup in the main interface to enter the Setup menu interface.

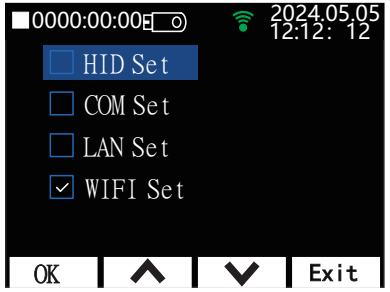
System Checkbox+OK



System Setting Checkbox In the Setting menu interface, check the System Setting checkbox and press the Confirm key to enter the system setting.

Use the arrow keys to select the object to be changed, press the Confirm key to confirm to enter the modification, use the + key and - key to make modification, when the modification is completed, press the Return key to save and exit the modification.

COMM Checkbox+OK



In the setup menu interface, check the COMM Set box and press the OK button to enter the communication setting.

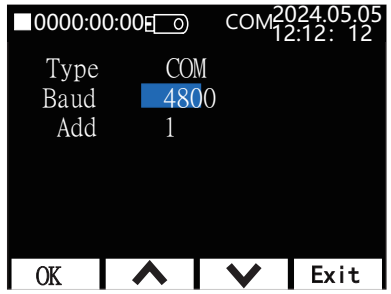
There are 4 types of communication options: HID, COM, LAN and WiFi, but only the selected method is effective.

After selecting the target option with the arrow keys, press the OK key to select the communication method and enter the setting page; after the setting is completed, press the Exit key to save and exit.

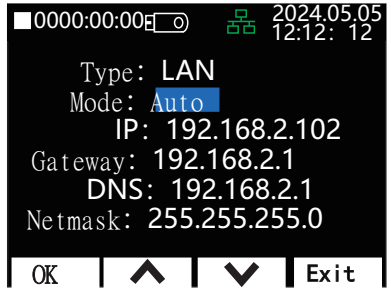
Serial connection is possible via TYPE-C with adjustable baud rate and address.

Baud rate is the data transmission rate.

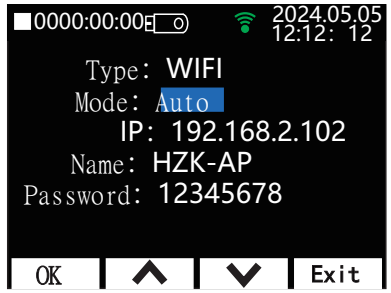
Address is the address of the module.



CAN, RS485 and RS232 share a common COM port, and the instrument installs the hardware module of one of the modes of CAN, RS485 and RS232 according to the requirement, so the same instrument can work with only one COM port mode.



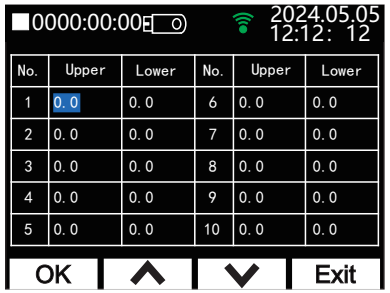
It can be connected to LAN via network cable, and can automatically adapt host IP, host gateway, as well as DNS and mask; it can also be entered manually.



The instrument can be connected to the route through WIFI.

Host IP can be automatically adapted and manually entered, Wifi name can be selected from the recognised hotspot, WIFI password needs to be manually entered.

Alarm Checkbox+◯OK



In the setup menu interface, check the Alarm box and press the OK button to enter the Alarm Setting interface.

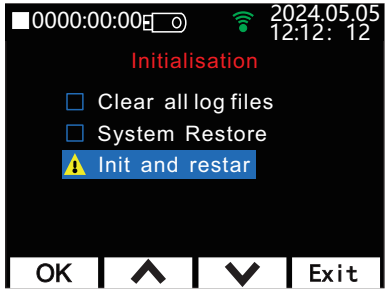
Select the value to be modified by moving up and down, and then press the OK key to call up the numeric keypad to modify the value.

Revisal Checkbox+◯OK

In the setup menu interface, check the Revisal box and press the OK key to enter the calibration setting interface.

Use the right button and NextP key to select the value you want to modify, and then press the OK button to call out the numeric keypad to modify the value.。

Init Checkbox +◯OK



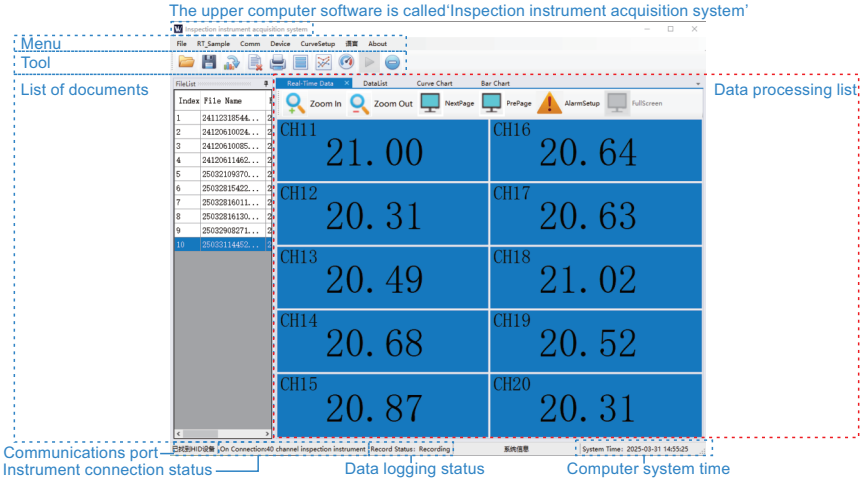
In the Setup menu interface, select Init box to enter the interface, you can choose to clear all the data and restore the default settings of the two executive items, and finally selected to execute and restore the implementation of the initialisation.

About Checkbox+◯OK

In the Setup menu screen, check the About box and press the OK button to enter the Information screen.

Upper computer program

The instrument can be used in conjunction with the supplied host computer, which is called ‘Inspection instrument acquisition system’.



The menu bar has seven menus: File, Real-time acquisition, Communication, Device, Curve, Language and About.

1.File menu has open (open the specified data file), save (save the data file to the specified location), import (the specified data file into the host computer), print preview (preview list of printed drawings) and exit (exit the host computer) a total of five functions.

2.Real-time acquisition menu can start and stop real-time acquisition.

3.Communication menu can specify the host computer and the instrument communication interface type, there are serial port (optional COM port), network port and USB.

4.the device menu has time synchronisation (host computer synchronization computer time), alarm settings (set data alarm upper and lower limits) and read files from the instrument (host computer to read the instrument's internal files).

5.Language menu can set the upper computer display language.

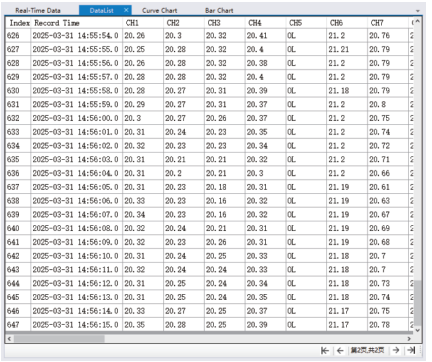
6.About menu can display the information of the upper computer.

The toolbar has ten shortcut tools: open file, save file, import file, delete file, print file, data list, curve, real-time data list, start real-time acquisition and stop real-time acquisition.

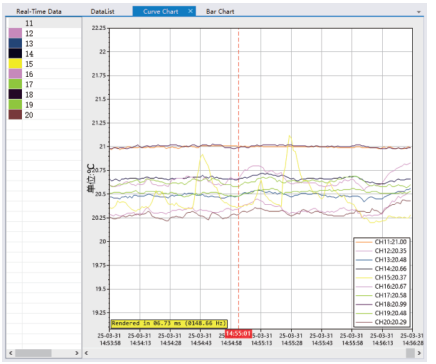
The file list shows the name and number of files recorded by the upper computer, which can be quickly opened or deleted by right-clicking after selecting the file in the list.

Data processing list can display data list, curve list, real-time data list and bar chart list at the same time.

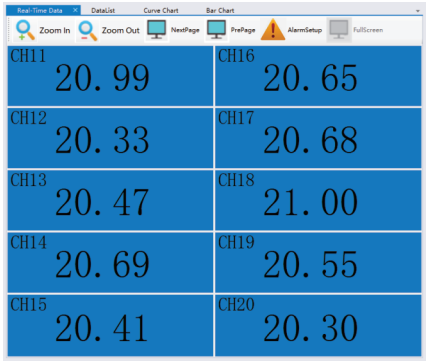
The curve list can be zoomed in or out by using the mouse wheel.



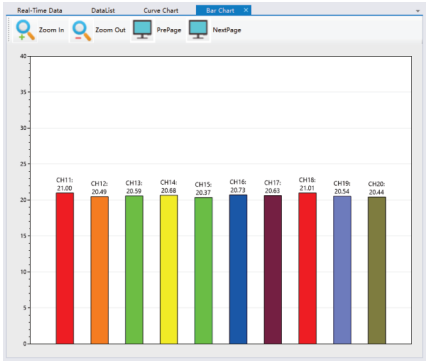
List



Curve



Real-Time data



Bar

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